



National Bank
of Ukraine

Consolidated Financial Statements and Consolidated Management Report

for the Year Ended
31 December 2022





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of Ukraine

Consolidated Management Report

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Table of contents

Part 1. Nature of Operations	i
1.1. General Information about the National Bank of Ukraine	i
1.2. NBU management	iii
1.3. Organizational Structure. Organizational Changes at the NBU in 2022	iv
1.4. Structure and Composition of Management Bodies	iv
1.5. Process and Project Management	viii
1.6. Impact of Economic Conditions on the NBU's Financial Position and Performance	viii
1.7. Impact of Global Covid-19 Pandemic on the NBU's Operation	xii
1.8. Impact of russia's Invasion on the NBU's Operation	xiii
Part 2. Strategy and Goals.....	xvii
2.1. NBU's Vision, Mission, and Corporate Values	xvii
2.2. Current Trends and Challenges for the NBU	xvii
2.3. NBU Strategic Goals 2025	xix
Part 3. Resources, Risks, and Relations.....	xx
3.1. Financial Resources	xx
3.2. Human Resources	xxi
3.3. Production Resources	xxii
3.4. Intellectual Resources	xxiii
3.5. Social and Reputational Resources	xxiii
3.6. Natural Resources	xxv
3.7. National Bank of Ukraine and Its Stakeholders	xxvi
3.8. Main Risks	xxix
Part 4. Overview of Key Indicators.....	xxxii
4.1. Overview of Key Indicators	xxxii
4.2. Overview of Other Indicators	xxxviii
Part 5. Development Prospects	liii

Part 1. Nature of Operations

1.1. General Information about the National Bank of Ukraine

The National Bank of Ukraine (NBU) is Ukraine's central bank. Its operations are governed by Ukraine's Constitution, Ukraine's law *On the National Bank of Ukraine* (hereinafter referred to as "the NBU Law"), as well as Ukrainian regulations.

In accordance with Ukrainian legislation, the main function of the NBU is safeguarding the stability of the Ukrainian national currency. In performing its main function, the NBU must be guided by the priority of achieving and maintaining price stability in the country.

As of 31 December 2022 and 2021, the NBU's structure comprised the units of the Head Office and the Banknote Printing and Minting Works of the National Bank of Ukraine (BPMW) – a standalone unit of the bank. These units operate within the scope of the NBU's tasks and functions, as stipulated by the NBU Law.

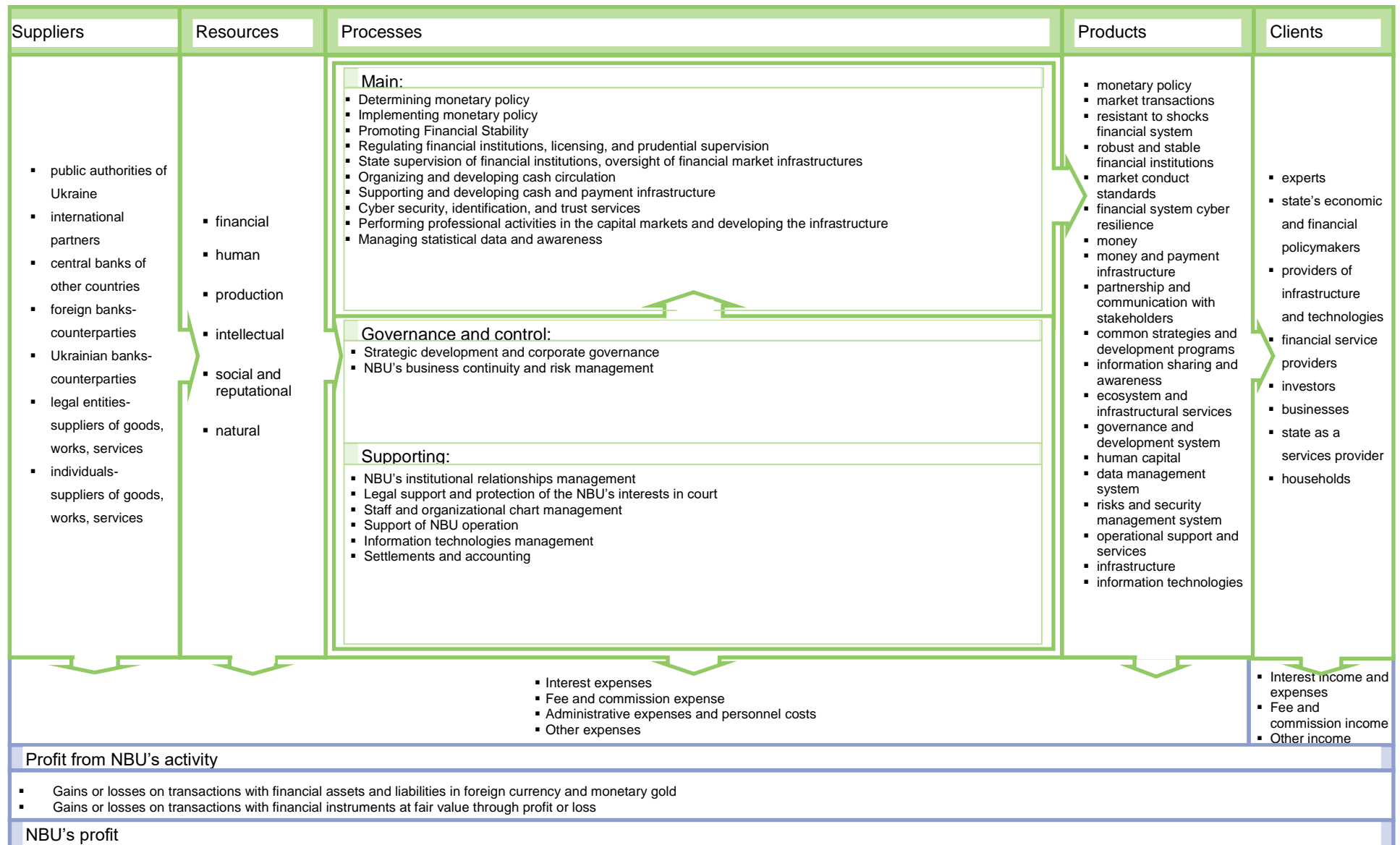
The NBU's subsidiary is the SETTLEMENT CENTER FOR SERVICING FINANCIAL MARKET AGREEMENTS PJSC (the Settlement Center).

Under Ukrainian legislation, the Settlement Center carries out professional activities in capital markets, clearing activities to identify liabilities, and clearing activities of a central counterparty.

As of 31 December 2022 and 2021, the NBU had investments in the National Depository of Ukraine PJSC.

More detailed information about the NBU's functions, operational purpose and the participating interest in its subsidiary and associated companies is provided in Note 1 to the Consolidated financial statements for the year ended 31 December 2022 (hereinafter - Consolidated Financial Statements).

Chart 1. Model of NBU activities



1.2. NBU management

1.2.1. NBU Council

Under the Constitution of Ukraine, the main tasks of the NBU Council include developing Monetary Policy Guidelines and overseeing the conduct of monetary policy. Pursuant to the Law of Ukraine *On the National Bank of Ukraine*, the main task of the NBU Council is also exercising supervision over the NBU's internal control system, and the NBU Council is authorized to:

- develop and approve the Monetary Policy Guidelines, exercise control over its implementation, submit recommendations to the Cabinet of Ministers of Ukraine on the impact of the public debt policy and tax policy on monetary conditions in Ukraine
- approve the administrative expenses budget and the progress report
- approve an audit company to perform audit of annual financial statements, consider the auditor's report and approve the NBU annual financial statements and the Annual Management Report of the NBU, approve allocation of distributable profit for the reporting year
- make a decision on increasing the authorized capital, including at the expense of profit before distribution
- appoint and dismiss the First Deputy Governor and Deputy Governors of the NBU, approve, on the recommendation of the NBU Board, the method of determining the salary of the NBU Governor and his deputies
- set the procedure and frequency of internal audit; approve the annual audit plan and the regulation on the internal audit function, supervise its activities, appoint and dismiss the head of the internal audit
- approve the decision of the NBU Board on the participation of the NBU in international financial organizations
- confirm presence or absence of indications of unstable financial standing of the banking system, deterioration of the balance of payments of Ukraine, and circumstances that threaten stability of the banking system and/or of the financial system of the country
- approve the NBU Council Rules of Procedure, the Regulations on the Audit Committee and other working bodies of the NBU Council, establish such bodies, determine their composition and appoint their heads
- make decision, in line with the set procedure, on informing the President of Ukraine or the Verkhovna Rada of Ukraine of the emergence of any grounds for the dismissal of a member of the NBU Council appointed by the President of Ukraine or the Verkhovna Rada of Ukraine
- approve the NBU Code of Conduct for NBU Employees submitted by the NBU Board
- assess the state of implementation by the NBU Board of the NBU Council decisions in the areas where decisions are binding on the NBU Board.

Four NBU Council members are appointed by parliament, with four other members being appointed by the president.

The NBU Governor, who is appointed by the Ukrainian parliament on the recommendation of the Ukrainian president, is a member of the Council by virtue of their position.

Sitting Council members that have been appointed by parliament:

Anatolii Barsukov
Vasyl Horbal
Viktor Koziuk
Olena Scherbakova

Sitting Council members that have been appointed by the President of Ukraine:

Ihor Veremii
Bohdan Danylyshyn
Mykola Kalenskyi
Vasyl Furman
Andriy Pyshnyy – Governor of the National Bank of Ukraine, **member of the NBU Council** by virtue of his position

1.2.2. Board of the National Bank of Ukraine

The NBU Board is responsible for managing the central bank's activities, conducting monetary policy in line with Monetary Policy Guidelines through relevant instruments, and performing other functions, as set forth in the Law of Ukraine *On the National Bank of Ukraine*.

Actual governance of the NBU activities was performed by six NBU Board members, and from the end of October 2022 by seven NBU Board members: the NBU Governor, the First Deputy Governor, and Deputy Governors. The NBU Governor is appointed by the Ukrainian parliament at the suggestion of the Ukrainian president, and has a tenure of seven years. All NBU Deputy Governors are appointed and dismissed by the NBU Council at the suggestion of the NBU Governor. NBU Board decisions are taken on the principle of collegiality by a simple majority vote, with the Governor having the deciding vote.

NBU Board

Andriy Pyshnyy, appointed NBU Governor on 7 October 2022.

Kateryna Rozhkova, NBU First Deputy Governor. Areas under her management include methodology of banks regulation and nonbank financial institutions regulation, as well as financial stability.

Yaroslav Matuzka, Deputy Governor. Areas under his management include financial controlling, management of

procurement and sales for the NBU, nonperforming assets management, administration of the NBU Corporate Pension Fund, NBU corporate operation support, accounting of transactions and operating activities, occupational, fire and environmental safety.

Oleksii Shaban, Deputy Governor His area of responsibility comprises issues of payments and cash circulation, regulation of cashless payments and payment systems, development of innovative information technologies and infrastructure.

Yuriy Heletiy, Deputy Governor Yuriy Heletiy is in charge of regulating monetary and FX markets, operations on managing liquidity of the banking system, liquidity support

lending to banks and the Deposit Guarantee Fund, NBU Depository and corporate rights management.

Sergiy Nikolaychuk, Deputy Governor. Sergiy Nikolaychuk is responsible for monetary policy, macroeconomic analysis of the Ukrainian economy and its development, statistics and reporting, and the NBU's international relations.

Dmytro Oliinyk, Deputy Governor of the NBU since 25 October 2022. His area of responsibility comprises prudential supervision, in particular banking supervision, registration and licensing, financial monitoring of the banking system, inspections; supervision over nonbank financial services markets, registration, licencing and other authorization procedures, financial monitoring and inspections of the nonbank financial services.

1.3. Organizational Structure. Organizational Changes at the NBU in 2022

More detailed information about the NBU's organization chart is available on the NBU official website at <https://bank.gov.ua/en/about/structure#orgchart>.

In 2022, the NBU's organizational chart was modified to improve its organizational structure as follows:

- Division for Occupational, Fire, and Environmental Safety was created. The division was established on the basis of the Division for Occupational, Fire, and Environmental Safety that was a part of the NBU Administrative Support Department, which was entrusted with all the functions of occupational, fire and environmental safety. The purpose of creating a separate division for occupational, fire and environmental safety was to raise the effectiveness of

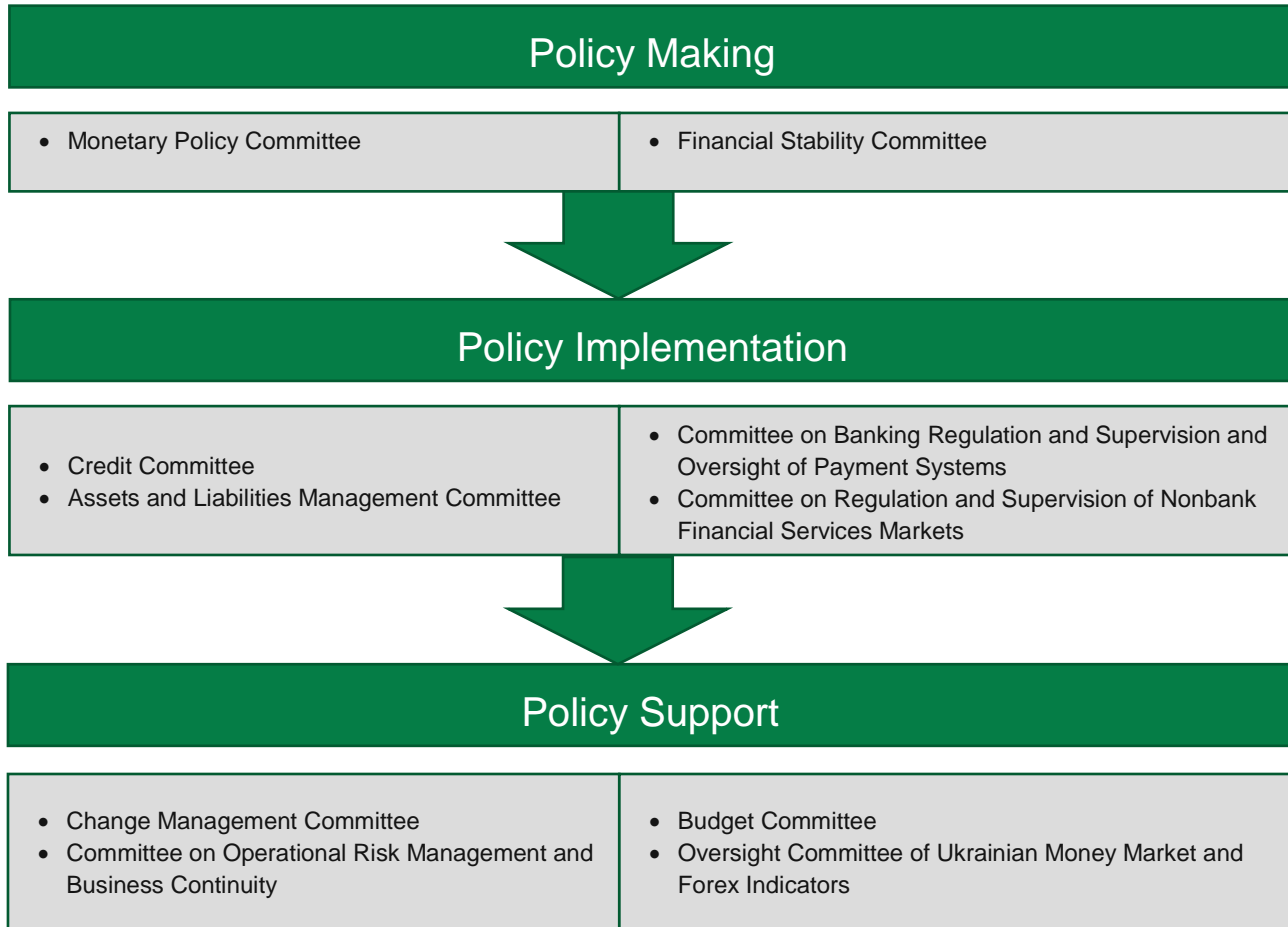
occupational, fire and environmental safety functions at the NBU and to enhance the control over their execution under the laws of Ukraine.

- With the aim to improve the distribution of NBU units among the reporting lines in the NBU organizational chart, a new distribution of NBU units among the reporting lines was established. The NBU organizational chart consists of the following reporting lines: General Block, Financial Stability, Prudential Supervision, Monetary Stability, Market Operations, Payment Systems and Cash Circulation, Finance, Administration and Operations. The new reporting line Financial Stability was established to strengthen the methodology of the financial sector regulation. The distribution of certain NBU units among the reporting lines was changed..

1.4. Structure and Composition of Management Bodies

As of 31 December 2022, the NBU Board has ten special committees. The structure of the committees covers all key activities of the NBU that require collective decisions. The committees fall into three main groups shown in Chart 2.

Chart 2. Structure and composition of corporate governance bodies



Mandate of NBU Board Committees

Monetary Policy Committee. An advisory body established to facilitate the exchange of information and opinions regarding the development and implementation of monetary policy. The main tasks of the Committee are:

- formulating the principles of, and conducting, monetary policy with the purpose of meeting the objectives and performing the tasks set forth in Ukrainian laws, Monetary Policy Strategy, and Monetary Policy Guidelines
- developing draft proposals on monetary policy objectives and benchmarks
- using monetary policy instruments.

Financial Stability Committee. A consultative and advisory collegial body that develops proposals and recommendations for the formulation of principles and implementation of macroprudential policy to ensure financial stability. The main tasks of the Committee are:

- identifying potential systemic risks threatening the financial stability, and preparing proposals on minimizing their adverse impact
- developing recommendations on use of macroprudential policy, their alignment with measures of monetary and

macroprudential policy, and monitoring of their implementation

- ensuring interaction between the NBU units in developing recommendations on financial stability.

Credit Committee. A consultative and advisory collegial body established to consider/review the issues and provide recommendations to the NBU Board concerning:

- lending to banks for the liquidity support except for the operations with the use of standard tools for the banking system liquidity regulation, and to the Deposit Guarantee Fund
- provisioning (release) and use of reserves to cover financial risks related to the NBU assets impairment (including loans, securities), except for receivables
- debt workout of the banks classified as insolvent under loans issued by the NBU
- methodology and management of credit risk assessment (collateral appraisal) under NBU's transactions.

Assets and Liabilities Management Committee. A collegial body mandated by the NBU Board to make decisions concerning the management of assets and liabilities, including Ukraine's gold and foreign exchange (international) reserves, to monitor risks, and to deliver financial results on operations with the NBU's assets and liabilities. The main tasks of the Committee are:

- formulation and implementation of the policy of efficient assets and liabilities management, including international reserves
- definition and implementation of the NBU investment strategy under transactions on international reserves allocation
- definition of actions on open markets
- definition and implementation of policy of management of the international reserves financial risks and the NBU market risks
- monitoring of market risks and financial performance under transactions with the NBU assets and liabilities.
- implementing the measures for prevention of crimes and offences in the banking system
- assisting in improvement of the legal framework on banking regulation and supervision, currency supervision, state regulation and supervision of financial monitoring, supervision over compliance with the sanctions laws, oversight of payment systems by initiating new and amending the applicable laws of Ukraine and NBU regulations
- approval, rejection to the appointment of the CEO (except for the Chairman of the Board) of a bank or a foreign bank's branch, chief risk officer, chief compliance officer, head of the internal audit unit (candidates for positions), employee in charge of financial monitoring of a bank or a foreign bank's branch; taking a decision on fitness or unfitness of the CEO (except for the Chairman of the Board), chief risk officer, chief compliance officer, head of the internal audit unit, employee who is a member of the board in charge of financial monitoring of a bank or a foreign bank's branch to the qualification requirements established in the laws of Ukraine and NBU regulations regarding independent director and/or independence requirements to members of the supervisory board of a state-owned bank, and/or requirements of Article 7 of the Law of Ukraine *On Banks and Banking*

Committee on Banking Regulation and Supervision and Oversight of Payment Systems. A collegial body mandated by the NBU Board with special powers on banking regulation and supervision, currency supervision, state regulation and supervision of financial monitoring, and oversight of payment systems. The main tasks of the Committee are:

- ensuring stability and reliability of the Ukrainian banking system and protection of interests of banks' depositors and other creditors
- solving priority issues of supervision over banks, their standalone units and branches of foreign banks, and activities of the Ukrainian banking sector
- identifying trends in the banking system development and submission of respective proposals to the NBU Board (if needed)
- ensuring work coordination of the NBU structural units in banking supervision, including improvement of information flows, further development of procedures for prompt and efficient decision-making and response to the banks' activities
- imposing corrective measures/sanctions for violations of the banking, currency laws of Ukraine, Ukrainian laws on financial monitoring, NBU regulations, including the regulations setting the restrictions for transactions that violate/intend to violate the laws, assist or may assist to bypass/avoid the restrictions established by personal special economic and other restrictive measures (sanctions) (hereinafter referred to as the "sanctions laws"), NBU requirements set pursuant to Articles 66, 67 of the Law of Ukraine *On Banks and Banking*, Ukrainian laws on protection of critical infrastructure, cybersecurity, and information security, on protection of consumer rights in financial services, including the requirements to interaction with consumers when settling the outstanding debts (requirements on ethical conduct), or in the case of the banks' risky operations threatening to the interests of depositors or other bank's creditors, as well as in the case of applying by the foreign states or interstate associations, international organizations of sanctions to banks or qualifying holders in the banks that threaten the interests of depositors or other bank's creditors, and/or banking system stability
- application of corrective measures for violation of the laws of Ukraine that regulate the payment market, and NBU regulations

Committee on Regulation and Supervision of Nonbank Financial Services Markets. A collegial body to which the NBU Board delegated special powers on supervision over nonbank financial services market participants and regulation of activities in the markets of nonbank financial services, in the sphere of protection of consumer rights in financial services, currency supervision, state regulation and supervision in financial monitoring. The main tasks of the Committee are:

- ensuring stability and reliability of nonbank financial markets of Ukraine
- protection of consumer rights in nonbank financial services
- solving issues of supervision and regulation of the Ukrainian markets of nonbank financial services, including in the area of consumer loans regarding the collection agencies
- defining development trends of nonbank financial services markets and submission of respective proposals to the NBU Board (if needed)
- ensuring work coordination of the units in supervision over the nonbank financial markets, improving information exchange, further development of the procedures for prompt and efficient decision-making and response to the operations in nonbank financial markets, including consumer lending as regards the activities of collection agencies

- applying corrective measures/penalties for violation of laws on nonbank financial services, protection of consumer rights in nonbank financial services, currency legislation, laws on financial monitoring, on applying and monitoring of efficiency of the applied special personal economic and other restrictive measures (sanctions), including the NBU regulations, by the following supervised entities:
 - legal entities/individuals providing one and more financial services, other services (transactions) related to provision of financial services, except for banks and subjects of payment systems oversight
 - collection agencies, nonbank financial institutions that grant loans and are new creditors
 - nonbank financial groups and institutions listed in the NBU regulations on organization and conducting supervision in the area of financial monitoring, currency supervision, supervision on the issues related to implementation and monitoring of personal special economic and other restrictive measures (sanctions)
- promoting the improvement of the legal framework for regulation and supervision of nonbank financial markets, currency supervision, state regulation and supervision in the area of financial monitoring, protection of consumer rights in nonbank financial services, provision of recommendations on amending the NBU regulations
- ensuring exercising of the NBU functions in the area of registration and licensing of participants of nonbank financial services markets
- ensuring exercising of the NBU functions in the area of protection of consumer rights in nonbank financial services.

Change Management Committee. A collegial consultative and advisory body of the NBU Board established to manage project activities at the NBU, with the purposes of implementing changes to build a modern, institutionally capable central bank and financial sector, including the Ukrainian banking system. The main tasks of the Committee are:

- management of the strategic initiatives implementation within the NBU Strategy, Financial Sector Strategy, and functional strategies that meet the criteria and attributes of the project activities, or those implemented within the changes to the NBU processes without launching the respective projects
- approval for introduction of new information systems and technologies, software complexes implemented within the project activities
- consideration of introduction of the innovative financial products/services at the NBU.

Committee on Operational Risk Management and Business Continuity. A collegial consultative and advisory

body established to coordinate the operational risk management, organize the NBU's business continuity management system, and to establish the system of internal control and development of the culture of operational risk management at the NBU. The main tasks of the Committee are consideration and provision to the NBU Board of recommendations/proposals on operational risk management, business continuity management, organization of the NBU internal control system.

Budget Committee. A collegial consultative and advisory body set up to ensure the professional discussion of the issues related to the NBU's supporting activities, with the ultimate goal of improving the quality of managerial decisions. The main tasks of the Committee are:

- promoting formation and implementation of the NBU policy aimed at enhancing the efficiency of its financial resources management
- ensuring the cost management, including the budgeting process and its integration with the strategy planning process for development of an integral system on the NBU's activities management
- promoting implementation of the NBU cost management process to enhance the economic feasibility assessment when making managerial decisions in the NBU's financial and economic activities.

Oversight Committee of Ukrainian Money Market and Forex Indicators. A collegial advisory body established to share information and opinions on definition, calculation, and publication of the Ukrainian Money Market and Forex indicators the oversight of which is performed by the NBU. The Committee's task is to resolve and discuss issues related to the definition, calculation, and publication of indicators.

In 2022, the structure of the NBU's committees remained unchanged.

Mandates of the NBU Council committees

The NBU Council shall establish the **Audit Committee** to assess reliability and efficiency of the internal control system in the NBU, completeness and accuracy of its annual financial statements. The Audit Committee is an advisory body of the NBU Council and operates on the basis of the regulation approved by the NBU Council.

Monetary Policy and Financial Stability Committee of the NBU Council is an advisory body of the NBU Council and operates on the basis of the regulation approved by the NBU Council. The main task of the Committee is development and submission of draft decisions and other materials for the NBU Council consideration pursuant to the NBU Council Rules of Procedure.

1.5. Process and Project Management

Assessing NBU's Process Management Maturity

NBU's assessment of process management maturity is conducted in compliance with Business Process Maturity Model (BPMM). NBU's process management maturity is one of the key indicators of its performance and an important element of the strategic planning roadmap, since operational efficiency depends on the extent to which the NBU processes are known, agreed upon, brought to the attention, understood, measured and supervised.

In 2022, the NBU's process management maturity level is 3.76 points out of 5 and is defined as "Standardized" approaching "Predictable" according to the BPMM. The said maturity level was achieved due to consistent and systemic work of all NBU employees on the processes.

NBU has devised an action plan aimed at increasing the process maturity level, streamlining processes and achieving the planned level of their efficiency.

Developing Project Management

In 2022, the focus of project management was mainly on prompt response to changes driven by the outbreak of a full-scale war in the country and coordination of project participants.

An operational audit of NBU's projects portfolio was conducted in order to understand the possibility of their further implementation due to scarcity of resources, both human and financial, brought by martial law. Overall, 20% of the projects were suspended. As for the other projects, the planning was updated and resources were redistributed, albeit their implementation is underway.

In the meantime, the projects were additionally synchronized (as regards goals, key results and deadlines) with the NBU strategy documents, which were also checked to see whether the tasks are relevant in view of the impact of martial law.

NBU also continued improving the methodology and approaches to project management. Specifically, the control was strengthened over the expected effects of the project's product, in particular over meeting financial indicators that are planned at the beginning of each project. Such an approach will enable us to more clearly manage product expectations and to more quickly adjust the actual status of the project's product in the event of any discrepancies.

In addition, in 2022 the NBU ensured that the risks that arose during the projects were timely monitored and addressed through the work of Project Management Teams and Change Management Committee, which helped keep the pace of the projects' implementation.

1.6. Impact of Economic Conditions on the NBU's Financial Position and Performance

In 2022, the Ukrainian economy was adversely affected by the full-scale war unleashed by Russia. In early 2022, the economy continued to grow thanks to the bumper crops of the 2020/2021 marketing year and further increases in consumer and investment demand. However, the risks of military aggression by Russia had an adverse impact on economic activity, increased the depreciation pressure on the hryvnia and made accessing foreign capital markets more difficult.

After 24 February 2022, business activity in Ukraine fell sharply because of Russia's full-scale attack. The hostilities led to significant destruction of infrastructure and industrial capacity, the disruption of supply and production chains between the regions and the rest of the world, and large-scale population migration. In March, active hostilities affected 10 oblasts of Ukraine and the city of Kyiv, which previously jointly accounted for around 55% of the country's GDP. A sharp decline in economic activity was also seen in relatively peaceful regions. As a result, according to a flash assessment by the State Statistics Service of Ukraine (hereinafter the SSSU) (ukrstat.gov.ua), the reduction in real GDP in Q1 amounted to 15.1% compared to the same quarter of the previous year, and deepened to 37.2% in Q2.

However, by the end of Q2 economic activity had already begun to recover, to some extent, from the shock of the earliest months of the war. Despite the difficult and changing

conditions, businesses and households demonstrated the ability to adapt rather quickly to wartime challenges. According to the flash business surveys conducted by the NBU once every two weeks during March and May, the share of companies that stopped/suspended their activities shrank to about 15% at the end of May, down from 35% in mid-March. The revitalization of economic activity was facilitated by: the liberation of part of the occupied territories (at the end of 2022, regions that previously produced 10%–12% of GDP remained occupied); the opening of the grain corridor; the removal of supply chain disruptions; the relocation of businesses to relatively safe regions; the expansion of online services; the reorientation of a number of activities towards military needs; the return of some of forced migrants to their places of permanent residence; and measures by the government to support businesses and households. However, the recovery was restrained by the destruction of production facilities and infrastructure, weaker consumer and investment demand, supply chain disruptions (in exports above all, due to impaired access to the country's Black Sea ports), and harvests that were lower than the previous year's. For instance, the decrease in consumer demand was caused by the difficult financial situation of households under conditions of reduced employment, significant migration abroad, and a shift in Ukrainians' consumer preferences in emergency conditions. Investment slumped, especially in the private sector. The main reasons for this include uncertainty, high security risks, falling effective demand, and companies'

weaker financial performance. Investment was partially driven by purchases and deliveries of weapons and hardware for Ukraine's Armed Forces. As a result, although the decline in real GDP in Q3 remained deep, it slowed to 30.8% compared to the same quarter of a year ago (according to a flash assessment by the SSSU, ukrstat.gov.ua).

The economic recovery would likely have continued into Q4 2022, had it not been halted by Russian attacks on Ukraine's energy infrastructure, which triggered power shortages and worsened the business outlook. Although a significant number of businesses adapted to power outages by actively purchasing electricity-generating hardware, not everyone was able to do so due to the specifics of their production processes and limited financial resources. As a result, the decline in real GDP deepened to 31.4% compared to the corresponding quarter of the year before (according to a flash assessment by the SSSU, ukrstat.gov.ua). In general, according to the NBU's calculations, which were based on the assessments by the SSSU, real GDP in 2022 declined by 29.2%, which was the deepest economic slump in Ukraine's history.

The full-scale war also triggered a humanitarian crisis in Ukraine. Security risks, the death of loved ones, physical and psychological injuries, the loss of or damage to housing and property, disruption to education, problems with access to healthcare and even basic human needs (water, food, etc.), especially in the occupied territories, have been affecting the lives of a significant number of Ukrainians. All of this led to forced migration, including abroad, at a scale unheard-of since the Second World War. Specifically, as of late 2022, there were about 8 million Ukrainians outside of Ukraine, according to UN data. The number of internally displaced persons (IDPs) was also significant: there were about 5.5 million IDPs in Ukraine at the end of 2022, according to the International Organization for Migration (IOM). Mass migration abroad led to a drop in domestic consumption and a decrease in the labor supply. The significant number of IDPs has been increasing the pressure on the domestic labor market.

The labor market went into deep recession. At the onset of the full-scale war, although businesses closed and economic activity slumped, a large number of businesses tried to keep staff numbers and salaries unchanged. Over time, however, the war forced businesses to optimize costs and revise their hiring plans. As a result, the number of vacancies significantly decreased. With the pickup in economic activity that took place between May and September 2022, the labor market also recovered, but the number of job openings remained significantly lower than before the full-scale war of aggression. At the same time, although a significant number of Ukrainians migrated abroad, those who stayed were actively looking for work. As a result, the unemployment rate remained high. During the year, the Ukrainian labor market was dominated by employers, forcing job seekers to accept jobs that were outside their profession and that paid lower wages. However, according to available data, nominal incomes returned to growth in H2 2022. To a large extent, this

was achieved through increases in the volume of budget sector payments, including military allowances. There was significant support from social transfers, IDP payments and other social benefits. But taking into account high inflation, households' real incomes decreased throughout 2022.

Fiscal policy expectedly and justifiably became expansionary in 2022, supporting households and softening the blow that the full-blown war had dealt the economy. The consolidated budget deficit reached a historic high of more than UAH 844 billion, or UAH 1.325 trillion after grants are excluded from revenues (more than 17% of GDP or over 27% of GDP, respectively, according to NBU estimates). The budget shortfall resulted from the sharp narrowing of the funding base and the unprecedented increase in expenditures. In particular, the reduction of the funding base was due to the considerable contraction of economic activity amid large-scale war and the introduction of temporary emergency tax benefits after Russia began its invasion. At the same time, strong financial performance in 2021, businesses' adaptation to new conditions, significant military allowances, the relatively quick recovery of imports, inflationary exchange rate effects, and a gradual rollback of previously introduced tax benefits supported tax revenues, the overall decline of which in 2022 ended up being quite moderate (7.6% yoy). However, nontax revenues (which increased in part due to charitable contributions and humanitarian aid) and international grants (more than UAH 480 billion or USD 14.2 billion) compensated for the reduction in tax revenues and ensured there was an increase in consolidated budget revenues of more than 32% (by 3.2% excluding grants). Consolidated budget spending rose by more than 50% compared to 2021. Defense and security, along with social programs to support households, are expected to be the main spending items in 2022.

The massive budget needs in 2022 were primarily funded with international financial aid (over USD 32 billion). However, the NBU also provided significant support, especially in March–June, when international assistance inflows were irregular and did not have clearly defined volumes: the central bank purchased a total of UAH 400 billion worth of domestic government debt securities in 2022.

Public and publicly guaranteed debt surged both in absolute terms and as a ratio of GDP (to more than 80% of GDP, by NBU estimates). On the one hand, this monetary financing effort was driven by a number of objective reasons, such as significant budgetary needs, an exchange rate revaluation of FX debt, and a significant drop in GDP. On the other hand, it was necessitated by administrative decisions: state guarantees to support businesses, and the issuing of domestic government debt securities to capitalize the [State Financial Housing Company PrJSC](#).

The current account ended the year 2022 in surplus (USD 8 billion, up from a deficit of USD 3.9 billion in 2021). The key drivers behind its formation were significant amounts of international financial aid in the form of grants, as well as a ban on dividend payments and a reduction in reinvested

earnings. In addition, remittances showed their usual resilience to crises, declining by only 9%, to USD 12.8 billion, due to the active employment of forced migrants abroad. At the same time, the deficit in the trade of goods widened considerably (to USD 15.3 billion, up from USD 6.6 billion in 2021). Goods exports fell by 35.2% as a result of the blockade of Ukraine's sea ports, the destruction of production facilities, and damage to transport and energy infrastructure. These factors had the most significant impact on the supply of metals-and-mining products, which, together with the narrowing of external demand and the increase in the cost of logistics, led to a decline in the export of metallurgical products (by 62.6%) and ores (by 56.7%). The launch of the grain corridor slightly slowed the fall in food exports, which at the end of the year were down by 15.5%. However, the increase in food supplies was restrained by the decreased harvest of staple crops and the deliberate delaying of ship inspections by Russian representatives. On the other hand, goods imports decreased more moderately (by 19.4%) compared to exports due to lower dependence on sea transport, the gradual recovery of domestic demand, preferential customs clearance being given to a wide range of goods in Q2, and higher prices for energy. Specifically, energy imports declined by only 8.9%. In particular, the value of imported petroleum products rose by 63% due to a significant increase in their prices, which was driven, among other things, by the successful reorientation of purchases from Belarus and Russia to the European market. On the other hand, natural gas imports fell by 51.2% due to a lack of funds. Coal imports plunged by 52.7% because of the destruction of power generation facilities and the weakening of demand from metallurgy. Record purchases of equipment to ensure energy independence at the end of the year slowed the drop in imports of engineering products (to 32.1% for the year). The reduction in imports of food and industrial products was also moderate (22.7% and 10.1%, respectively), primarily due to the significant needs of the defense and security forces of Ukraine. In addition, the services trade landscape underwent significant change. Exports of services declined by 12.4%. The blockade of Ukraine's sea ports and the suspension of civil aviation flights, as well as the reduction of gas transit volumes, caused a drop (by 28.3%) in exports of transport services. Exports of tolling services fell by 42.1% after some factories suspended operations at the outbreak of the full-scale war, and demand from European automotive producers waned. In contrast, exports of IT services continued to grow (by 5.8%) thanks to the higher flexibility of this sector and its adaptation to work amid hostilities and power shortages later in the year. At the same time, services imports surged (by 85.7%) as people relocated abroad en masse, boosting the import of travel-category services (to more than three times the level of a year ago). As a result, the trade in services in 2022 moved into deficit (USD 10.7 billion, down from a USD 4 billion surplus in 2021), which is an unusual circumstance for Ukraine.

Risks of military aggression by Russia at the beginning of the year, and their materialization with the full-scale assault, caused financial account outflows of USD 11.1 billion. Specifically, capital outflows from the real sector were

preceded by the accumulation of FX cash outside banks and the buildup of nonresidents' obligations under trade loan agreements. In the banking sector, capital outflows were fueled by the growth in assets in the form of foreign currency and deposits. FDI significantly declined in volume, to USD 0.5 billion, as a result of the war. All of the FDI came from the reinvested earnings of banks with foreign capital. The private sector sustained a total of USD 24.2 billion in capital outflows, a loss that was only partially offset by inflows to the public sector (USD 13.2 billion) thanks to international financial aid. However, with the current account surplus being significant, the balance of payments recorded only a moderate deficit (USD 2.9 billion). Thanks to that, and to disbursements from the IMF (USD 2.7 billion), international reserves edged only slightly lower to USD 28.5 billion at the end of the year, and up from when the full-scale invasion started.

According to December data, inflation accelerated to 26.6% yoy in 2022, fueled mainly by supply-side factors caused by Russia's full-blown war against Ukraine. However, even in such difficult conditions, inflation in Ukraine remained manageable, and over the last three months of the year the inflation rate remained practically unchanged in annual terms.

During the year, consumer prices in Ukraine were under significant upward pressure as business costs surged and supply plunged due to the destruction of production capacities, production chain disruptions, and supply chain disruptions. The energy crisis was a significant factor in generating inflationary pressure at the end of the year. Global processes were also a significant factor in these pressures: many countries saw inflation hit multiple-year highs, and some advanced economies struggled to tackle price growth, which escalated into the double digits.

Another factor was the pass-through effect on prices from the hryvnia's depreciation in early 2022 and the adjustment of the fixed official hryvnia-to-dollar exchange rate in late July. Overall, however, the fixed exchange rate regime made a positive contribution to the controllability of inflationary processes, serving as a nominal anchor that stabilized expectations. Inflation and its expectations were restrained by the freezing of utility tariffs and the gradual easing of supply chain disruptions. Although the crop harvest in marketing year 2022/2023 came in lower, the supply of agricultural products was sufficient to meet Ukraine's domestic needs. Moreover, although the grain corridor was operating, export prices for Ukrainian crops and other agricultural products remained low due to logistical difficulties and high risks. This, in turn, restrained price growth on the domestic market. Cheaper feed partially offset the impact of a decrease in livestock numbers and the effects of electricity shortages on prices of animal farming products.

Inflation was also restrained by weak consumer demand, as well as by changes in its structure as households' spending priorities shifted. In particular, the growth in prices for nonstaple goods and services decelerated. The rise in inflationary pressure was also restrained by the high

adaptability of Ukrainian businesses to difficult conditions, and by the liberation of more of the country's territory. The liberation of Ukrainian territory, specifically part of Kherson oblast in Q4, made it possible to eliminate supply chain disruptions that had prevented better-quality and cheaper goods from coming in from other regions of Ukraine, and to ease price pressures in what had previously been russian-occupied territory.

Due to the large-scale war and the imposition of martial law in Ukraine, the NBU had to take a wartime approach to monetary policy. As the war grinds on, the central bank's first order of business is to ensure that the banking and financial systems operate reliably and stably, that Ukraine's military needs are met in a manner that maximizes the country's defense capabilities, and that public finances and critical infrastructure continue to function smoothly. The main priorities and principles of monetary policy that will operate during martial law, and until the economy and financial system return to business as usual, are determined by the [Monetary Policy Guidelines during Martial Law](#), which the NBU Council approved on 15 April 2022.

When Russia launched its full-scale war of aggression, the NBU had to prevent the destabilization of the FX market. The regulator fixed the official hryvnia exchange rate against the U.S. dollar at the level of 24 February 2022 and imposed a number of temporary restrictions on FX transactions and cross-border capital flows. The fixed exchange rate and FX interventions during the year became the NBU's key instruments for supporting macrofinancial stability. As the efficiency of the monetary transmission mechanism decreased in February–May, when economic agents were reeling from the psychological shock of the full-scale invasion, the NBU refrained from making decisions to change the key policy rate during those months, leaving it at 10%.

However, as the economy adapted to the war and individuals and businesses regained the ability to make decisions based on market-driven incentives, the NBU returned to an active monetary policy and hiked its key policy rate by 15 pp, to 25% per annum in June 2022. This step was aimed at protecting households' income and savings in the hryvnia, raising the attractiveness of hryvnia assets, easing pressure on the FX market, and thus enhancing the NBU's capability to maintain the stability of the exchange rate and restrain inflation processes in wartime.

In July 2022, the central bank adjusted the official hryvnia exchange rate by 25% and fixed it at a new level. This measure was warranted by the seismic shift in Ukraine's economic landscape as the war raged on, the dollar's appreciation against other currencies, and the increase in the hryvnia-to-dollar nominal effective exchange rate. This step was necessary to make Ukrainian producers more competitive, harmonize exchange rate conditions for various groups of businesses and households, and support the economy's resilience in wartime.

The adjustment of the official hryvnia exchange rate, coupled with other measures to match FX supply and demand, helped ease FX market imbalances. By keeping the key policy rate elevated since June and by announcing plans to tighten reserve requirements for banks in 2023, the NBU aimed to increase the attractiveness of hryvnia assets, maintain exchange rate stability, keep price rises in check, and ease inflationary pressure.

In line with the [amended legislation](#), the NBU, for the duration of martial law, was given the power to purchase government debt securities to ensure the continuity of budget expenditures during Russia's full-scale war against Ukraine. The purchases of war bonds by the NBU made it possible to support Ukraine's defense capabilities and ensure the uninterrupted operation of critical infrastructure and the public finance system overall. However, to mitigate risks to macrofinancial stability, in H2 2022, this financing method was limited to UAH 30 billion per month. Overall in 2022, the NBU purchased UAH 400 billion worth of war bonds. The pursuit of this monetary financing strategy helped stabilize expectations and ease pressure on the FX market.

Despite the challenges posed by the full-scale war, the NBU remains committed to pursuing an inflation-targeting regime with a floating exchange rate and to adhere to the ban on the monetary financing of the state budget. As the Ukrainian economy and financial system return to normal, the NBU will resume, as soon as possible, the pursuit of the monetary policy principles and instruments stipulated in its [Monetary Policy Strategy](#).

Given the specifics of the functioning of a wartime state budget, the banking system's liquidity stood at a high level during 2022: the average daily balances of current accounts and certificates of deposit increased to almost UAH 481 billion in December 2022, which was more than twice the level of December 2021. This happened both due to the growth in average daily balances on bank accounts (to UAH 78 billion) and in the principal amount of certificates of deposit (to UAH 403 billion). Significant volumes of excessive liquidity dampened the impact of the transmission mechanism.

Full-scale hostilities led to the deterioration of Ukraine's debt ratings. On 25 February 2022, Moody's confirmed Ukraine's credit rating at B3, while Fitch Ratings and Standard & Poor's downgraded it to CCC/C and B-/B respectively. In later rating reviews, Moody's on 4 March 2022 downgraded Ukraine's credit rating to Caa2, and Standard & Poor's on 11 March 2022 affirmed the rating at B-/B. In the following reviews held in Q2 2022, Ukraine's sovereign ratings deteriorated further: Standard & Poor's downgraded the rating to CCC+/C on 27 May, and Moody's set the rating at Caa3 on 20 May 2022.

For Fitch Ratings and Standard & Poor's, the first and the second value of the FX debt rating refer to ratings for long- and short-term debt respectively. For Moody's, this is the rating of long-term FX debt.

The ratings continued to deteriorate at the start of Q3, in particular on the back of the negotiations over postponing for two years the redemption of sovereign Eurobonds and related interest payments. Standard & Poor's downgraded the credit rating to CC/C on 29 July 2022 and to SD/SD on 12 August. Fitch Ratings revised its rating downward to C/C on 22 July 2022 and to RD/C on 12 August. In August 2022, changes to the conditions of issuance and placement of government financial instruments were successfully agreed with holders of sovereign Eurobonds and government derivatives (GDP warrants). After that, Ukraine's ratings improved slightly: Fitch Ratings on 17 August raised the credit rating for FX debt to CC/C, and Standard & Poor's on 19 August upgraded Ukraine's rating to CCC+/C. In Q4 2022, international rating agencies did not revise Ukraine's sovereign credit ratings.

Changes in Ukraine's operating and political environment in 2022

In late 2021 through early 2022, mounting geopolitical tensions over the buildup of Russia's military presence on the border with Ukraine affected the expectations of the various groups of businesses and fueled depreciation pressure on the hryvnia as Ukrainian assets declined in value. Russia's full-scale invasion of Ukraine broke out on 24 February 2022 and has been raging on ever since. Part of Ukraine's territory has been occupied. In response to Russia's armed aggression, Ukraine's president issued a decree that introduced martial law in Ukraine. Thanks to the heroic efforts of the Armed Forces of Ukraine and other defense forces and special government authorities involved in repelling the aggressor, some of Ukraine's territory was liberated from Russian invaders during the year. Kyiv, Chernihiv and Sumy

oblasts were fully de-occupied, most of Kharkiv Oblast was liberated, and part of Kherson oblast and other areas.

Russia's war of aggression violates all applicable provisions of international law regarding the protection of nature, sustainable development, humanitarian law, and the fundamental moral standards and principles of human coexistence. The actions of the Russian military have wrought unprecedented damage to Ukraine's production facilities, housing, and infrastructure. The aggressor state has caused a massive, critical, and irreparable loss of civilian life and health in Ukraine. The Russian invaders have been killing Ukrainian military personnel. They have forced an exceptionally high number of Ukrainians to relocate, both within the country and abroad, as they fled their homes in an exodus of a scale not seen since the Second World War. In late 2022, Russia resorted to terrorist attacks on Ukraine's energy infrastructure, leading to a shortage of energy and restrictions on power, heat, and water supplies to households and businesses. These disruptions were especially harsh during winter, with companies and individuals in Ukraine struggling to do business and exist without suffering damage to their financial standing, health, and welfare. As the war grinds on, the risk of missile attacks remains high for the entire country. Parts of Ukraine are still under Russian occupation, and demographic and economic losses stand to increase.

The further impact of security risks and the situation on the frontlines may have a mixed effect on the NBU's performance and financial standing. However, the magnitude of this effect cannot be gauged accurately at this point. The NBU's leadership is closely monitoring current developments and is taking the necessary action to mitigate the influence of adverse factors.

1.7. Impact of Global Covid-19 Pandemic on the NBU's Operation

In order to ensure its operational continuity, the NBU took the following preventive measures to prevent Covid-19 infection from being brought in and spread in the NBU's premises:

- created an emergency operations center based on NBU units in order to prevent Covid-19 infection from being brought in and spread in the NBU's premises
- provided employees with personal protective equipment
- arranged procurement of personal protective equipment (protective masks, disinfectants and other necessary materials)
- arranged temperature screening and disinfection of employees and visitors' clothes at the entrance to buildings

- arranged premises for medical personnel at the sites of the NBU (in Kyiv)
- optimized the program of public events in order to minimize the participation of NBU employees in these events as organizers or attendees (both in Ukraine and abroad)
- approved procedure and measures to prevent the virus spread in the NBU's premises in the event of confirmed COVID-19 cases
- organized workplace vaccination for NBU employees and their families in vaccination centers and NBU's premises.

In 2021-2022, the following personal protective equipment was procured/used:

Name	Unit of measurement	2022	2021
Protective masks	pcs	194,000	804,043
Protective gloves	pair	-	30,500
Disinfectants	liters	3,200	4,689

NBU Measures Related to Fallout from Global Covid-19 Pandemic

In order to ensure its operational continuity and safe working conditions and prevent the spread of severe acute respiratory syndrome COVID-19 caused by a 2019-nCoV coronavirus, the NBU introduced a remote work for its employees as a form of labor organization where employees are doing their jobs from a location other than a central office or outside the premises for the period determined by the Cabinet of Ministers of Ukraine.

In order to provide the operational HR support to the NBU employees, the process of switching to the remote work mode was automatized.

For those NBU employees, who are unable to work remotely due to the nature of their job duties and whose work in the NBU's premises is suspended for the period of the imposed

quarantine, the NBU established in its regulations a procedure for introducing employment suspension of NBU employees in response to the spread of COVID-19. Remuneration for the period of suspended employment is paid in line with Ukrainian laws: in the amount of two-thirds of the employee's monthly salary (tariff rate).

The NBU kept daily statistics on the COVID-19 cases and traced contacts according to the action plan approved in regulations.

In 2022, trainings on remote work mode were held, including on information protection. The employees were granted access to all materials required for ensuring the continuity of the work in this format.

In 2022, the NBU team suspended a charity project, which was launched as early as in April 2020 to help Ukrainian medical institutions fight the coronavirus.

1.8. Impact of russia's Invasion on the NBU's Operation

In the context of large-scale military aggression, the need for uninterrupted cash supply of the Ukrainian economy has become particularly important. To that end, the NBU transferred cash stocks to authorized banks for storage in accordance with the terms of the agreements and established cash stock limits. At the same time, to mitigate the risks of cash loss, the NBU minimized the limits on the NBU's cash reserves stored at authorized banks' branches in regions where active hostilities were taking place or where there was a significant probability of occupation, while the cash received from the NBU was immediately deposited into the banks' cash desks to make payments to the public and the military.

In 2022 the NBU supplied cash to banks without restrictions to ensure the continuity of cash circulation processes amid increased demand for cash at the beginning of the large-scale military aggression. The NBU also introduced a requirement that ATMs be refilled with cash without restrictions.

Along with the above, the NBU decentralized the storage of the NBU's emergency funds to ensure the safety of cash and minimize the risk of its loss.

The NBU eased a number of requirements for banks to organize cash handling, storage, and transportation, which facilitated the fast transfer of cash from regions under threat of occupation to safer areas.

To ensure a balanced regulation of cash circulation under martial law, the NBU has introduced, among other things, UAH 100,000 per day limit on hryvnia cash withdrawals from client accounts, with certain exceptions (payment of salaries, certain social security payments, and more).

The NBU allowed banks to receive cash free of charge for subsequent payouts to the Armed Forces of Ukraine (after

the bank transfers cashless funds from the correspondent account and states the intended use of cash).

The NBU developed and implemented an action plan to ensure the continuity of the banking system's operation, as an important segment of critical infrastructure, in the face of long-lasting power outages caused by attacks on energy infrastructure during russia's air raids.

The NBU initiated the creation and operation of POWER BANKING, an integrated network of bank branches that will provide customers with the necessary banking services even during long-lasting power outages. By the end of 2022, this network included almost 1,450 branches equipped with alternative energy sources, backup communication channels, enhanced cash collection capabilities, and additional staff. In the event of a possible blackout, a certain list of basic and urgent banking services will be available to all customers of the POWER BANKING network, including cash withdrawals (via ATMs or at the bank's cash desk). In most branches of the POWER BANKING network, the initiative of "national ATM roaming" was also introduced, which provides customers with the opportunity to withdraw cash from their payment cards at any ATM of any bank to meet their current needs and build up a certain cash reserve.

The widespread use and popularization of a service known as "cash withdrawal at the retail cash desk" has become an effective measure to stabilize cash circulation, protect cash collectors, and reduce the volumes of counter cash transportation.

In the first weeks of russia's full-scale invasion, the NBU recommended that retailers, pharmacies, and gas stations ensure that customers could withdraw cash when making cashless payments at their cash registers. As of the end of 2022, thousands of retail outlets provided the "cash

withdrawal at the cash desk” service. Maximum amount of one-off cash withdrawal was UAH 6,000.

With the outbreak of a full-scale war, the NBU faced new huge communication challenges that required a systemic response.

The key task in the first days of the war was to prevent mass panic, in particular mass withdrawals of cash from ATMs or savings from bank accounts, which could disrupt the stable operation of the banking system, and to explain to the public and financial market participants the reasons and objectives of the regulator's anti-crisis measures. In addition, communication efforts aimed to:

- raise the effectiveness of the NBU's comprehensive efforts to put maximum financial pressure on the aggressor state to deprive it of additional sources for financing the military activities in Ukraine
- ensure maximum facilitation for the expansion of international financial assistance and support of our country in vital areas.

In order to carry out said tasks, the NBU communication team took the following measures in the earliest days of the war:

- switched all communication channels of the NBU to the 24/7 mode to ensure continuous communication under conditions of significant security risks. Additionally, the NBU took effort to:
 - send its daily newsletters to regional military administrations in order to inform the public in the regions
 - place publications in the media, create coverage on television, and hold round table discussions with NBU experts
 - share the NBU's news with the public through partners' communication channels
 - encourage other countries' central banks to publish on their websites the information on the terms for converting hryvnia cash into the local currency
 - play promo videos on the terms of financial services on screens inside train cars
 - communication support of charity campaigns to raise funds for the Armed Forces of Ukraine
 - raise public awareness on the new payment fraud schemes during martial law, holding educational webinars, creating learning materials for lessons in educational institutions.
- launch a unified information portal *Financial Defense of Ukraine* (<https://promo.bank.gov.ua/fin-defense/>) so that the public could always access the updated information on the operation of banks, their services, and all amendments in the currency regulation
- establish the real-time communication with the Presidential Office of Ukraine, public authorities, international donors, other central banks, the banking community, business representatives, and all-Ukrainian and international mass media.

Some NBU decisions required communication for the new target audiences:

- Ukrainians who were forced to flee abroad to escape the war
- volunteers who deliver the required equipment to support the army
- the IT sector, which has become one of the main source of FX inflows to Ukraine.

Such systemic communication helped ensure effective support of the regulator's activities during the war, minimize panic among the public, and ensure a stable operation of the financial system.

As far as the NBU's work with problem assets is concerned, the full-scale military aggression caused a temporary:

- suspension by the Deposit Guarantee Fund of the sale of assets (property) pledged as collateral by insolvent banks to the NBU
- suspension of enforcement proceedings to recover from guarantors the debt on refinancing loans granted to banks that are currently being withdrawn from the market through liquidation (without inventory of property, property valuation, etc.)
- suspension by the NBU of the sale of the property it acquired to pay off the banks' debts on the refinancing loans
- shutdown by the Ministry of Justice of Ukraine of access to the state registers of Ukraine while under martial law, in particular to the State Register of Property Rights to Immovable Property, the State Register of Encumbrances of Movable Property, the State Land Cadastre, the Unified State Register of Court Decisions, and more.

In view of the above facts, the NBU had to adjust downward its forecast debt repayment plan on refinancing loans previously granted to banks that are currently being withdrawn from the market by the Deposit Guarantee Fund through liquidation.

In addition, there is a significant risk of a decrease in the value of assets (property) pledged to the NBU or acquired by it, given the probability of their damage, destruction, or in connection with their location in the territories temporarily occupied by Russia and the loss of pledged items in connection with the illegal actions of the Russian military.

One of the measures taken to address the impact of the Russian aggression on the NBU's activities and to ensure the operational continuity was the adoption of administrative and regulatory acts of the NBU to:

- ensure, under martial law, prompt drafting and submission of proposals for legislative regulation of issues within the purview of the NBU to the authority with the right of legislative initiative for their subsequent

submission for consideration by the Verkhovna Rada of Ukraine

- regulate the procedure for drafting and adopting regulations and administrative acts of the NBU in urgent cases related to the introduction of martial law in Ukraine or some of its regions.

Due to Russia's armed aggression against Ukraine and to ensure the uninterrupted operation of the NBU Board Committees, the NBU decided to allow some NBU committees to consider issues that require discussion on a routine basis and to approve the list of issues to be considered by the NBU committees on a routine basis.

Due to the imposition of martial law in Ukraine in February 2022 and the materialization of a number of risks, both for the financial sector and the regulator, within the framework of the existing strategic goals, the NBU updated the measures necessary to implement the provisions of the NBU's strategic documents in accordance with the needs of wartime.

Some measures were suspended due to the loss of relevance or the impossibility of their implementation, while the implementation deadlines for other measures were extended. Also, new events were planned in the new context of realities.

At the same time, the NBU continued to create products for its customers that are grouped into six components of the NBU's value proposition:

- ensuring price stability
- regulating financial services market
- developing cash circulation and payment systems
- developing financial ecosystem
- organizational development
- developing Infrastructure and Corporate Administration.

The NBU aims to create a comprehensive and flexible system of strategic development management at the NBU in the face of rapid changes in the environment and needs of financial ecosystem participants in order to ensure that the NBU effectively implements its functions. To ensure effective implementation of strategic changes, the NBU carried out operational planning: draw up annual plans and define specific tasks for the NBU's units set out in strategic documents.

The NBU's operational plans for 2022 were approved in January 2022 and adjusted in July to meet the needs of wartime. In December 2022, the NBU launched the next operational planning cycle, which includes monitoring the implementation of plans for 2022 and starting planning for 2023. Despite the war, the NBU continued to roll out the operational planning concept. In the summer, the regulator partially synchronized operational and financial planning by identifying and providing for additional resource requirements in the operational plans to meet the planned goals and objectives.

Since the first days of hostilities, one of the NBU's main tasks has been to ensure the continuous operation of the NBU's information systems to sustain the uninterrupted operation of the Ukrainian banking system. To this end, the NBU's IT team ensured that a remote backup Data Processing Center (DPC) was put into operation as the main data center, organized backup workplaces, and provided them with the necessary technical equipment and access to information systems. As part of the NBU's overall business continuity plan, the NBU ensures that plans for recovery of all information resources of the first-level criticality are available and updated, and that they are tested at least once a year and, if necessary, more often (the NBU additionally tested the disaster recovery plans of critical information resources in a remote backup DPC). Taking into account the results of modeling various scenarios of negative factors, the NBU developed instructions for switching information resources included in the list of critical information infrastructure objects of the NBU between different DPCs, as well as instruction for employees on the algorithm procedure for their actions during a special period (martial law).

The NBU implemented a mechanism for secure backup connection of banks via VPN technology from cloud services to the NBU's information network using the Internet.

In order to minimize the risk of the operational failure of Ukraine's banking system as a result of Russian aggression, long-lasting power outages (blackouts), the NBU, together with systemically important banks, implemented an action plan to ensure the continuity of the banking system operation.

Measures are being taken to keep each of the NBU's backup DPCs constantly ready to operate as the NBU's main DPC.

The NBU information systems continuity is also maintained due to continual user support by Omnitracker system which is developed and improved by covering more aspects of assisting the NBU employees' activities. The NBU ensures timely (prompt) and qualitative servicing of its employees in cases requiring the interference of IT specialists in all premises of the NBU, including different regions of Ukraine.

Due to the imposition of martial law in Ukraine as a result of Russia's aggression and the aggravated situation in the Ukrainian energy system, which has a direct impact on organizing work of the NBU's units in the NBU premises, the NBU established an emergency operations center to organize the work of the NBU's units during martial law and developed an Action Plan for organizing the work of the NBU's units in the NBU premises, which provided for measures to maintain power supply to the critical infrastructure in the NBU premises, provide drinking and industrial water, organize the operation of canteens for employees, arrange premises for the NBU employees to stay after office hours and at night, rooms for the children, and more. In case of public transportation disruptions, additional transportation routes were developed to transport a critical group of employees to/from the NBU premises from/to designated assembly points.

The NBU purchased engineering and other equipment to equip the NBU's "invincibility points" in its premises in case of a blackout: folding beds with mattresses, sleeping pads, thermal pots, eurocubes for storing fuel and industrial water, hydraulic pumping stations, heaters, heat guns, fuel pumps, LED table desk lamps, tanks for drinking water, and composting toilets (portable cabins).

In order to ensure the continuity of the NBU's operations under martial law, the NBU has regulated the procedure for processing documents on employment relations.

Given that a significant number of the NBU's employees were deprived of the opportunity to work from office due to the Russian aggression, and many employees were forced to leave their places of residence due to threats to their lives and health, the NBU has regulated the specifics of processing personnel documents for the duration of martial law in Ukraine. Specifically, if it is not possible to use printed documents, ASKOD, or SAP Fiori, the NBU will process primary documents and/or information for preparing relevant administrative acts on labor issues sent by available means of communication.

Measures taken by the NBU allowed to promptly resolve urgent issues related to the hiring of employees involved in critical (urgent) processes, as well as to transfer, dismiss, grant all types of leave and military leave of absence to NBU employees, make timely salary payments, etc.

In 2022, the total cost of providing financial assistance to employees whose homes were damaged as a result of hostilities was UAH 307.4 thousand, including UAH 229.4 thousand at the NBU Head Office and UAH 78 thousand at the Banknote Printing and Minting Works.

In 2022, there was an increase in fund transfers to the NBU's internal fundraising account intended to support colleagues serving in the army through transfers from NBU employees. In addition, the NBU implemented many corporate volunteering projects.

Part 2. Strategy and Goals

2.1. NBU's Vision, Mission, and Corporate Values

Vision

The National Bank of Ukraine is a modern, innovative, open, and independent central bank that is a leader in the development of the financial ecosystem, cares about financial services consumers, is integrated into the European community of national central banks, and enjoys trust of the public and international partners.

Mission

NBU mission is to ensure price and financial stability with the goal of contributing to Ukraine's sustainable economic development.

Corporate Values

The NBU's operation is guided by five values:

patriotism: the NBU acts in the interests of the public and the state

professionalism: the NBU is focused on results, strives for excellence, and promotes an environment that inspires and supports innovation, development, and the spread of new ideas

transparency: the NBU is open, consistent and logical in decision making

integrity: the NBU is honest and principled, respects diverse ideas and opinions, and always complies with ethical business practices

partnership: the NBU supports dialogue and partnership, respects diverse ideas and opinions, has a shared vision and enjoys public trust, and its staff works together to implement the NBU's mission.

2.2. Current Trends and Challenges for the NBU

Russia's full-scale invasion of Ukraine and the inability to predict when hostilities will end significantly worsens Ukraine's investment attractiveness and economic expectations. As a result of the invasion, the country has faced challenges with the stability and independence of the energy system. Ukraine's economy has suffered a significant decline. International financial assistance has become a significant source of budget revenues, but the regularity of its inflows and the budget's dependence on international support will continue to pose major challenges. Weak domestic demand, destroyed businesses, and significant disruption to export logistics are some of the problems obstructing the way to economic recovery.

The ageing of the population will require fiscal and labor changes, and will spur competition in the labor market. The issue of labor migration is also vitally important today. The increase in the share of one-way migration of the youngest working-age individuals is especially disturbing. Declining household incomes and rising unemployment will impact demand for the banks' retail credit products and insurance services, as well as households' ability to repay existing loans. The number of persons in need of special care, obtaining a prosthesis, or psychological rehabilitation is growing.

In the coming years, economic development will be strongly influenced by digitalization factors on the back of the wider use of artificial intelligence, which will fuel demand for automation, robotization, the integration of services, and cybersecurity solutions. However, financial technology is vulnerable to network congestion, power and communication outages, and cyberattacks, which hamper consumers' access to financial services and increase the need for cash. The military-tech sector has developed rapidly in Ukraine, with tens of types of unmanned aerial vehicles and systems, developed mainly by civilians, now being used by the army.

Ukraine has obtained EU candidate status. Therefore, in terms of domestic policy, the country should continue structural reforms and institutional development so as to harmonize with European practices. Compensation for damage caused to individuals during active hostilities is a complex legal issue.

The Law of Ukraine *On Payment Services* (hereinafter referred to as "the Payment Services Law") came into effect on 1 August 2022, transforming the payment market and widening its circle of participants, while also providing the basis for revamping the Ukrainian payments landscape and integrating the Ukrainian payment market with the European one.

The Payment Services Law provides a powerful impetus for the development of the fintech market in Ukraine through the implementation of open banking and the creation of a regulatory platform (sandbox) by the NBU, which will open up many new opportunities for financial services users.

The transitional provisions of the Payment Services Law stipulate open banking will come into effect and be launched 36 months after the adoption of the abovementioned law. In this way, from August 2025, payment services providers will be able to gain access to user accounts through an application programming interface (API), which is a technical tool enabling greater data exchange between banks and payment institutions, fintech companies, and nonfinancial payment service providers.

The development of the concept of open banking is nearly completed.

The NBU is continuing its work on launching the regulatory platform (sandbox). Within the regulatory sandbox, the NBU will provide authorized participants of the financial market with consulting, simplified market access during testing, and approvals for the testing of innovative financial products and services – in a limited format and in compliance with all legislative norms.

Today, Ukraine, like the rest of the world, and like the EU in particular, is transitioning its payment infrastructure to the ISO 20022 international standard. The NBU scheduled to complete this work on 1 April 2023, thus obtaining a modernized financial infrastructure.

The NBU is implementing a next generation Ukrainian system of interbank electronic payments – SEP 4.0 – based on the international standard ISO 20022 and supporting the 24/7 operation of the system. This will, in particular, increase the competitiveness of the country and facilitate the integration of Ukraine's payment market with the global one.

Despite martial law, a series of full-scale tests by SEP participants were conducted with SAP 4.0 in Q4 2022. These were carried out so that System of Electronic Payments (hereinafter referred to as SEP) participants could test the improvements they have made in functional interaction (ISO 20022 messages), the security system, interaction with the ABS, and so on. The test results confirmed the readiness of SEP participants to implement SEP 4.0.

Joining the Single Euro Payment Area (SEPA) – which ensures the harmony of regulations and the making of payments in euros both within and between SEPA member states – is an integral part of integration between the Ukrainian and European financial markets.

The introduction of IBAN and implementation of ISO 20022 create the technological foundations for the further integration of Ukraine's payment infrastructure into SEPA payment systems. The NBU actively worked in this area throughout the year, and launched the respective project. This pace of this work sped up significantly after Ukraine became an EU candidate in June last year.

The support of European regulators as well as cooperation with the World Bank and the European Payments Council helped to step up these efforts.

In fact, the NBU is currently working in two directions:

- political: confirming the compliance of Ukraine with SEPA criteria for membership as a jurisdiction/territory
- technical: considering feasible options for integrating with SEPA payment systems.

In the first direction, a legal opinion has been drafted on the compliance of Ukrainian laws with the criteria for the extension of the SEPA's geographical scope, and carried out consultations about the document with World Bank experts. In addition, in order to ensure there is effective cooperation

between ministries and other authorities, the NBU governor in late 2022 agreed with the prime minister to create a working group on Ukraine's compliance with SEPA membership criteria. Thus, all of the necessary steps have been taken to enable the submission of application documents for Ukraine's membership of SEPA to the European Payments Council in H1 2023.

In turn, the successful implementation of the first direction enables the start of the practical implementation of work to integrate Ukrainian payment services providers with SEPA payment systems. Therefore, in Q4 2022, regular question-and-answer consultations were held with representatives of the central banks of Poland, Lithuania, Italy, and Croatia, as well as with experts from the EU Twinning project *Strengthening the Institutional and Regulatory Capacity of the National Bank of Ukraine to Implement the EU-Ukraine Association Agreement*, to study European experience and create a model for joining SEPA payment systems. The information and research materials obtained will allow the approval in Q2 2023 of a target version of the procedure for integrating with SEPA payment systems.

Green Finance

Aware of the current global challenges driven by climate change, in 2022 the NBU continued to spearhead initiatives in the field of sustainable development, which in the long-term will have a significant impact on the financial system and the economy.

Sustainable development aims to ensure long-lasting economic prosperity that is less dependent on using scarce resources and exploiting the environment, is more socially inclusive, and which includes the closely interrelated environmental, social, economic, and governance aspects.

Sustainable finance – which implies the integration of environmental, social, and governance (ESG) criteria into financial services – is a prerequisite for sustainable development.

To this end, the NBU focused its efforts in 2022 on implementing measures provided for in the Sustainable Finance Development Policy Until 2025.

The document, which was drafted in cooperation with the International Finance Corporation (IFC), aims to shape the future landscape of sustainable financing in Ukraine. It describes tasks and new instruments for bringing the practices applied by Ukrainian financial institutions closer to the best global standards in integrating the ESG criteria into financial services.

In particular, in 2022, the NBU studied the latest international standards and practices on how financial institutions disclose ESG information, and analyzed the requirements for environmental and social risk management.

In addition, in November 2022, as a part of cooperation with the IFC, NBU specialists alongside representatives of the National Securities and Stock Market Commission took part in the international sustainable finance forum, which was held at the National Bank of Georgia, and which was aimed at exchanging experience with other central banks with regard to achieving sustainable development goals.

2.3. NBU Strategic Goals 2025

In 2022, the NBU proceeded with implementation of 2025 Strategy of the National Bank of Ukraine presented in 2021. Our activities were aimed at ensuring sustainable development of the NBU and the financial ecosystem of Ukraine. The document is in line with the principles and areas of the financial sector's development, as set forth in the Strategy of Ukrainian Financial Sector Development Until

2025, which consolidates the visions of development of all participants of the financial ecosystem.

The Strategy of the National Bank of Ukraine and the Strategy of Ukrainian Financial Sector Development need to be updated to factor in the risks of the banking system's operation under martial law and in the post-war period. This work is already underway.

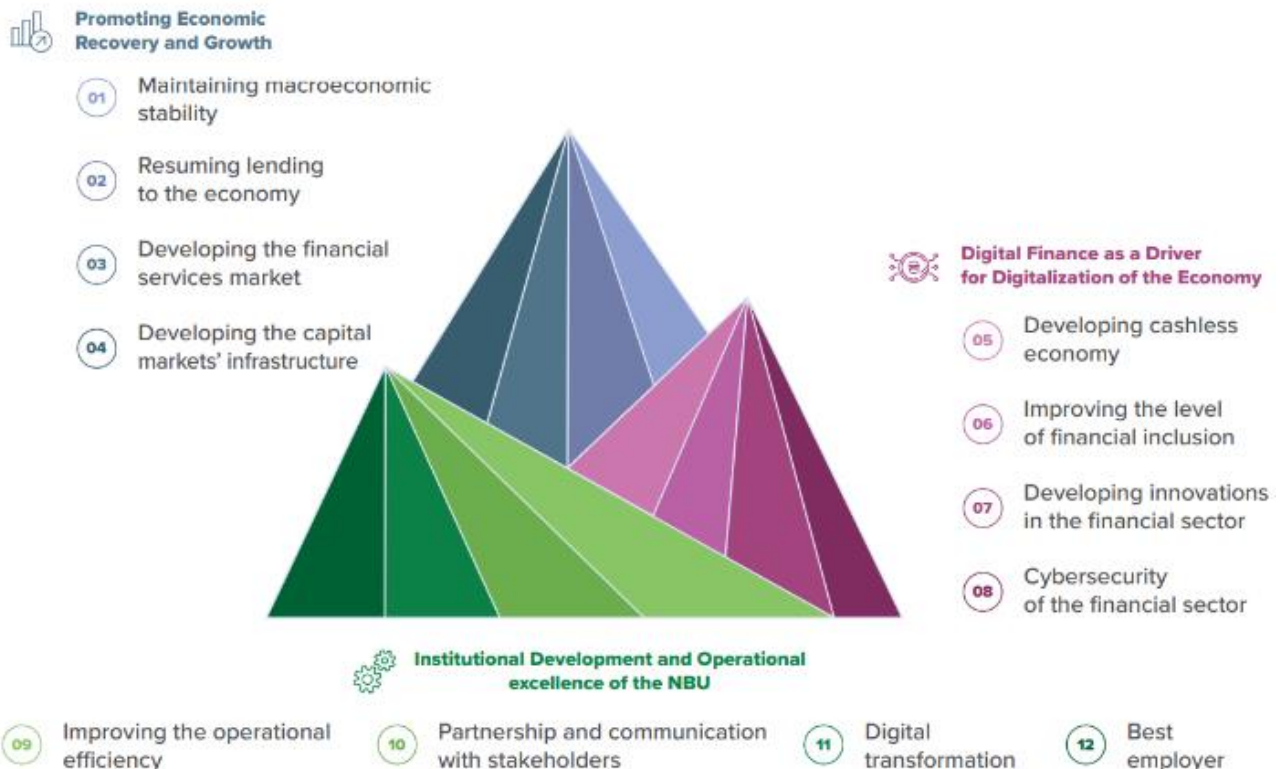
Three strategic pillars encompass 12 strategic goals:

Pillar 1. Promoting economic recovery and development

Pillar 2. Digital finance as a driver for the digitalization of the economy

Pillar 3. Institutional Development and Operational Excellence of the NBU.

NBU's Strategic Pillars and Goals towards 2025



Part 3. Resources, Risks, and Relations

Resources

The NBU uses the following types of resources in order to create products/value proposition for its customers and attain the goals set forth in its mandate:

- financial resources
- human resources
- production resources
- intellectual resources
- social and reputational resources
- natural.

3.1. Financial Resources

Financial resources include available means which the NBU receives as financing or from transactions or investment and which it uses to fulfill its functions and provide services.

The NBU employs the following types of financial resources: debt and equity, namely paid-in capital and earned capital.

The NBU's debt includes funds the central bank raises from foreign and international organizations in order to implement its policy. These are

- loans received from foreign banks and organizations
- funds received from the IMF, including liabilities arising from quota contributions, SDR purchases (received loans), and SDR allocations.

Debt is shown in the NBU's consolidated statement of financial position as liabilities and gives rise to expenses recorded in the consolidated statement of profit or loss and other comprehensive income.

The paid-in capital refers to the authorized capital of UAH 100 million, which is owned by the state. A part of the NBU's distributable profit and, if required, the state budget of Ukraine, are the sources of the central bank's authorized capital.

The earned capital consists of retained profits and provisions created from profits. The NBU creates:

- general provisions to cover its losses; these provisions are made annually by distributing a portion of the profits earned during the year
- revaluation reserves to cover unrealized costs from the revaluation of financial instruments, monetary gold, and investment metals.

The NBU's equity is presented in the respective section of the NBU's consolidated statement of financial position.

General reserves are created from a portion of the profits earned in the current year. Revaluation reserves are made by accumulating gains from financial instrument revaluations carried out during the year. These revaluations are presented

in the NBU's consolidated consolidated statement of profit or loss and other comprehensive income.

For more details on the management of NBU capital, see Note 28 to the NBU's Consolidated Financial Statements.

3.1.1. Distributable Profit Forecast

The NBU determines distributable profit in accordance with the Law of Ukraine *On the National Bank of Ukraine* and distributes it between its equity and the state budget, as set forth in the law. Therefore, forecasting distributable profit is important for assessing the central bank's future financial position and equity and for medium-term budget planning.

A process of financial forecasts has been introduced in the NBU. These forecasts include projections of the NBU's financial position (assets, liabilities and equity) and income and expenses, which in turn allows the central bank to forecast distributable profit and its distribution. The forecasts can cover the following periods:

- the medium term (i.e. three years), in particular for informing state authorities about projected transfers from the NBU to the budget
- the current year – for obtaining more up-to-date information about the NBU's financial position and distributable profit as of the end of the year.

A macroeconomic forecast that is approved by the NBU Board as part of the monetary policy decision-making process is the basis for a distributable profit forecast. Macroeconomic forecasts contain information about the NBU's projections of the monetary base, international reserves and transactions with the reserves, the hryvnia exchange rate, the key policy rate, and the consumer price index. In addition, a forecast of open market operations provides inputs for a distributable profit forecast. These inputs include yields on foreign currency instruments, projected amounts of debt liabilities to the IMF, projected fee and commission and other income and expenses, including administrative expenses, projected repayments of past due debt on bank loans and making/cancelling provisions for such loans, and so on.

All inputs are integrated into a financial forecast model, which processes the inputs. What is more, a number of indicators are calculated in line with the algorithms set in the model. Expert assumptions are an important element of forecasting, as they allow for forecasting future indicators under conditions of uncertainty. Scenario modelling may also be used in order to construct various scenarios, depending on the variations in inputs and expert assumptions.

3.1.2. Planning and Controlling Administrative Expenses

With a view to ensuring its operation, the NBU draws up an administrative budget for one year ahead; the NBU Council approves the budget by 15 November of the current year.

The administrative budget includes:

- staff costs
- administrative and other expenses
- depreciation and amortization
- investment in NBU activities.

Financial resources are planned to meet the needs of NBU subdivisions and the NBU Council for the year ahead and thus enable the NBU to fulfill its tasks and attain its strategic goals.

In line with the principles of transparency and efficiency of the NBU's expenses, control over the central bank's expenses is established by law:

- The NBU's expenses are disclosed in its annual financial statements in accordance with the Law of Ukraine On the National Bank of Ukraine.
- The financial statements are audited by an audit company selected through a procurement procedure in accordance with the Law of Ukraine *On Public Procurement*.
- The NBU Council, an independent body to which the NBU reports, approves the administrative budget, which includes the NBU's operating expenses, and controls the implementation of the budget during the year.

3.2. Human Resources

Human resources include employees of the NBU, their competencies, abilities, experience, and motivation to fulfill the functions, provide the services, and attain the goals of the NBU.

In its activities, the NBU uses human resources represented by its staff, namely:

- specialists who work to fulfill the NBU's central bank functions
- workers who are support staff carrying out maintenance functions (drivers, cleaners, catering staff, and so on).

- The Accounting Chamber monitors the implementation of the NBU's administrative budget and its obligation to transfer funds to the state budget of Ukraine. The Accounting Chamber reports audit results to the Ukrainian parliament, the Cabinet of Ministers, and the President of Ukraine.

Reports on the NBU's planned and actual expenses for the reporting period are submitted to the NBU's Budget Committee monthly, to the NBU Board quarterly and to the NBU Council semi-annually (for H1 and annual).

The approval and implementation of the NBU's administrative budget is controlled in line with requirements specified in regulations and internal control procedures of the NBU. The procurement procedure is public and competitive.

The NBU has a system of internal control of expenses. The controls ensure that expenses are justified and economically sound and that goods, works, and services of proper quality are purchased at reasonable prices.

The NBU has a cost management system, which, among other things, serves to determine general expenses incurred by NBU units as they work on reaching the strategic goals, record and analyze the expenses, assess the efficiency of resource usage, and search for cost cutting opportunities.

One of the cost management tools used by the NBU is cost allocation, which the central bank implemented in 2019.

Cost allocation implies distributing expenses from the administrative budget of the NBU head office among three cost allocation targets: NBU structural units, level two processes, and the NBU's functions.

Cost allocation results are reflected in regular reports that contain information (data as of a certain date and historical data) about the costs of structural units, level two processes, and the NBU's functions. These reports are used to assess the efficiency of NBU units and level two processes as well as to find ways to optimize costs, and make decisions on the management of costs and NBU activities.

Human resources do not appear in the NBU's Consolidated Statement of Financial Position, as this type of the resources does not meet the recognition criteria – the NBU has no control. However, the Consolidated Statement of Profit or Loss and Other Comprehensive Income reflects expenses on these resources: staff costs and other expenses, provisions, and other expenses.

HR Policy

The NBU ensured the implementation of the main tasks and functions of personnel management and administration in accordance with the Labor Code of Ukraine and NBU administrative acts. In 2022, the NBU hired 207 employees

and dismissed 216. It was engaged in document-related formalities and registration of relevant HR documents, tracked employee absences from work (by issuing orders to formalize all kinds of leave, other absence types, namely military leave of absence, quarantine-related inactivity, introducing martial law in the territory of Ukraine, accounting travel hours of work, processing sick leave documentation).

Remuneration Policy

The military aggression by Russia directly affected the remuneration policy. The NBU focused on ensuring the financial stability of employees - regular salary payout, available programs of financial and psychological support for employees.

Given the stronger focus on the financial stability of employees and mitigation of any risks that jeopardize the confidence in the future and security of employees, the salary components remained largely unchanged and, like in the previous periods, included:

- base component, which is base pay set as the official salary (tariff rate) within the range for each position grade
- a variable component, which is extra salary offered in the form of raises, bonuses, and premiums.

3.3. Production Resources

The NBU's production resources include man-made (rather than natural) physical assets that it uses to perform its functions and provide services.

The NBU's production resources include:

- property and equipment (buildings, facilities, vehicles, machinery, equipment, tools, appliances, gear, capital investment in property and equipment)
- investment property
- inventories of tangible assets
- other similar assets.

Production resources are presented in the NBU's Consolidated Statement of Financial Position as assets. Production resources give rise to expenses that are recognized in the Consolidated Statement of Profit or Loss and Other Comprehensive Income.

Management of State-Owned Real Assets

Under the Law of Ukraine *On the National Bank of Ukraine*, the NBU's assets are owned by the state and are under the central bank's operating control.

The NBU manages the following assets:

- the central bank's own real assets
- real assets the NBU has acquired by recovering the property (collateral) pledged as security against refinancing loans.

Other payouts, namely, financial assistance for the medical treatment of employees and their family members, retirement or redundancy pay (severance pay and a lump sum).

Understanding the devastating risks of the external environment, the NBU, among other things, introduced a program to help employees whose homes were damaged as a result of hostilities, offered financial aid for the medical treatment of employees and their family members, NBU pensioners; payments for the burial of deceased NBU employees/pensioners; severance pay to NBU employees upon termination of employment other remunerations (contributions), such as the pension contributions the NBU makes for its employees to the NBU Corporate Nonstate Pension Fund, insurance premiums under voluntary health insurance agreements, contributions to the NBU primary trade union organization, and contributions related to cultural events and health improvement.

In 2021–2022, Ernst & Young LLC provided the NBU with consulting services on data processing (samples) regarding the labor market, as a result of which reports were provided on the level of labor remuneration and current practices, trends in the field of personnel management.

A list of the NBU's real estate was approved as part of implementing the NBU's Functional Strategy for Developing Infrastructure and Corporate Administration in 2021-2024, ensuring effective real estate management, optimizing the NBU's real estate portfolio, determining the efficient and sustainable use of the existing administrative and economic space, as well as developing measures to maximize their usage, analyze and determine the feasibility of projects designed in previous years.

In 2022, the NBU's administrative buildings or their parts, located in the regions, that were not used for performing the main functions were leased mainly to state institutions in accordance with the requirements of the Law of Ukraine *On Leasing State and Communal Property*, namely 22 real estate objects (with a total area of 13,133.05 square meters) for accommodation of state bodies and other business entities: Headquarters of the National Police in Odesa oblast, Regional Office of the Deposit State Property Fund of Ukraine for the Kharkiv oblast, Regional Office of the Deposit State Property Fund of Ukraine for the Donetsk and Luhansk oblasts, Second Administrative Court of Appeal, Central and Western Interregional Office of the Ministry of Justice (Khmelnitskyi), Western Interblast Regional Office of the Antimonopoly Committee of Ukraine, and others.

As of 31 December 2022, the NBU managed 343 own real assets, which were listed in the Unified Registry of State Property Objects. They included: 43 plots of land and 300 buildings and engineering structures. As many as 149 buildings were listed according to the real estate classifier; of

them, there were four residential buildings, 125 nonresidential buildings, 20 other facilities, as well as 151 engineering structures.

Collateral Management Policy

The NBU issues loans backed by securities, real estate and movable property, property rights under loan agreements, and other types of collateral.

For more information on types of collateral and the extent of coverage of loans issued to banks, refer to Note 10 of the NBU Consolidated Financial Statements.

Under collateralized loan agreements, property put up as collateral shall be managed and kept by a collateral provider until enforcement is required to repay a debt under a loan agreement if there is a breach of the obligation.

Nonperforming loans issued to banks were repaid using proceeds including from the sale of property put up as collateral, as well as by the NBU's appropriation of collateral.

Under the Law of Ukraine *On the National Bank of Ukraine*, the NBU acquires, in order to cover the debts owed to the

3.4. Intellectual Resources

Intellectual resources include intangible, knowledge-based assets.

The NBU uses the following types of intellectual resources:

- intangible assets (software, both purchased and own, licenses, websites, information, databases, copyright, rights of enjoyment, etc.)
- organizational resources – knowledge, research, and knowledge bases accumulated in the NBU, systems, processes, and procedures.

The NBU's intangible assets, recognized and presented in the Consolidated Statement of Financial Position as assets, primarily include third-party software and licenses to use software that eventually expire, resulting in expenses that are recognized in the Consolidated Statement of Profit or Loss

3.5. Social and Reputational Resources

Social and reputational resources include institutions and relationships within communities, as well as between stakeholders and other groups, and the ability to share information to increase individual and collective wealth.

The NBU uses the following types of social and reputational resources:

- the NBU values, the Code of Conduct for NBU employees (the Code of Conduct) and the rules of conduct, including anticorruption ones
- relationships with stakeholders

NBU, any rights and assets, provided that they are further alienated within the shortest possible time.

Under Article 73 part two of the Law of Ukraine *On the National Bank of Ukraine*, the NBU may sell through the established procedure the property that it acquired from banks to recover the money it loaned to the banks with the purpose of supporting liquidity, without obtaining approval from other government agencies.

The NBU's balance sheet as of 31 December 2022 included six real estate facilities with a total area of 44,100 square meters and 140 plots of land covering 662.18 hectares with a total book value of UAH 452.4 million (excluding VAT). They passed into NBU ownership as a result of partial repayment of debt on refinancing loans to be put up for further sale for the best bid in the shortest possible time.

In 2022, the NBU sold seven assets at a total price of UAH 424.8 million (excluding VAT).

Part 4 hereof describes how the NBU forecloses and acquires the assets of this type to recover outstanding loans.

and Other Comprehensive Income mainly as administrative and other expenses.

Proprietary software, the official website built by the NBU's software developers, databases, and the right to use state-owned land do not meet the criteria for being recognized as assets, and are thus not recognized as such in the Consolidated Statement of Financial Position. However, the NBU bears the costs of developing and maintaining these assets, and these costs are recognized in the Consolidated Statement of Profit or Loss and Other Comprehensive Income.

For more information on further research at the NBU, the modernization of reporting systems, the development of open data, IT, information security, and bank cyber security, see Part 4 hereof.

- reputation- and brand-related intangible assets
- social licenses to operate: NBU's rights to perform its main functions as set forth in the legislation.

The NBU's consolidated statement of financial position does not recognize social and reputational resources since they do not meet the criteria of financial statement items. However, the NBU bears the costs of developing and maintaining these assets, and these costs are recognized in the Consolidated Statement of Profit/Loss and Other Comprehensive Income mainly as administrative and other costs.

Code of Conduct

One of NBU's main tasks is to create an environment characterized by ethical and responsible conduct that is based on the NBU values.

The guidelines and rules on employees' conduct and ethics are set forth in the NBU's Code of Conduct.

The process of amending the Code to bring the Code in line with the NBU Strategy 2025, applicable laws of Ukraine, and NBU regulations is underway:

- Code of Conduct draft has been approved.
- The draft has been submitted to the NBU Council for consideration and approval.
- A Working Group, composed of the NBU representatives and NBU Council representatives and responsible for finalizing the Code of Conduct draft has been set up.

Anticorruption Policy

The NBU's policy on preventing and counteracting corruption bases on the principles of good faith, "zero tolerance" to any form of corruption, inevitability of punishment for corruption or offenses related to corruption, transparency and openness of its activities.

In 2022, the corruption prevention was carried out in accordance with the requirements of the anti-corruption legislation and the NBU's Anticorruption Program for 2022–2023, approved by the decision of the NBU Board.

With a view of preventing, detecting, eliminating, and combating corruption, the NBU regularly implements the following measures:

- upholding the collegiality principles in decision-making
- regulating the processes of NBU units' operation
- building awareness of the anti-corruption legislation among NBU employees, methodological and consultation support on compliance with the laws on corruption prevention
- overseeing compliance of NBU employees with anticorruption restrictions, requirements regarding prevention and resolution of conflict of interest, other requirements of anti-corruption legislation
- carrying out anti-corruption examination and assessment of NBU's draft regulations
- verifying the details of applicants for positions of NBU officials
- reviewing reports of whistle-blowers and reports on violations of the requirements set out in the Law of Ukraine *On Prevention of Corruption* by NBU employees
- investigating, inspecting and implementing measures of prosecution of persons guilty of corruption or corruption-related offences
- developing the culture of whistle-blowing within the NBU of possible facts of corruption or corruption-related offences, methodological and consultation support

- implementing other measures provided for by the current anti-corruption law and Anticorruption Program.

Labor Safety

The NBU's key priority in labor safety is to create in each of its structural units the working conditions as prescribed by the regulations and ensure compliance with the laws regulating the employees' rights in this field, namely:

- creating safe working conditions at each workplace
- applying effective measures to reduce the impact of the employees' health at the workplaces where hazardous or dangerous factors have been identified as higher than standard
- granting the employees benefits and compensations for difficult and dangerous labor conditions
- providing the employees with special clothing, special footwear and other personal protection means
- ensuring effective functioning of the labor protection management system by exercising control over labor conditions within the units responsible for labor safety
- complying with the employer's obligations set forth in the collective agreement and undertaking comprehensive measures to meet the required standards and improve the labor safety level
- ensuring proper maintenance of buildings and facilities, production equipment and machinery, monitoring of their technical condition
- ensuring availability of fire protection means in the premises and transport vehicles
- ensuring 24/7 operation of the fire protection systems and fire alarm announcement system
- introducing preventive measures based on the investigation findings on accidents, occupational diseases and other emergency situations to prevent the similar accidents in the future
- organizing lab study of the labor conditions, assessment of technical condition of the production equipment and machinery, certification of workplace compliance with the labor safety requirements
- developing and approving regulations, guidelines and other internal documents for occupational safety
- undertaking measures to handle fallout from global Covid-19 pandemic.

The NBU has developed and implements the following:

- internal special training in occupational safety under nine thematic programs and the basic fire prevention program for NBU head office employees, performing high risk (including high fire risk) work
- labor and fire safety briefings for NBU head office employees
- labor safety instructions
- the list of works that require safe work permits
- allowance for issuance free of charge of special clothing, special footwear, and other personal protective means

- cleaning and disinfection of premises, supply of medical masks, control of employees health status, vaccination of employees and their family members

NBU Corporate Nonstate Pension Fund (CNPf)

The CNPF's purpose is to attract highly qualified specialists to the NBU, reduce labor turnover and provide the participants with decent support after retiring from work. Its activity is aimed solely at accumulating pension contributions with further assets management and pension payments to CNPF participants.

The NBU, being a socially responsible employer, provides its employees of retirement age with stable benefits.

More detailed information on the NBU's relationships with the CNPF is provided in Note 1 to the consolidated financial statements for the year ended 31 December 2022.

Voluntary Health Insurance System

The NBU has procured voluntary health insurance services for its employees in order to further motivate the staff, protect its employee's health and preserve working efficiency.

Additionally, with assistance from the insurance company within the Total Rewards system the insured NBU's staff received the opportunity to use a new benefit (aimed to satisfy the need for safety, protection and self-fulfillment): to watch video of recommendations from experts and to make an appointment for free individual consultations.

The program was launched in July 2020. In 2022, 120 individual consultations were provided.

For information on indicators related to employees' health concerns, see Part 4

3.6. Natural Resources

The NBU is making every effort to minimize the use of natural resources and uses natural resources of both national importance (atmospheric air, groundwater) and local significance (land). Other natural resources are used indirectly.

NBU deploys natural resources in compliance with compulsory environmental requirements, so NBU pays taxes and makes compulsory payments for their use, such as land charge, for air and water emissions etc. The NBU implements the environment protection policy. The NBU recognizes expenses related to paying taxes and environmental protection activities mainly as administrative and other expenses in the consolidated statement of profit or loss and other comprehensive income.

Primary Labor Union Organization of the National Bank of Ukraine (hereinafter – Labor Union)

Social initiatives of the Labor Union are:

- regular support of the Labor Union members who enlisted in the Armed Forces of Ukraine
- regular support of the Labor Union members whose homes have been damaged by hostilities
- protection of rights and interests of the members, accident prevention
- cooperation with the NBU administration to mitigate adverse effects of dismissals, the Labor Union members' health care

NBU Employer Brand

In 2022, NBU introduced a set of measures to develop and promote the employer brand with great emphasis on work with young people. The measures were implemented through cooperation with Ukrainian universities, briefings, lectures, participation in job fairs, internships for students with the aim of increasing the attractiveness of the employer brand and engaging the best students by offering a traineeship and job at the NBU. In particular, we took part in "Uni-Biz Bridge" social project for Ukrainian teachers and met with experts during the accreditation of the educational program "Finance and Credit" of Taras Shevchenko National University of Kyiv.

We engaged 24 trainees and 14 interns from the students of Ukrainian universities. Three trainees were offered jobs at the National Bank of Ukraine after successfully completing their traineeship programs.

In particular, the NBU was among the 25 best employers open to young employees in Ukraine, according to STUDPOINT's 2022 ranking and was awarded Best employer of 2022 according to HR Brand agency UGEN.

The NBU produces a minor effect on the environment. However, the structure of the National Bank of Ukraine includes a separated unit — NBU Banknote Printing and Minting Works production facility, for which the issue of environmental protection raises higher concern.

The NBU Banknote Printing and Minting Works adheres to and complies with the requirements and regulations of the Labor and Environmental Protection Policy of the NBU Banknote Printing and Minting Works (hereinafter – Policy).

The current system of ecological protection of the NBU Banknote Printing and Minting Works complies with the DSTU ISO 14001:2015 standard and is developed, implemented, and honed under risk-oriented thinking as a set of interrelated processes, aimed at increase in the production performance, rational use of natural resources, reduction of

environmental load within the area of facility's possible impact.

The Policy is focused on activity of the NBU Banknote Printing and Minting Works – manufacturing of competitive production – banknotes, coins, state awards, securities, and other production that satisfies the demand of customers and partners of the NBU Banknote Printing and Minting Works with stable quality which meets the state and international standards.

Such possible ways to achieve goals regarding the boost of the facility's energy efficiency and provision of minimal negative impact on the environment are envisaged by the Policy:

- technical re-equipment of the production facility by implementation of advanced technology, high-performance equipment, innovative materials, energy efficiency and resource saving technology, low-waste, no waste and eco friendly technological processes that ensure reduction of negative impact on the environment, human health, and guarantees safe working conditions
- management of significant ecological aspects that impact or may impact the state of environment
- constant analysis and enhancement of current eco management systems
- training, professional development, consultations, and involvement of employees into advancement, implementation and enhancement of environmental protection system.

3.7. National Bank of Ukraine and Its Stakeholders

NBU Clients and Value Accumulation Chain

In pursuing its Mission, the NBU works to create maximum value for the clients.

NBU clients are participants of the financial ecosystem classified into the following eight groups by the NBU according to the nature of their needs and operations, interests, role of the group in the financial ecosystem, and current changes influenced by global and local trends:

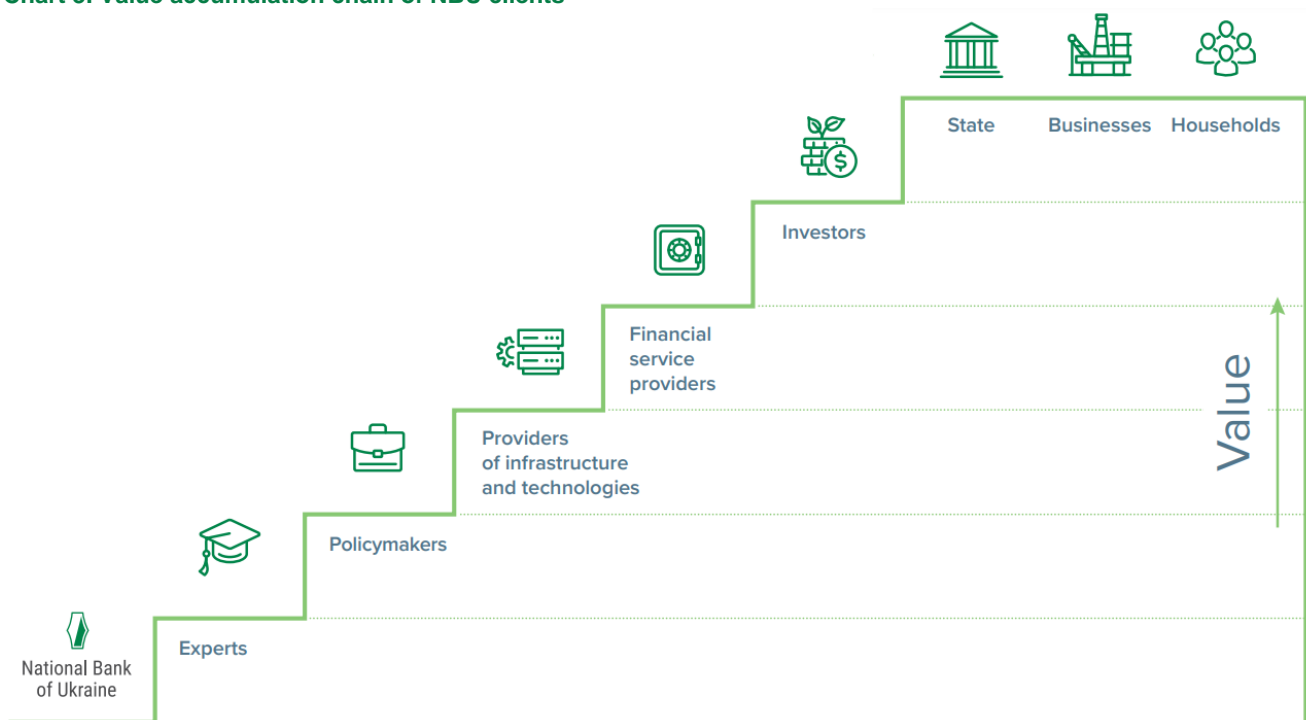
- experts
- economic and financial policymakers
- providers of infrastructure and technologies
- financial service providers
- investors

- economic entities (businesses)
- state as service provider
- households.

Every participant of the ecosystem acting within their role boundaries performs certain functions, in this way offering other participants certain value that is created by them, independently or jointly with the NBU or other ecosystem participants. The logic behind the client grouping follows the value accumulation chain: each client creates value that is accumulated, and simultaneously the final consumers (state, businesses, and households) receive the maximum value.

Value accumulation chain of NBU clients is presented in Chart 3.

Chart 3. Value accumulation chain of NBU clients



Cooperation with International Partners

In 2022, the NBU's interaction with its international partner was defined by the wartime needs. As part of holding Ukraine's financial defense frontline, the NBU engaged in international cooperation in two general areas: raising international aid to meet the challenges of war, and stepping up international pressure on the aggressor state.

Throughout 2022, the NBU maintained active communications with Narodowy Bank Polski, the Bank of Lithuania, Sveriges Riksbank, the Deutsche Bundesbank, the National Bank of Belgium, the Bank of England, the Federal Reserve System, the National Bank of Moldova, De Nederlandsche Bank, the Banque de France, and other partners.

From the earliest days of the war, the NBU has been in constant communication with its partners, calling on them to cut the Russian banking system off SWIFT, freeze the correspondent accounts of Russian financial institutions, ban transactions in Russian currency, terminate cash supplies to Russia and Belarus, discontinue transactions with MIR cards, and more.

In a separate effort that also continued all year long, the NBU searched for opportunities to incentivize international banks and insurance companies operating on the Ukrainian market to cease their business in Russia and Belarus.

Being a proactive participant in international organizations that specialize in central banking, the NBU lobbied to have Russia's membership in such organizations terminated. These efforts became an important part of the central bank's international activities. As a result, a number of partners, such as the International Capital Markets Association (ICMA), the OECD's International Network on Financial Education (OECD/INFE), the International Credit Union Regulators' Network (ICURN), the International Association of Insurance Supervisors (IAIS), and the Group of Banking Supervisors from Central and Eastern Europe (BSCEE), suspended their Russian participants' membership.

During the events hosted by international partners, the NBU constantly raised the issue of the need to provide continuous support to Ukraine. International events were also a platform that the central bank used actively to disseminate up-to-date information about the current condition of Ukraine's financial sector and economy and future measures to maintain macrofinancial and financial stability. Straightforward and open dialogue with partners (diplomatic corps, institutional investors, rating agencies) became an important way of creating a favorable investment climate in Ukraine in wartime conditions.

An important area of work for the NBU amid an increase in cross-border migration from Ukraine was the signing of agreements with the central banks of other countries (Poland, Germany, Belgium, the Netherlands, Italy, Latvia, Lithuania, Sweden, Switzerland, Malta) to make possible the exchange

of cash hryvnias for local currency so that migrants would be able to meet their urgent needs. Exchange transactions under these agreements continued until late 2022.

The year 2022 was marked by the granting of EU candidacy to Ukraine, a significant historical event. As an institution of public administration, the NBU was an active participant in the filling out of an EU Questionnaire that led to the decision to grant Ukraine EU candidacy status.

As the war ground on and relations with the EU reached a new stage, financial support from the EU increased significantly. Specifically, the NBU in 2022 implemented steps in order for Ukraine to receive EUR 7.2 billion in macrofinancial aid from the EU to support the country's financial stability.

In addition, the central bank continued to implement the provisions of the EU-Ukraine Association Agreement, despite the ongoing war. In particular, the NBU prepared a draft of the new version of the Law of Ukraine *On Compulsory Insurance against Civil Liability in Respect of the Use of Land Motor Vehicles*, developed and streamlined 13 NBU regulations in accordance with the Law of Ukraine *On Payment Services*, and drew up draft laws aimed at bringing Ukrainian legislation into compliance with the standards of the Financial Action Task Force (FATF) and the requirements of EU legislation on anti-money laundering (legalization) of proceeds from crime.

Work went on as part of long-term dynamic cooperation with the following EU-supported assistance projects: EU-FINREG project (Strengthening Regulation), EU-FAAR project (Implementation of EU Practice in Accounting, Financial Reporting, and Auditing in Ukraine), and the Twinning Project (Strengthening the institutional and regulatory capacity of the National Bank of Ukraine to implement the EU-Ukraine Association Agreement). The NBU ensured that measures under these projects were brought to their conclusion despite the war.

Ukraine's new status and the need to step up efforts to integrate the Ukrainian financial market into Europe's financial space led to the intensified development of relations with EU financial institutions: the European Central Bank (ECB), the European Banking Authority (EBA), and the European Insurance and Occupational Pension Authority (EIOPA). In 2022, the NBU put tremendous effort into having our country join the Single Euro Payments Area (SEPA).

Given the need to deploy global best practices to entrench the NBU's institutional capacity, as well as the interest of central banks and financial regulators around the world in learning the NBU's unique experience of maintaining financial stability and business continuity in wartime, international technical partnership acquired particular importance in 2022. New technical assistance projects/programs increased in both number and volume. Support under these initiatives was provided by EU central banks and regulators from EU member states and other developed countries. This increase

in funding was driven by the shift in geopolitical priorities, Ukraine's acquisition of EU candidacy, the NBU's and Ukraine's more proactive position in establishing international relations, and the desire of international partners to ramp up aid to our country. This year, the NBU's international technical cooperation has been carried out both to promptly meet critical needs that ensure financial stability and to pursue strategic priorities of financial system development in Ukraine. NBU experts were most interested in studying global best practices and international experience in the following areas: monetary policy implementation, financial stability maintenance, banking supervision and regulation, payment system operation and the introduction of innovations in emergencies, efficient communications, NBFIs supervision and regulation, and so on.

The International Monetary Fund, World Bank Group, the European Union, the European Bank for Reconstruction and Development, the European Central Bank, other central banks and financial regulators of EU countries and the United Kingdom, the Federal Reserve Bank of New York, the Bank of Israel, and the Swiss National Bank remained the NBU's key international partners in 2022. The NBU also continued to cooperate with the U.S. Agency for International Development (USAID) on the Credit for Agricultural Producers project and commenced work on the Financial Sector Reform project. The NBU also moved forward on cooperation with International Finance Corporation on the Financial Inclusion for Growth Project, which is being implemented in partnership with Swiss State Secretariat for Economic Affairs (SECO) and the Great Britain Good Governance Foundation (GGF). Furthermore, the NBU continued to collaborate with the Geneva-based Graduate Institute of International and Development Studies as part of the Bilateral Assistance and Capacity Development for Central Cooperation (BCC) Program, which is partly financed by SECO. In 2022, to promote sustainable financing in Ukraine, a memorandum of understanding was signed with the United Nations Development Programme (UNDP) aimed at creating the framework for cooperation in ensuring sustainable, inclusive and green economic growth, facilitating development of green and sustainable financing, and making financial system of Ukraine more resilient to environmental, social and governance risks.

In spite of the military aggression, the NBU continued to share its expertise with international financial community in 2022. In particular, the NBU held two international round tables on strategic development (*Strategic Development for Ukraine's Economic Recovery and Development* with more than 50 attendees) and inflation targeting (*Inflation Targeting in a World of Large and Persistent Shocks* with more than 160 participants). The NBU's representatives were invited to the International conferences, round tables, forums, and task forces, where the NBU shared its experience on regulation of the NBFIs, monetary policy and research, sustainable development, crisis communications during the wartime, cross-border information exchange, payments, funds transfers, and cloud-based technologies.

The NBU kept acting as a technical assistance provider and the increasing demand for the NBU's expertise regarding various aspects of banking sector operation was an important achievement last year in the field of international technical partnership. The NBU provided technical assistance requested by the central banks and other regulators of Azerbaijan, Finland, Georgia, Germany, Latvia, Montenegro, Northern Macedonia, Poland, Sweden, Tunisia, Türkiye, Uzbekistan. In 2022 the NBU received a total of 17 TA requests (3 more than in 2021). The colleagues from other central banks were interested in the development of financial sector in wartime, strategic planning and development, communications, monetary policy, open market operations, payment systems (including in wartime), HR management, the operations of the NBU's Museum of Money, central bank digital currency (CBDC) design, cash circulation, and prevention of corruption.

The cooperation with the IMF remained the central bank's priority. Because of the Russian invasion of Ukraine, Ukraine asked the IMF to terminate the current Stand-By Arrangement and allocate USD 1.4 billion in emergency financial aid to Ukraine under the Rapid Financing Instrument (RFI). The IMF Executive Board made a decision to that effect on 9 March 2022.

On 30 September 2022, the IMF's Executive Board approved a new window under its emergency financing instruments, which allowed Ukraine to request a new USD 1.3 billion disbursement under the RFI. Respective approval was received on 7 October 2022.

Following the negotiations held in October-November 2022, the NBU and Ukrainian government reached an agreement with the IMF on launching a Program Monitoring with Board Involvement for Ukraine (PMB). The PMB was approved by the IMF management and discussed by the Executive Board of the IMF on 19 December 2022. The PMB itself does not provide funding, but its approval helps raise funds from other international donors. Effective performance under the PMB should pave the way toward a fully-fledged IMF-supported program.

The NBU was actively engaging in the systemic projects of Ukrainian government with the International Bank for Reconstruction and Development (IBRD) and International Development Association (IDA) of the World Bank Group, that allocate financing for the support of the state budget and the implementation of investment projects in Ukraine aimed at financial sector development.

Institutional relations with Ukrainian stakeholders

The security challenges of 2022 had a significant impact on engagement with stakeholders.

The first two months of the year were dedicated to adapting the banking system to operation during a special period and maintaining monetary and currency stability, among other things, by holding regular meetings.

In the first 2 months, 5 meetings were held with representatives of the banking community, 3 meetings with representatives of nonbank institutions, 2 meetings with business associations, and 3 public events were attended by the NBU Board members.

During the first months of the invasion the business activity went down. But in order to preserve the stability of the financial and banking system, regular working meetings were held with banks and nonbank institutions. During the next 10 months, 15 meetings were held with representatives of the banking community, 12 meetings with representatives of nonbank institutions, the NBU speakers attended 6 public events, and 1 meeting was organized with volunteers.

An important area of cooperation of the NBU with other state authorities is the NBU's contribution to law-making – an integral part of the central bank's activities – that seeks to

introduce global best practices in the national laws that govern the financial sector with account for the new challenges created by the military aggression in the territory of Ukraine.

This was evidenced by engagement of the NBU leadership and staff with the subject-matter committees of the Ukrainian parliament. Overall in 2022, NBU representatives attended 25 meetings of these committees.

The NBU actively engaged with the National Council for the Recovery of Ukraine from the War (the NCRW) established by the presidential decree. The NBU Governor was appointed a co-chair of the NCRW task force on financial system operation and reform. During 2022 the NBU Governor, his deputies, and experts took part in the NCRW task force meetings.

3.8. Main Risks

NBU Risk Profile

The NBU's risk profile comprises both financial and nonfinancial risks.

Financial risks constitute the risks that arise in connection with financial instruments. The NBU's financial risks are grouped as follows:

- financial risks related to the policies determined and conducted by the NBU (hereinafter referred to as NBU policy financial risks). These risks arise from financial instruments, when their recognition on the NBU's balance sheet or off balance is related to the central bank's performance of its main function and other functions, as set forth in Articles 6, 7 of the Law of Ukraine On the National Bank of Ukraine, with the exception of Article 7 paragraph 15 thereof.
- financial risks arising from Ukraine's international (foreign exchange and gold) reserves
- other financial risks.

Each financial risk category includes several risk types defined by the factors that cause the respective risks. In particular, the NBU distinguishes between liquidity, credit and market risks.

Financial risks		
Probability of incurring losses or additional losses on financial instruments, or additional underperformance of planned proceeds from financial instruments, or failure to fulfill obligations on financial instruments due to the effects of adverse internal and external factors		
Financial Risk Groups	Financial instruments and transactions with them	Level I processes
Financial risks arising from the policy	<ul style="list-style-type: none"> ▪ Transactions on cash storage ▪ FX interventions ▪ FX swaps ▪ Emergency liquidity assistance (ELA) ▪ Liquidity management transactions: <ul style="list-style-type: none"> - refinancing transactions (loans) - repo transactions - certificates of deposit - transactions with government bonds 	<ul style="list-style-type: none"> ▪ Organizing and developing cash circulation ▪ Implementing monetary policy ▪ Promoting Financial Stability
Financial risks arising from international reserves	<ul style="list-style-type: none"> ▪ Reserve financial assets 	<ul style="list-style-type: none"> ▪ Implementing monetary policy
Other financial risks	<ul style="list-style-type: none"> ▪ Other financial assets and liabilities ▪ NBU's financial investments ▪ Pension assets of the NBU Corporate Nonstate Pension Fund 	<ul style="list-style-type: none"> ▪ Performing professional activities in the capital markets and developing the infrastructure ▪ Administrative support of the NBU's operation

Nonfinancial risks include the risks of the NBU that arise in connection with nonfinancial factors.

The NBU's nonfinancial risks are as follows:

- operational risk is the potential threat of direct or indirect losses stemming from improper or failed processes, incorrect actions by NBU employees, failures of internal systems, or external events
- compliance risk is the risk of sanctions against the NBU, financial or reputational losses due to noncompliance by the NBU or its employees with the laws of Ukraine, NBU regulations and orders, including the code of ethics and the rules for the prevention and resolution of conflicts of interest
- strategic risk is the probability that the NBU does not achieve its strategic goals or performs its functions inefficiently due to incorrect strategic management decisions and inadequate responses to changes in the external environment.

When managing financial and nonfinancial risks, the NBU takes into account the potential impact of their materialization on its reputation, but does not separately distinguish a reputation risk.

NBU orders on risk management set out the management policy for certain types of NBU risks, its risk tolerance level, and its risk appetite. The activities of the NBU units are carried out within the established risk appetite.

Risk Management Process

The NBU Board organizes the risk management process and system in such a way that they correspond to the functions, specifics, and role of the NBU as Ukraine's central bank and special central body of public administration determining Ukraine's monetary policy.

The NBU's risk management system aims to support its institutional capacity and independence by protecting its assets, capital, and reputation, as well as maintaining the level of trust in the central bank and the policy that the NBU develops and implements.

The NBU's risk management system is based on holistic risk management as a systematic and continuous process. It is run by the NBU Board and NBU employees, starting from the NBU's strategy development and throughout its whole activity.

The NBU's risk management process is a continuous process incorporated in the management of the NBU at all organizational levels, and embedded in the corporate culture and daily activities of the NBU. This process is aimed at detecting events that may adversely affect the NBU's activities, and the management of risks related to such events within the set level of risk appetite, in order to ensure that the NBU performs its functions and achieves its goals.

At the same time, due to developments triggered by Russia's military aggression against Ukraine, the NBU was forced to change current processes in some units and introduce some restrictions. Specifically, the Temporary Investment Declaration of Ukraine's International Reserves for the period of martial law validity or special period was approved (dated 27 February 2022).

The NBU's risk management process comprises the following interconnected components:

- internal environment and risk management culture
- risk management circumstances (context)
- detection of events that can have an adverse impact on the NBU's operation
- risk assessment
- measures in response to risks (counterreaction to risks)
- control function
- information, communications, and reporting
- monitoring and review of the risk management system.

The NBU's **financial risk management policy** covers all of the central bank's assets and liabilities (both on- and off-balance-sheet items).

Notes 22–27 of the NBU's Consolidated Financial Statements contain information on the stages of the financial risk management process, the measures taken by the NBU in response to financial risks, and a detailed evaluation of the risks.

The NBU's **operational risk management policy** covers all processes and projects of the NBU.

The operational risk management process has the following stages:

- prevention of operational risks
- identification of operational risks
- assessment (measurement) and analysis of operational risks
- monitoring of operational risks and reporting
- development of measures for operational risk management
- implementation of measures for operational risk management
- evaluation and monitoring of the results of the implementation of measures for operational risk management.

The NBU is conducting regular training events in order to enhance its operational risk management culture and raise awareness of these risks among top managers and employees.

Internal Controls

The NBU has introduced a uniform and structured approach to ensure the sufficiently effective performance of the NBU's functions, its stable and continuous operation, cooperation between NBU units at all organizational levels, and to introduce a corporate culture of organizing and developing the NBU's internal controls.

The NBU's internal controls and risk management system are interrelated and complementary systems with aligned goals and based on the **three lines of defense policy**.

The NBU units that are the **first line of defense** own all of the risks that fall under their mandate and are responsible for identifying, measuring, taking administrative measures and reporting such risks, as well as drawing up, introducing, complying with and improving controls when performing their functions/assignments.

Units of the **second line of defense** support risk management and control procedures within the remit and have the mandate to propose/recommend improvements of business control to other units according to control procedure performance findings.

The Internal Audit Department performs the functions of the **third line of defense**.

Business Continuity Management

The NBU performs the following to ensure the business continuity:

- configuring and testing backup workplaces as part of implementing the NBU's General Business Continuity Plan and Plan for the Recovery of IT Resources After Failures
- conducting a regular analysis of the impact of adverse factors on the NBU's processes and the operational continuity of its units
- updating the NBU's business continuity plans
- offering training in the area of business continuity.

Part 4. Overview of Key Indicators

4.1. Overview of Key Indicators

The NBU introduced International Financial Reporting Standards (IFRS) approved by the International Accounting Standards Board in the preparation of its financial statements in 1998, and has been fully compliant with the standards since 2012.

NBU financial statements cover the consolidated financial statements prepared according to the IFRS, the NBU Law and the law of Ukraine *On Accounting and Financial Reporting in Ukraine*.

As of the end of 2022, the NBU's balance-sheet total increased by 42.25%, to UAH 1,959 billion.

In 2022, the central bank continued to execute its functions, forming the corresponding profile of its assets, liabilities, and equity.

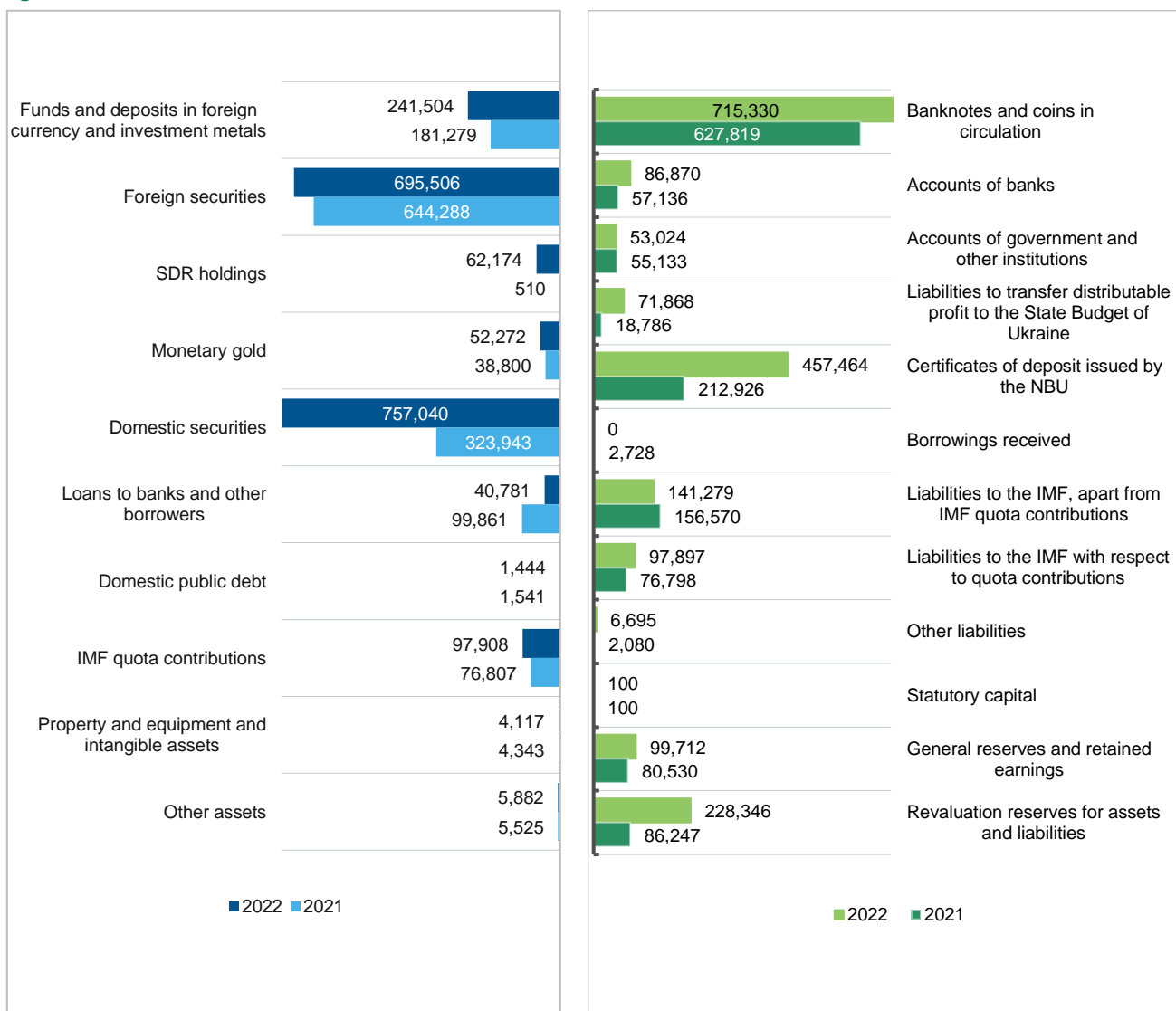
The NBU's assets mainly include:

- domestic securities
- foreign securities
- funds and deposits in foreign currency and investment metals.

The NBU's liabilities mainly include:

- banknotes and coins in circulation
- certificates of deposit issued by the NBU
- liabilities to the IMF

Figure 1. NBU's assets and liabilities in 2021–2022, UAH million



International reserves decreased during 2022, due to hostilities in the territory of Ukraine.

Overall, international reserves decreased by 8% to USD 28.5 billion as of the end of 2022, down from USD 30.9 billion at the end of 2021.

This decrease stemmed from the NBU's net purchase of USD 25.0 billion in foreign exchange interventions in the interbank FX market of Ukraine, government's payments of USD 6.7 billion under external and internal liabilities, payments of USD 2.4 billion to the IMF.

The increase in international reserves was driven by proceeds of USD 31.4 billion in favor of the government, including USD 25.6 billion from international lenders, placement of USD 3.1 billion in domestic government debt securities, receipt of USD 2.7 billion loan tranche from IMF under the Rapid Financing Instrument (RFI), and other (changes in the market value of financial instruments, etc.).

The main tools in the process of managing international reserves were foreign securities and short-term deposits with foreign banks.

The NBU's hryvnia assets are mainly comprised of domestic securities, the portfolio of which increased by UAH 433.1 billion or 2.3 times to UAH 757 billion in 2022. Owing to this and the rise in assets that form international reserves, the percentage of domestic securities in the NBU's balance-sheet total grew to 38.7% in 2022, compared to 23.5% in 2021. Of the domestic securities, 99.9% are securities held to generate cash flows in line with the terms of issue, and are accounted at their amortized cost.

The NBU's loan portfolio decreased 2.4 times, mostly due to lower volumes of long-term loans (repayment) issued to banks via the NBU's tendering procedure. Thus, the gross book value of loans (outstanding debts) decreased by UAH 59 billion, to UAH 76 billion, whereof UAH 37 billion are long-term loans. Meanwhile, 49.6% of debts outstanding as of the end of 2022 consisted of the problem debts of banks that were being wound up. However, the gradual repayment of debt on such loans continues - in particular, during 2022, UAH 1.1 billion was repaid, and the amount of expected loan losses (reserves provisioned) decreased by UAH 0.5 billion.

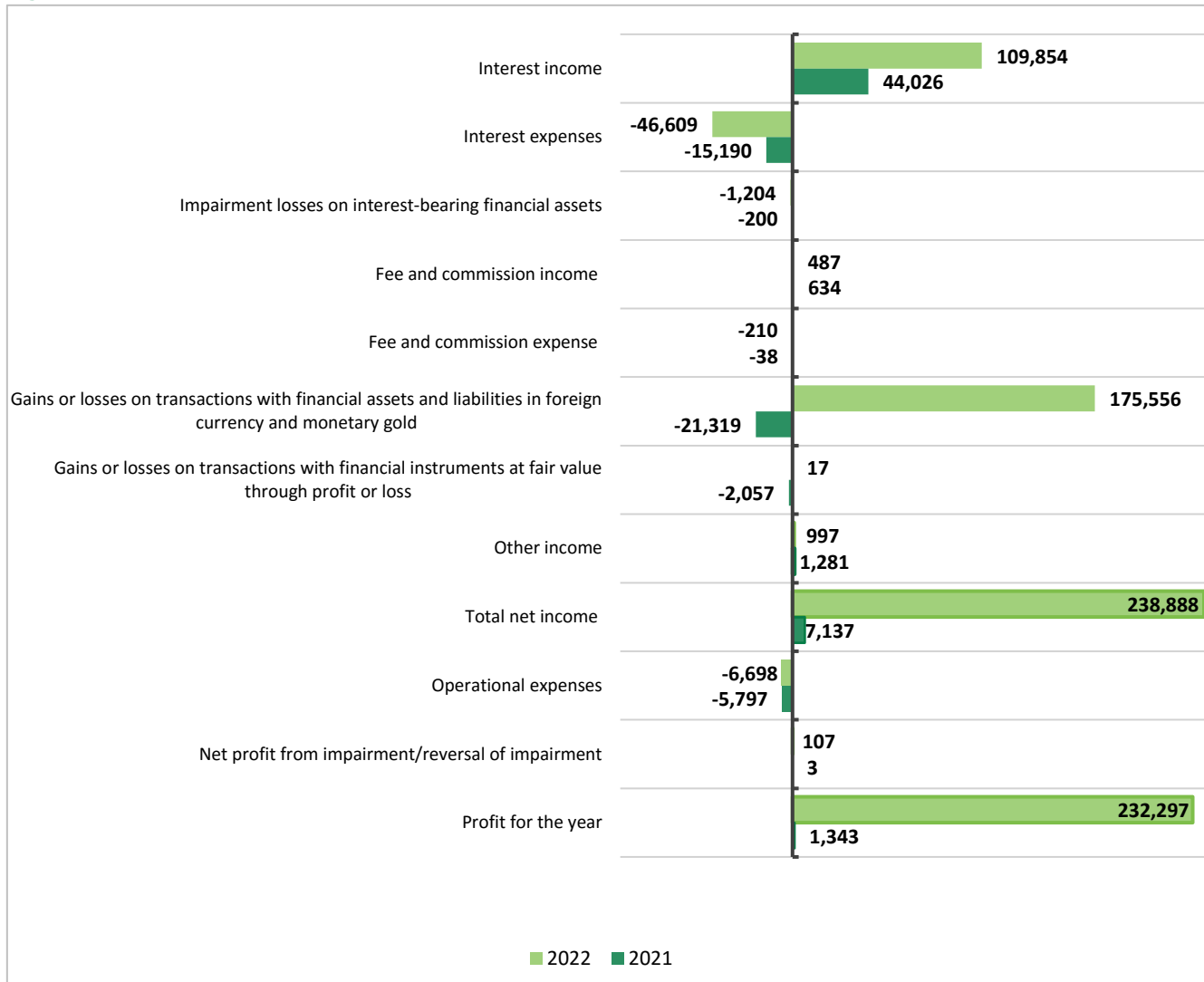
The main changes in the NBU's liabilities, apart from the liabilities to the IMF, were as follows:

- banknotes and coins in circulation grew by 13.9%
- liabilities to transfer profits to the state budget increased 3.8 times
- certificates of deposit issued by the NBU increased 2.1 times
- accounts of banks increased by 52%.

Financial Results

The main driver of the NBU's profit is traditionally the interest income.

Compared with 2021, interest income, mainly from domestic securities and loans to banks, increased and reached UAH 110 billion, along with the increase in domestic securities volumes and average weighted interest rates.

Figure 2. NBU profit or loss in 2021–2022, UAH millions

The interest expenses increased by 3.1 times, to UAH 46.6 billion in 2022, primarily due to higher expenses on NBU certificates of deposit, which is associated with the increase in volume of transactions and average weighted interest rates from 8.47% in 2021 to 23% in 2022. Meanwhile, expenses on interest-bearing liabilities to the IMF increased.

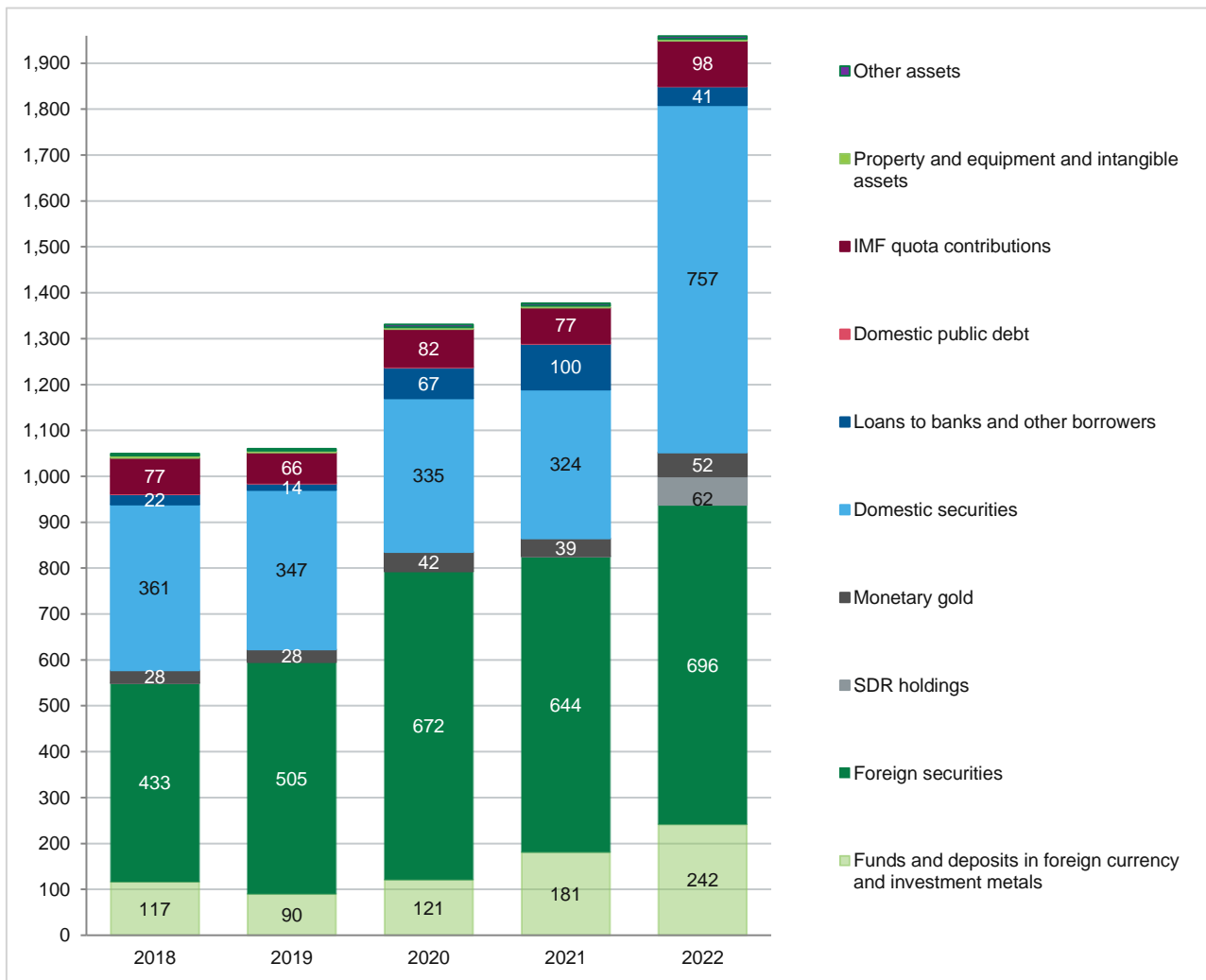
In 2022, the NBU's impairment provisions for loans issued to banks increased. Overall, due to impairment of interest-bearing financial assets, expenses (negative result) were UAH 1,204 million (in 2021 – UAH 200 million).

Net interest income (considering impairment) totaled UAH 62 billion in 2022, which was 2.2 times higher than in 2021.

The exchange rate fluctuations have exerted a significant influence on the NBU's performance and cause high volatility of both the relevant item and the NBU's financial result. In particular, in 2022, the exchange difference was positive at UAH 175.6 billion (while in 2021 it was negative at UAH 21.3 billion).

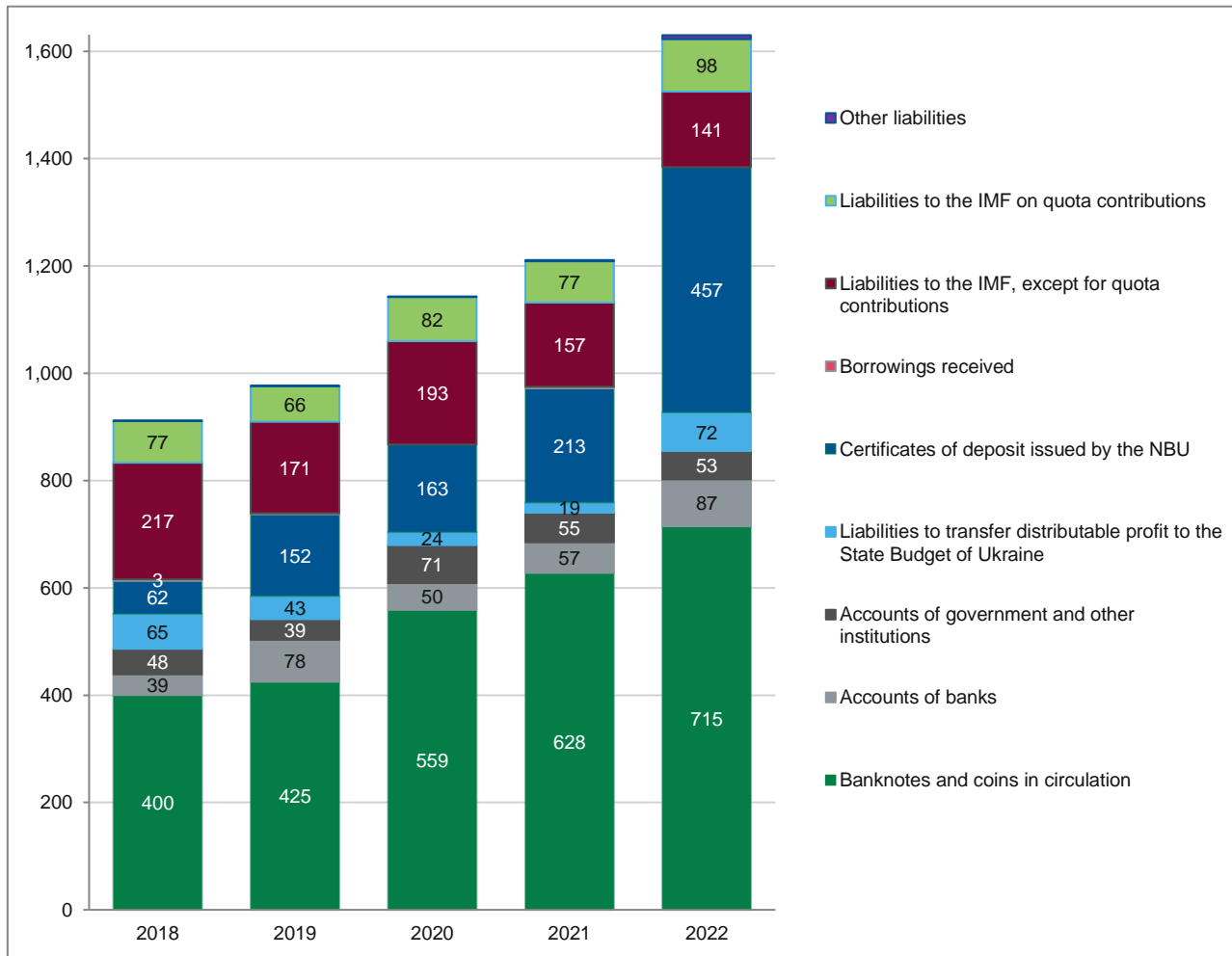
For more details on setting exchange rates, see Note 4 to the NBU's Consolidated Financial Statements.

NBU administrative and other expenses increased by 16% from UAH 5,797 million in 2021 to UAH 6,698 million in 2022. In 2021 and 2022, the provisions for court complaints were not formed.

Figure 3. NBU assets in 2018–2022, UAH billions

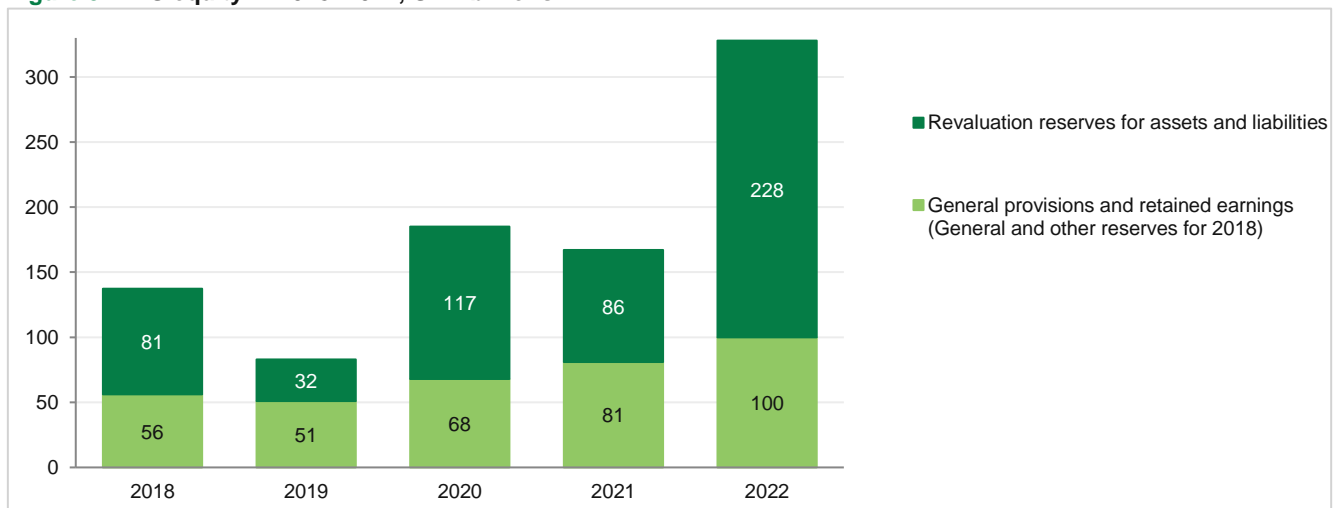
Over the past five years, the main changes in the NBU's asset structure came from increases in components of international reserves. For the first time in five years, the share of domestic securities, represented primarily by government debt securities, has grown.

For more details on increase in the share of domestic securities within the NBU's asset structure, see Note 9 to the NBU's Consolidated Financial Statements.

Figure 4. NBU liabilities in 2018–2022, UAH billions

In general, the liabilities structure has hardly changed over the past five years (except for banknotes and coins in circulation and certificates of deposit issued by the NBU, the book value of which has increased over the past five years).

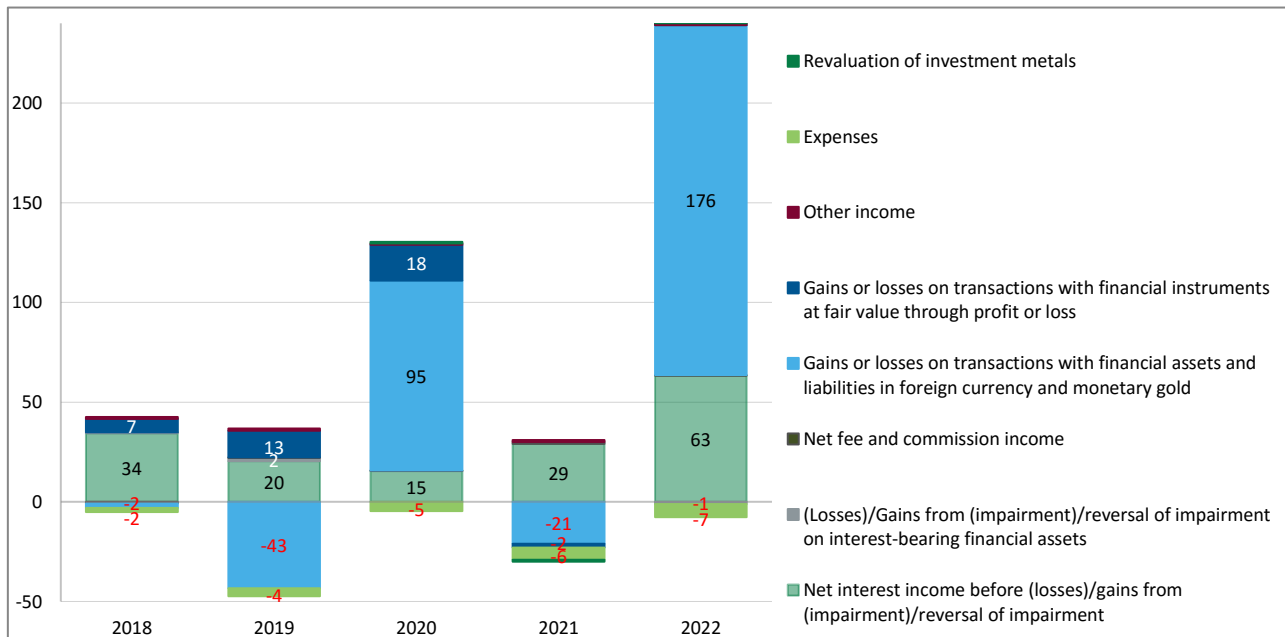
A large portion of the NBU's liabilities consists of banknotes and coins in circulation, liabilities to the IMF and NBU certificates of deposit.

Figure 5. NBU equity in 2018–2022, UAH billions

The NBU's equity, which is the residual value of assets after deducting liabilities, was mainly formed from sources other than government contributions. The NBU's equity consisted of the deferred unrealized revaluation of the NBU's assets

and liabilities, including due to exchange rate fluctuations, and a part of the profits retained by the NBU as general reserves, as required by law.

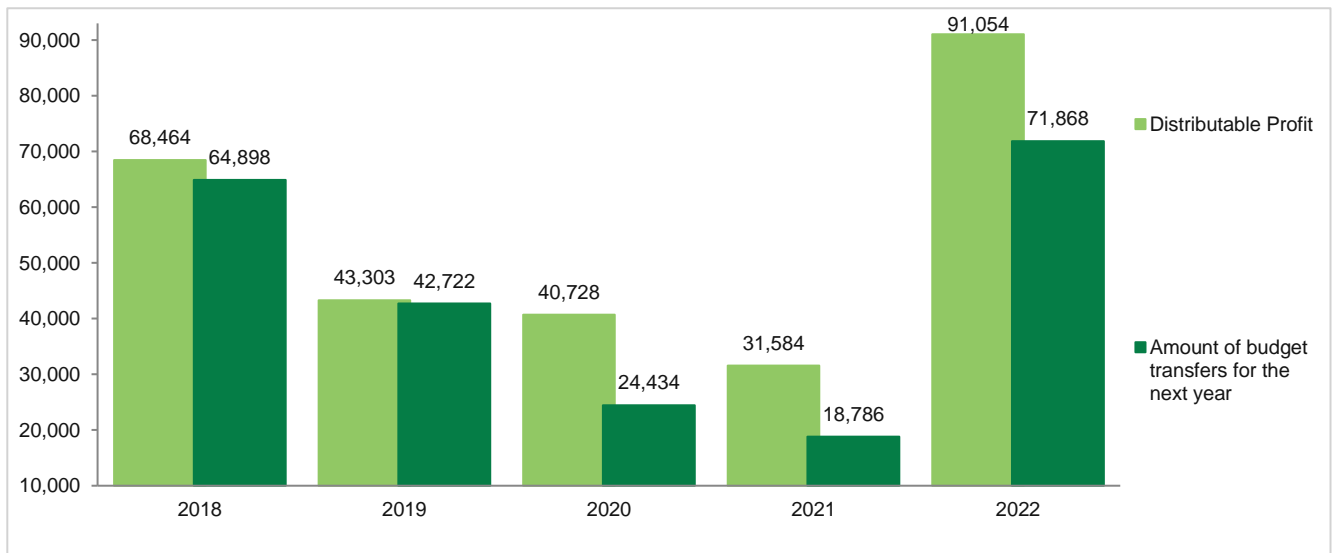
Figure 6. NBU income and expenses in 2018–2022, UAH billions



Net interest income as usual was the main contributor to the NBU's financial result. The central bank's financial performance is also influenced by changes in the exchange

rate and a large share of FX items being on the NBU's balance sheet.

Figure 7. Transfers by the NBU to the State Budget of Ukraine in 2018–2022, UAH millions



Payments to the State Budget of Ukraine

In 2022, the NBU transferred UAH 18.8 billion to the State Budget of Ukraine. As of 31 December 2022, the central bank recognized its obligation to pay UAH 71.9 billion of its profit to 2022 State Budget.

The NBU's remaining distributable profit of UAH 19.2 billion will be set aside to create general reserves of the NBU.

Read more about the changes in accounting policy in Section II.1. Financial Instruments, Note 4 to the NBU's Consolidated Financial Statements. Read more about identifying the distributable profit, liabilities to transfer the distributable profit to the State Budget of Ukraine, and creating general reserves of the NBU in Note 29 thereto.

4.2. Overview of Other Indicators

4.2.1. Financial Resources

NBU's Administrative Expenses

The NBU operates under the administrative budget, which is drafted for the year ahead and approved by the NBU Council.

The table below provides data on key items in the administrative budget for 2022 and planned data for 2023.

NBU's administrative expenses (including expenses of the Settlement Center) for 2022–2023

	Planned for 2022 (revised)	Actual performance in 2022	Percentage of plan performance in 2022	Planned for 2023
(UAH millions)				
Staff costs	3,341	3,256	97%	3,633
Administrative and other expenses	849	641	76%	1,000
Depreciation and amortization	267	254	95%	317
Total administrative expenses	4,457	4,151	93%	4,950
Investment costs for creating and developing facilities and equipment required for the NBU's operation	426	253	59%	495

The data presented show that the NBU is complying with its planned administrative expenses and managed to save resources. This is in line with the NBU's goal of using public resources efficiently and effectively.

According to the results for 2022, administrative expenses were lower than the planned rate by 7% on average.

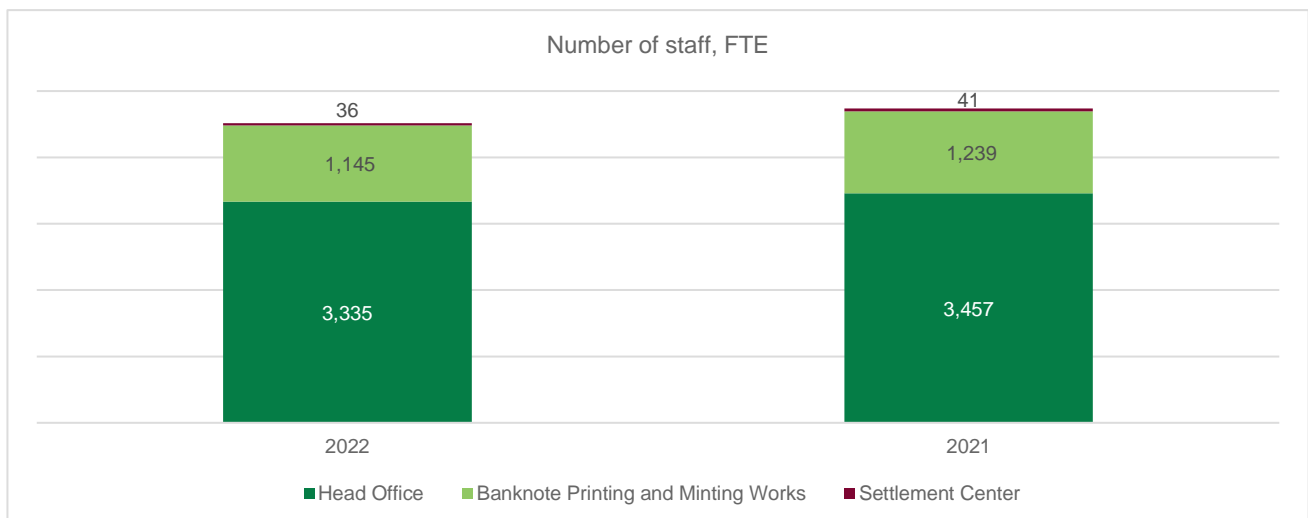
In 2022 the planned indicators of administrative expenses for 2022 were amended according to the NBU's procedure. The amendments mainly included reduction of expenses and

investments that are not critical in wartime and increase of certain expenses to ensure the NBU's business continuity under martial law.

Also, in 2022 a significant part of funds planned for the NBU material and technical base remained unused (about 41% of the planned amount). It resulted mostly from the postponing the deadlines for works completion, equipment supply, procurement, etc. due to martial law and suspension of the projects that were not related to the critical needs.

4.2.2. Human Resources

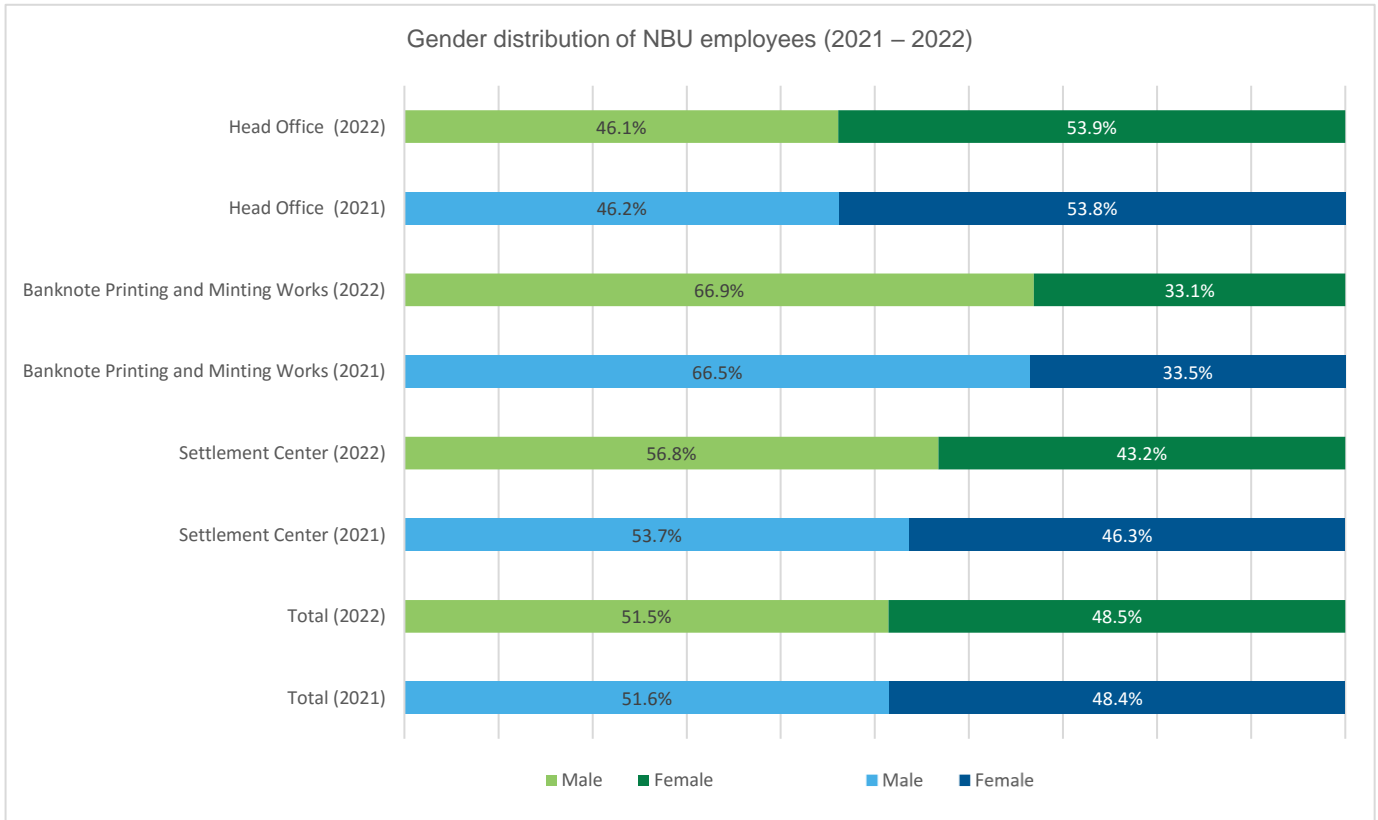
As of 31 December 2022, the NBU staff number reduced by 4.66% compared with the previous year and was 4,516 FTEs (staff at work); as of 31 December 2021, it was 4,737 FTEs.



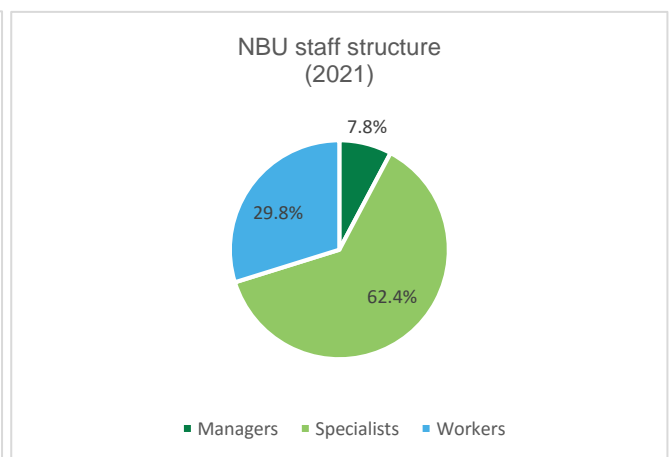
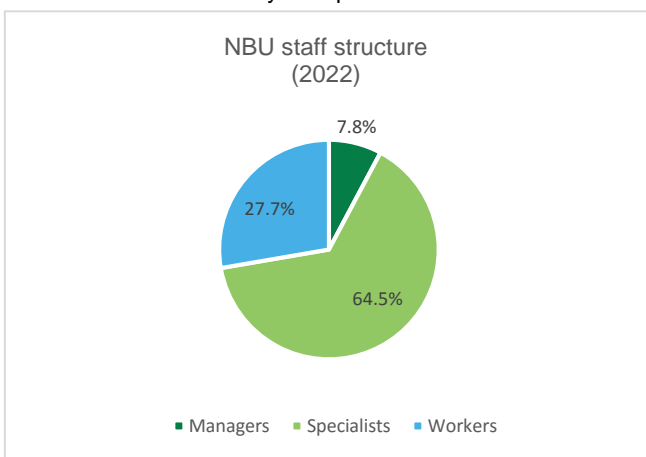
As of 31 December 2022, the average age of an NBU employee was 46 years, and the average employee tenure for the NBU was 13 years. NBU employee gender distribution is as follows: the NBU's Head Office employs 53.9% females

and 46.1% males, the Banknote Printing and Minting Works – 33.1% females and 66.9% males, Settlement Center – 43.2% females and 56.8% males.

The NBU staff structure by gender as of 31 December 2021 and 31 December 2022 was as follows:



The NBU staff structure by occupational classification as of 31 December 2021 and 31 December 2022 was as follows:



For more information on the NBU labor costs in 2022 refer to Note 34 of the NBU Consolidated Financial Statements.

25,340 at the Banknote Printing and Minting Works; UAH 36,819 at the Settlement Center.

In 2022, the average base pay (or the base component of remuneration) was UAH 41,352 at the NBU Head Office; UAH

The average salary including additional payments (raises, bonuses, extra pay, etc.) was UAH 62,042 at the NBU Head

Office; UAH 34,503 at the Banknote Printing and Minting Works; and UAH 44,087 at the Settlement Center.

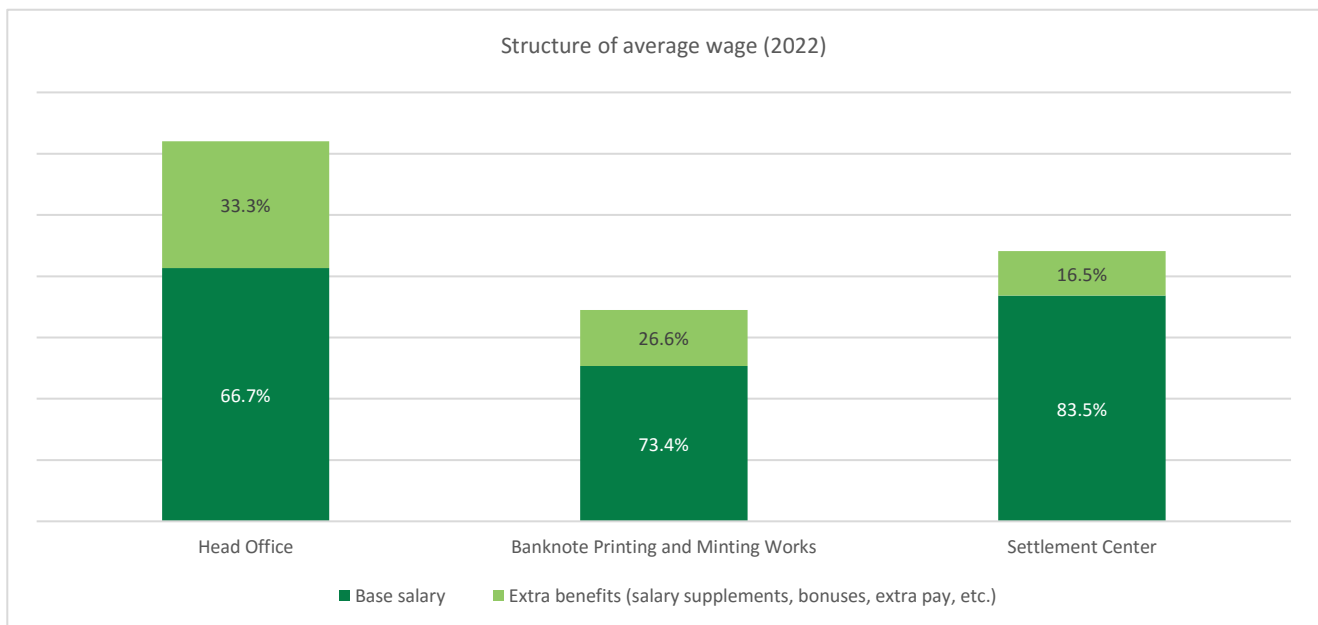
The general number of the educational events held in 2022 was 494 and the number of attendees - 6,120.

As in previous years, the trend for prevalence of the educational events related to hard skills preserved, compared to soft skills training, 277 vs. 182 events in 2022, respectively. Most soft skills trainings were conducted by the NBU internal trainers.

Various forms of training were used and combined both online and offline, as well as club meetings, peer-to-peer training (in which the employees share their knowledge).

New courses have been developed. Special attention was given to security issues: information and personal security during hostilities.

Total number of completed online courses in 2022 was 9,599.



4.2.3. Production Resources

State Property Management

As of 1 December 2023, the NBU managed 343 own real assets, which were listed in the Unified registry of State Property Objects. They included: 43 plots of land and 300 buildings and engineering structures. As many as 149 buildings were listed according to the real estate classifier, including:

- Donetsk oblast: 4 land plots, 8 buildings and structures
- Luhansk oblast: 3 land plots, 18 buildings and structures
- AR of Crimea: 4 land plots, 7 buildings and structures
- city of Sevastopol: 4 land plots, 23 buildings and structures

In order to implement the Strategy of Infrastructure Development and Corporate Operation Support in 2021-2024, a list of the NBU's real estate was approved. It was classified into four basic segments, including the property planned to be transferred for free (43 items) and disposed

through termination of the right to use land plots (8 objects). In 2022, 3 state-owned objects were disposed of (1 by transfer to another public authority authorized to manage property, the rights to use 2 land plots were terminated).

The detailed information on the NBU buildings and engineering structures is given in Note 30 of the NBU Consolidated Financial Statements.

Collateral Management

In 2022, the NBU received UAH 1.1 billion in repayment of debt on refinancing loans of insolvent banks (in 2021: UAH 1.4 billion).

Most funds were received from premature repayment of creditor claims by Rodovid Bank JSC to the NBU in the amount of UAH 945 million.

The NBU recovered part of the debt on its refinancing loans to insolvent banks also by:

- sale through enforcement proceedings of real estate pledged as security by property surety providers of insolvent banks for the total amount of UAH 28.3 million
- NBU's foreclosure on encumbered real estate though its acquiring into ownership: UAH 97.4 million
- other sources of debt repayment in total amount of UAH 0.4 million.

	2022			2021		
	Through DGF	Through third parties	Total	Through DGF	Through third parties	Total
Repayments from sale of collateral :						
real estate	–	28	28	210	227	437
securities and investment metals	–	–	–	161	–	161
property rights under pledged loans	–	–	–	175	–	175
Total repayments from sale of collateral	–	28	28	546	227	773
Repayments through NBU's acquisition of title to:						
real estate	43	55	98	441	–	441
premature repayment of creditor claims	945	–	945	–	–	–
from other sources	–	–	–	193	–	193
Total	988	83	1,071	1,180	227	1,407

In the domestic jurisdiction courts the NBU filed 107 lawsuits against property guarantors and 10 lawsuits against financial guarantors, within the scope of economic and civil proceedings aimed at the return of refinancing loans of insolvent banks withdrawn from the market by the Deposit Guarantee Fund (hereinafter referred to as the "DGF"), as well as 4 lawsuits against 5 individuals within the scope of criminal proceedings.

As of the end of 2022, based on the NBU's claims, 9 cases to property surety providers on foreclosure of property, 13 cases on bankruptcy of property surety providers, 8 claims to financial guarantee providers, and 4 civil actions within the scope of criminal cases were pending in the courts of various instances.

At present, the NBU is taking actions to enforce the court decisions regarding financial and property surety providers.

4.2.4. Intellectual Resources

The NBU's intellectual resources, which count as its intangible assets, comprise mainly software and licenses for its use.

In 2022, the NBU expanded the practice of using the latest data presentation tools, boosting statistical data visualizations by 10.2%.

Improvement of Reporting System

In order to provide a wide range of users with access to statistical information, in 2022, the NBU continued to put this information in the public domain on its website. The central bank has expanded the list of indicators that are published in the open data format (API). These indicators concern monthly and annual data about the amounts of FX cash imported and exported by Ukrainian banks.

According to agreements entered into with government authorities and international organizations and with a view of meeting the information needs of internal users, in 2022 the NBU, on the basis of the statistical reports it received from banks, prepared and submitted about 7.2 thousand regular statistical reports. Some of these reports were submitted to the Office of the President of Ukraine, Ukraine's Ministry of Economy, Ukraine's State Statistics Service, Ukraine's State Tax Service, and to the International Monetary Fund.

With a view to boosting the skills of NBU staff, the central bank held 14 consultations on how to use the latest data presentation tools, using the BI platform developed by MicroStrategy Inc., a world leader in data visualization.

The NBU also considered and drew up responses to people's requests, rulings of Ukrainian courts, and the queries submitted by Ukraine's National Police, committees of the

Ukrainian parliament, and Ukraine's Antimonopoly Committee.

Research and Development

Despite facing unprecedented challenges in 2022, the NBU continued to carry out economic research into the most relevant issues related to the development of the Ukrainian economy under martial law and during the post-war recovery. Although the NBU had to cancel the already planned traditional Annual Research Conference and some other research events in 2022 due to the start of the active phase of Russia's full-scale invasion, the central bank was able to adapt its research through organizing a number of scientific events aimed at domestic and international cooperation, support and strengthening research and analytical capabilities.

Responding to new challenges, the NBU updated its research priorities for the period until 2025 to factor in the specifics of the functioning of the country's economy in wartime and during the post-war recovery. The NBU will focus its research on:

- monetary policy in wartime and during post-war economic recovery
- safeguarding financial stability in the face of large and persistent shocks
- long-term challenges for the real economy after a protracted war
- developing digital markets, products, and their regulation.

In 2022, the NBU focused its research on topics that were especially relevant for the central bank's policy. Specifically, with limited access to official statistics, the central bank set up several approaches to assessing the current health of the Ukrainian economy. The NBU published the specifics of, and the methods for, estimating GDP in wartime in its July 2022 Inflation Report.

In 2022, the NBU also expects to continue previously initiated long-term studies, the results of which were published in peer-reviewed journals, or in other reputable publications. These studies related to:

- the sensitivity of banks' liquidity to sectoral shocks (<https://doi.org/10.1016/j.ememar.2022.100942>)
- the interconnection between wages and unemployment (<https://doi.org/10.1016/j.jce.2021.05.003>)
- the specific nature of fiscal multipliers (<https://doi.org/10.1016/j.jmoneco.2022.09.003>)
- the relationship between fiscal policy and migration (<https://doi.org/10.1111/jmcb.12897>)
- the structure of bank branches (<https://doi.org/10.1016/j.ecosys.2022.101040>)
- models for forecasting inflation (<https://doi.org/10.26531/vnbu2021.252.01>)
- analyses of the business models of Ukrainian insurance companies

(<https://doi.org/10.26531/vnbu2021.252.02>)

- debt burdens and "zombie banks" (https://bank.gov.ua/admin_uploads/article/WP_2022-01_Aragon_eng.pdf)
- choosing the monetary policy rule (https://bank.gov.ua/admin_uploads/article/WP_2022-03_Grui_Liebman_Nikolaychuk_Nikolsko-Rzhevskyy_eng.pdf) and
- trust in the central bank's policies (https://bank.gov.ua/admin_uploads/article/WP_2022-02_Savolchuk_Grui_eng.pdf).

Events for researchers held by the NBU in 2022 helped bolster confidence in monetary policy and broaden scientific discussion of the practical issues of the central bank's policies

- These events included the workshop "Inflation Targeting in a World of Large and Persistent Shocks" (25 November 2022)
- open research seminars (11 seminars) and
- the contest "[Monetary Policy: NBU University Challenge](#)" (18 November 2022).

Information Technologies

One of the main goals of the information technologies amidst a full-scale Russian aggression was ensuring continued operation of information systems of the NBU and the banking system of Ukraine. In the last years, in order to meet the goal the NBU IT infrastructure has been upgraded based on cutting-edge global technologies, including:

- upgrading the data storage system, server equipment, and software for the private cloud of the NBU and providing technology for secure storage of data on USB Flash drives
- upgrading the backup system/data recovery system of the NBU backup system followed by installation on all the premises
- introducing a remote access mechanism (VPN) for NBU employees to internal resources
- upgrading and expanding the options of remote access for NBU employees to the NBU information resources and systems by procurement in 2021 – 2022 of planned number of PC, updating the upgrading virtual work stations (VDI) and introducing an additional pool of virtual machines
- upgrading the system of the NBU corporate e-mail with replicating emails on all the premises
- installing a new communication channel between the NBU units on different NBU premises
- upgrading the local computer network for the State Treasury of Ukraine and the Central Vault
- conducting regular testing of disaster recovery plans (DRP) of critical information resources after breakdowns
- taking measures to identify the operational risks and mitigate their impact on the NBU information systems
- taking other measures as part of the operating activities.

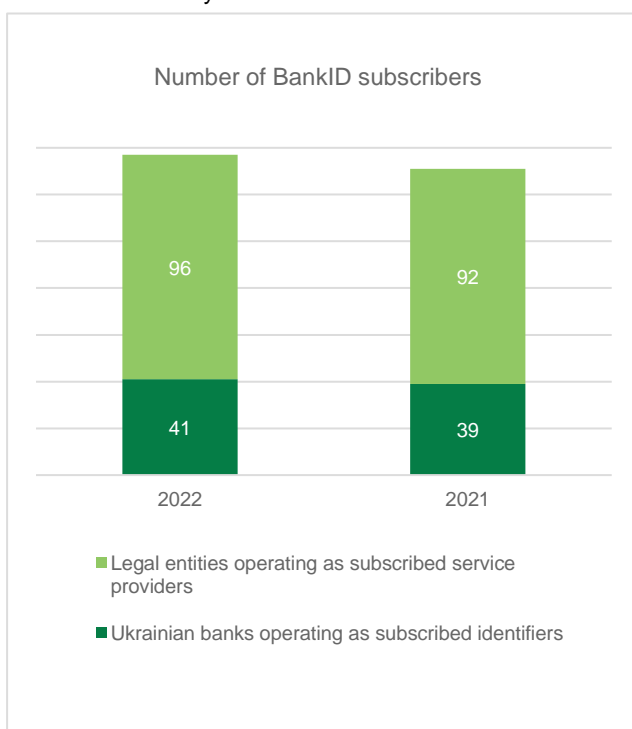
On the account of the measures above, in the earliest days of martial law in Ukraine, NBU IT specialists promptly took every step necessary to ensure the smooth operation of the information infrastructure of both the financial sector of Ukraine and the NBU itself. NBU IT specialists ensured continued operation of all information systems of the critical information infrastructure of the NBU and the banking system of Ukraine. At present, considering the full-scale war, these information systems are constantly undergoing backup by several regional separated backup Data Processing Centers (DPCs).

On the account of said measures, the System of Electronic Payments of the NBU (SEP) continued to operate in routine mode. In 2022, SEP was used to transfer 362.7 million payments (i.e. a daily average SEP load was 1.4 million payments) amounting to UAH 133.5 trillion. Thus, in 2022, SEP executed 18.7% less payments than in 2021, and 2.3-time more in terms of value.

The national system of electronic remote identification (NBU BankID) remained up-to-date and in demand.

As of the end of 2022, NBU BankID accounted for 137 subscribers including:

- 41 banks of Ukraine operating in the system with the status of identifying subscribers and covering 99.9% of individual card holders in Ukrainian market, and provided access to the service
- 96 legal entities operating in the system as subscribed service providers (86 business entities and 10 nonbusiness entities), including DIIA State Enterprise, DIIA app, and ID.GOV.UA Integrated Electronic Identification System.



In 2022, under martial law, individuals actively used NBU BankID to receive financial and administrative services, including through DIIA mobile app on ID.gov.ua portal for remote account opening etc.

In 2022, the NBU introduced tariffs on services provided by the NBU to NBU BankID subscribers that were temporarily suspended since 13 March 2022 in order to provide a continued access for the public to remote services and support NBU BankID subscribers during martial law.

Last year, the NBU BankID was used to execute 32.8 million successful electronic identifications, a 9% increase of the indicator in 2021 (30.2 million).

In 2022 an NBU BankID Personal account was introduced to simply information sharing both between subscribers during settlements and directly with the NBU, and settlements between subscribers along with monitoring insurance premiums are automated.

Strategic goals for developing NBU BankID until 2025 are the increase in the system subscribers, extending the list of services available to households and introducing tariffs differentiated by data received by subscribed service provider by NBU BankID means.

In 2022, main efforts of the PROSTIR National Payment System (hereinafter referred to as "PROSTIR") were directed at supporting participants, expending the infrastructure for the acceptance of PROSTIR cards, and implementing new services for cardholders.

Acceptance of PROSTIR cards in Ukraine as of the end of 2022:

- at retail POS-terminals is 100% (+2 pp annually)
- at ATMs – 94% (+7 pp annually).

The following services were introduced in 2022:

- PROSTIR card replenishment with cash at over 50 thousand self-service terminals
- cash withdrawals at POS-terminals at retail cash desks including supermarkets, pharmacies, filling stations
- P2P transfers using PROSTIR cards on websites five banks.

During 2022, one acquirer joined PROSTIR, and three banks ceased participation in the system, and six new issuers commenced issue of PROSTIR cards

Interbank transactions processed by PROSTIR increased in contrast with 2021 as follows:

- 13% by number – 4,474 thousand transactions
- 63% by value – UAH 3,015 million.

In 2022, PROSTIR e-Secure, a security technology for e-commerce transactions was introduced.

The strategic goals of PROSTIR development until 2025 are to increase the share of PROSTIR issuing banks to 70% of the total number of banks in Ukraine, ensure acceptance of PROSTIR payment cards by payment devices in Ukraine at a level not lower than 95%, advance security of online payments as a result of connecting PROSTIR participants to the PROSTIR e-Secure technology introduced in 2022, and introduce PROSTIR card tokenization service for digital wallets.

To provide a reliable source of information about the NBU and the banking system of Ukraine, the NBU supported and developed the NBU's official website during the year, in particular:

- developing and launching a functionally new website PROSTIR <https://prostir.gov.ua/en>
- completing development and launching the new portal for submitting financial statements <https://portalapi.bank.gov.ua/>
- developing and implementing a map of on-call bank branches with filters by banks and cities and the option to search by on-call branches, and switched to vector Tiles map
- developing a data import service for the map of on-call bank branches via the administrative panel of the NBU's official website
- developing a POWER BANKING microsite <https://power.bank.gov.ua/>.

As part of the development of electronic interagency information exchange systems the NBU integrated data sources using NBU enterprise service bus (ESB) with external sources in terms of NBU data, including the API of the National Securities and Stock Market Commission to obtain information on securities issuers and State Enterprise "NAIS" information system of the Ministry of Justice of Ukraine to receive data from the Unified State Register of Legal Entities, Sole Proprietors, and Nongovernmental Organizations.

The NBU launched the RPI information system designed to ensure that the NBU performs its function of keeping the Register of Payment Infrastructure.

A new subsystem for controlling incoming data from banks is introduced into the NBU's Credit Register system.

The following was accomplished for the Automation Systems for Monetary Policy Instruments (hereinafter referred to as ASMPI):

- calculation of the compounded UONIA index and compounded UONIA average rates was automated for their subsequent regular publication on the NBU's official website
- NBU Depository ASMPI software was put into trial operation, as well as software for accounting for NBU Depository Institution, CredLine3 for conducting bank refinancing, and supporting SwapLine for interest rate

swaps, NBU CertLine for servicing circulation of certificates of deposit for generating technical applications for replacement of collateral in the refinancing pool and the Bank Guarantee Fund taking into account the specifics for maintaining bank liquidity under the martial law

- mechanism and formats of API interaction between the automation system of the Depository Institution and the depository recordkeeping system of NBU Depository were introduced that are used, in particular, when households purchase military bonds in the Diia mobile app as an important tool for financing the Ukrainian army
- in NBU Depository and NBU Depository Institution systems, transfer of debit memo registers was introduced through the payment service using the mechanisms for signing accounting documents by QES software and hardware suite
- Exchange Rates-2 software for calculating the official hryvnia exchange rate against foreign currencies and accounting prices for investment metals
- a new version of the Electronic Form of the State Register of Banks system in the form of a web appl was prepared for trial operation.

The Cash Circulation Automation System (CCAS) is a centralized system for effective management of banknotes and coins in cash reserves and reserve funds of NBU that computerizes accounting and operations including operations on transferring cash stocks of the NBU for storage to authorized banks. In particular, 2022 was noted for:

- expanding and optimizing system's functions for handling securities
- computerizing new operations with cash and respective document formats
- putting into operation the settings to ensure decentralization of storage of reserve funds of the NBU in other divisions of the NBU in the regions.

Since 1 January 2022, a new version of WEB-Application-Online (automated workplace in a bank/SIT company as part of the subsystem "Automation of processing bank applications for cash reinforcement, removal of its surplus and unfit for circulation banknotes and coins") in full was introduced in CCAS. A remote site infrastructure was established for the CCAS.

BARS Millennium automated banking system, the NBU's general ledger, is constantly being developed and improved. More specifically:

- in order to reduce the risk of unauthorized access to data, a role-based model of administration of BARS Millennium ABS users in accordance with the matrix of authorizations was introduced and software for automating the issuance of roles in accordance with the matrix of authorizations was put into operation
- QES software and hardware suite algorithm was automated for signing and setting display of documents

- BARS Millennium ABS was integrated with the SwapLine by means NBU ESB to exchange data on the terms and conditions of swap agreements for automated accounting operations of interest rate swaps
- software was introduced to record transactions on repayment of certificates of deposit pledged to the NBU.

Reporting Analytical System and NBU data warehouse are undergoing improvements.

In accordance with the needs of NBU units, existing and new algorithms for calculating indicators are constantly updated, analytical reports are revised and updated, and requests for changes to the controls of reporting files are implemented on the web portal reporting (hereinafter referred to as the "Reporting Portal") including the following:

- amendments were introduced to calculating data of economic ratios, open FX position limits, and required reserve ratios
- calculation procedure of mandatory reserves based on the data provided during the martial law period was implemented
- consolidated documents were drafted based on reporting statements of credit unions to the DGF, indicators, and reports for calculating and analyzing internal credit ratings for resident banks of Ukraine
- algorithms for calculating indicators were revised in accordance with the changes in the Methodology for deriving indicators based on FINREP data model
- reports were implemented for ensuring preparation and submission of the updated list of financial resilience indicators to the IMF.

In order to further computerize reporting, the NBU developed and implemented an upgraded version of the Reporting Portal since September 2022 that provides reporting entities with automated file structures with indicators and controls, reference modules, and download logs. File uploads with reporting indicators were computerized to the Data Warehouse and data processing in the *Reporting Analytical System*.

Rules for calculating and publishing data have been updated. 12 new reference books and respective API sets on the Reporting Portal were developed; models of reporting files and calculations of indicators were revised.

The NBU Data Warehouse components for modeling dimensions and structures of reporting files and XSD Schemas, the *Constructor* software, were put into operation.

NBU EBS implemented data integration services update between the CERTIF and BARS Millennium ABS systems, SAT RM and BARS Millennium ABS systems to transfer descriptions (key characteristics) of resident securities and certificates of deposit, and developed an automated service for integrating data on SEP services between NBU SAP system and NBU Datawarehouse for visualizing the Microstrategy system.

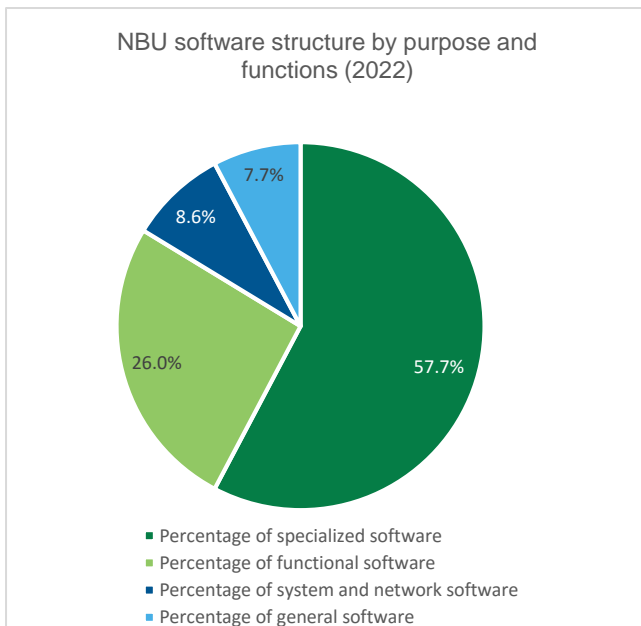
The NBU's banking, financial, and business process automation system, NBU SAP, implemented on the basis of SAP systems, is constantly under improvement and development:

- DB HANA replication technology was implemented to backup DPC to ensure rapid recovery of the NBU's SAP information resource
- data transfer to BARS Millennium ABS was introduced via the payment web-service of NBU SAP using by signing accounting documents through QES software and hardware suite
- a web-service was developed for interaction between the NBU SAP and BARS Millennium ABS to accept incoming payments from BARS Millennium ABS for lending and sales services
- optimized procurement process was implemented and other improvements were made to the procurement and contractual management process to comply with legal amendments, in particular, due to martial law
- a universal web-service was introduced to transfer data from the NBU's information systems to the NBU's SAP on provided services that are reported in the "Sales" function
- electronic sick leave processing function was introduced in NBU SAP; legal amendments related to martial law were formalized
- salary reporting, including calculating provisions for unused vacation time was finalized
- reporting account receivables/payables was automated in terms of generating reconciliation statements of settlements with creditors for business operations.

The NBU has developed the DECART system for automated verification of declarations submission by declaring entities, which allows generating structured information based on the data from the Unified State Register of Declarations of Persons Authorized to Perform State or Local Self-Government Functions that can be used to identify and prevent conflicts of interest among the NBU's employees and to ensure that they comply with restrictions provided for by anticorruption laws.

The NBU mobile applications are being developed and continuously improved. One of the recent developments and implementations is the mobile app "Monthly Business Outlook Surveys".

The regulator keeps the Register of software used by the NBU (362 units as of the end of the reporting year) to optimize managing intangible assets.



As part of development interventions of the information infrastructure, cutting-edge information technologies were introduced, a modern information infrastructure at the NBU was established and maintained, and employees working remotely were provided with the necessary technical means and access to the information systems as part of the NBU's organizational measures to prepare and hold 74 procurement procedures in 2022: network and telecommunications equipment, laptops and computer equipment, information systems, software, modernization services, and maintenance of information systems, equipment, software assistance, telephone and data transmission services of the NBU, etc.

Information and Cyber Security

In the context of Russia's armed aggression and martial law declared in Ukraine, the NBU focused its efforts on ensuring the stable operation of the Ukrainian banking system, protecting critical infrastructure in the Ukrainian banking system, and strengthening its cybersecurity and cyber defense.

The enemy's targeted actions have led to a significant increase in the number of cyber threats and cyber attacks against the NBU and Ukrainian banks.

To ensure continued operation of the NBU's information resources and the banking system of Ukraine, to respond in a timely manner to challenges and threats arising in the context of war, and to make prompt management decisions, the NBU established the following information resources:

- the Emergency Operations Center at the NBU to coordinate measures for business continuity of the banking system of Ukraine during martial law
- a working group handle issues related to the functioning of Ukraine's banking system in territories that have temporarily been forcibly removed from under Ukraine's control or that are under threat of occupation
- an operations center for NBU facilities during martial law

- a cyber incident and attack response group at the NBU.

The NBU's Cyber Security Center and the Cyber Security Incident Response Team of the Ukrainian banking system (CSIRT-NBU) were put on high alert and continuously monitored risks and cyber threats to information resources of the NBU and the Ukrainian banking system, and ensured that timely and adequate response and countermeasures were taken.

In 2022, CSIRT-NBU analyzed 11,280 samples of malware (2,000 samples in 2021), and provided timely alerts to Ukrainian banks on detected cybersecurity incidents and reported attempted cyberattacks. The NBU posted around 300 reports on cyber incidents and indicators of cyber threats on the information sharing platform on current cyber threats and respective indicators, the Malware Information Sharing Platform & Threat Sharing (MISP-NBU).

The NBU also actively counteracted a significant increase in cyberfraud and cybercrime, mostly related to programs providing state and international financial assistance to Ukrainian citizens. By using phishing resources, deceiving citizens, the criminals tried to gain access to personal data of the Ukrainian public, to data on their payment instruments, and to the money on their accounts.

On account of continuous monitoring of cyberspace in 2022, CSIRT-NBU identified and initiated the blocking of about 4,500 phishing resources disguised as Ukrainian banks and payment services, government portals of the Cabinet of Ministers of Ukraine, Diia, E-Dopomoga, and others.

The regulator continues to actively cooperate with European and US cyber security institutions for receiving assistance by the NBU in organizing cyber security and cyber defense of the banking and financial sectors of Ukraine, adjusting the Cybersecurity Center and CSIRT-NBU operations to constantly growing number and severity of cyber threats, improving and tuning instruments of response and counteractions.

The regulator paid additional attention to ensuring an adequate level of cybersecurity and reliability of information resources operated by the NBU.

The measures taken to decentralize, distribute locally, and duplicate (backup) technological platforms of information resources and systems of the NBU, and to organize the work of its staff at new locations, ensured operation, continuity, and flexibility of managing these resources and systems, as well as their integrity and resilience not only against cyber aggression (cyber threats) but also against other possible risks and threats from the aggressor.

The information and cybersecurity of the BankID System was strengthened by introducing additional requirements to information security systems, network security and other information security measures during verification of applicants for the permit to join the BankID System.

Online Fraud monitoring of PROSTIR payment cards was constantly carried out to detect fraudulent transactions, and the information received was processed jointly with the security departments of banks and law enforcement agencies of Ukraine. The major outcome of the effort was exposing a large criminal group of fraudsters by joint efforts of CSIRT-NBU and law enforcement agencies of Ukraine.

In addition, the external audit of the NBU's SWIFT infrastructure's compliance with the provisions of SWIFT

Customer Security Controls Framework (CSCF) v2022 conducted in 2022 confirmed that the NBU has implemented.

4.2.5. Social and Reputational Resources

Occupational Health and Safety

In 2022, the NBU adopted a series of measures to create and maintain safe working conditions.

Expenses on labor safety of the NBU

	2022	2021
	(UAH thousands)	
Occupational health and safety measures	114	455
Work clothes, footwear	157	545
Mandatory and periodic medical examination	402	513
Compulsory traffic accident insurance	2	4
Purchase of medical products for first aid kits	33	63

In 2021–2022, a number of trainings in occupational health and safety were conducted:

	2022		2021	
	Number of events	Number of participants	Number of events	Number of participants
Occupational health and safety	17	228	9	218
Fire safety	6	350	8	423
Remote training in occupational health and safety	11	1,051	6	1,334
Total	34	1,629	23	1,975

Activities of the NBU Corporate Nonstate Pension Fund (CNPFF)

As of 31 December 2022, the Fund has 12,750 participants (12,720 as of 31 December 2021), including 3,416 persons that receive pension benefits for a definite period (3,430 as of 31 December 2021). Book value of CNPF's assets reached UAH 1,779 million as of 31 December 2022 (UAH 1,680 million as of 31 December 2021). In 2022 the founder contributed UAH 76 million to the CNPF (UAH 60 million in 2021).

Voluntary Medical Insurance

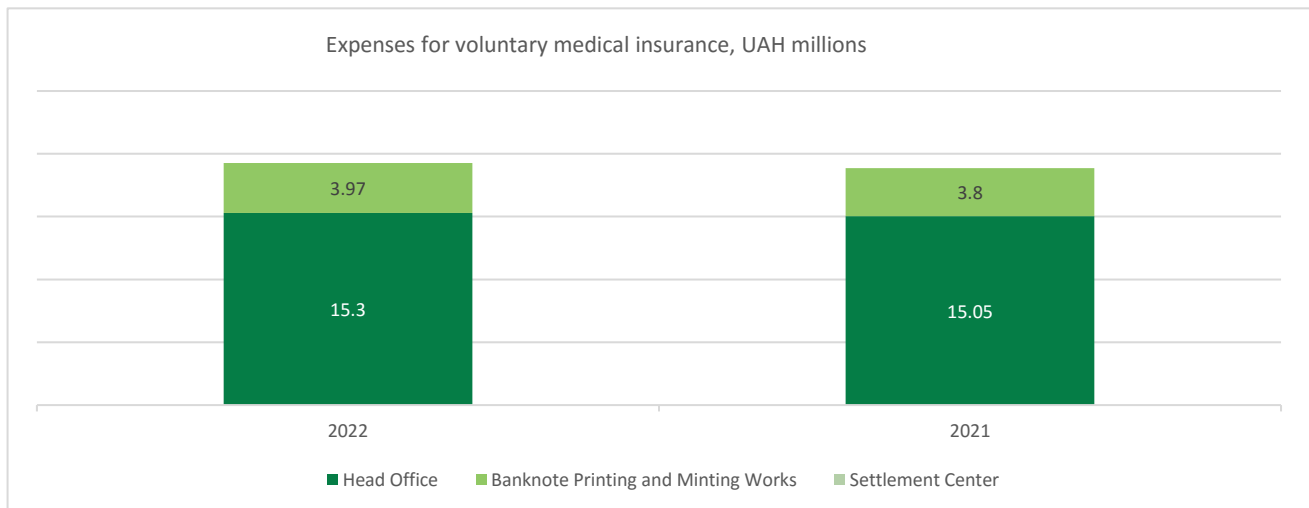
The number of insured persons amounted to 3,615 in 2022, including 2,857 employees of the NBU Head Office and 758 employees of the Banknote Printing and Minting Works. In 2021, the number of insured persons was 3,678, including

2,939 employees of the NBU Head Office and 739 employees of the Banknote Printing and Minting Works.

In 2022, the expenses for voluntary health insurance totaled UAH 19.27 million, including UAH 15.3 million on the NBU Head Office and UAH 3.97 million on the Banknote Printing and Minting Works (in 2021, the respective figures were UAH 18.85 million, UAH 15.05 million and UAH 3.8 million).

The NBU's Settlement Center is not covered by the voluntary health insurance program.

NBU's total expenses for financial assistance and other compensations amounted to UAH 11.39 million in 2022, including UAH 10.77 million to the employees of the NBU Head Office, UAH 0.62 million to the Banknote Printing and Minting Works.



Operation of the Primary Labor Union Organization of the NBU

In 2022 the NBU's Labor Union

- provided assistance to members of the Union for childbirth, funeral of the first-degree relatives, and medical treatment
- paid one-time lump sums to the NBU employees raising three or more children and children with special needs
- provided support of the Labor Union members whose principal residence has been damaged by hostilities in the region of residence
- provided periodic assistance to NBU employees who joined the ranks of the Armed Forces of Ukraine
- organized training sessions on pre-hospital care
- As part of charitable initiatives, the NBU's Labor Union:
 - provided assistance to Kyiv Military Hospital for treatment of the wounded
 - supported the war-affected residents of Kherson, Balakliia, and Izium
 - provided targeted assistance to the injured
 - presented Christmas gifts (sweets) for orphans studying at the Tarashchanskyi educational and rehabilitation center
- supported arrangement of rooms for kids of NBU's employees at the sites of the NBU in Kyiv and regions
- provided NBU bomb shelters in Kyiv and in the regions with tea and cookies to ensure the comfort of employees during long air raids
- organized summer rest and recreation (including abroad) of 139 children of the union members

The number of employees that joined the Labor Union in 2022 was 208 persons (in 2021 - 210).

Financial Literacy

This year, the NBU focused its attention on several areas of social activity, informing the public about the work of the financial sector during the war, raising the level of financial

literacy of the public, and launching charitable initiatives to support Ukraine's defense.

In March 2022, the NBU launched a website *Financial Defense of Ukraine* to raise public awareness of the financial system operation during the war (<https://promo.bank.gov.ua/fin-defense/>). The website consists of nine thematic sections: hryvnia, foreign currency, cards, transfers, loans, deposits, insurance, fraud, and more.

The website was used not only by citizens living in Ukraine, but also by Ukrainians who were forced to go abroad to escape the war. Along with the website, the NBU launched the *Financial Defense of Ukraine* information campaign, which informed residents of Ukraine about the operation of banks and nonbank financial institutions during the war through various channels (NBU's channels, websites and social media of regional state administrations, the media, etc.).

In order to protect the rights of borrowers and improve public awareness on lending services, their rights and obligations, NBU additionally launched the awareness campaign *Know Your Rights: Loans*. More than 50 partners joined the campaign, sending, together with the NBU, to the target audience six million messages over three months.

A new powerful area of financial literacy has emerged: training of teachers to teach the discipline Entrepreneurship and Financial Literacy in schools. The discipline will be introduced in all Ukrainian schools: in 2025 for grade eight and in 2026 for grade nine.

To train educators to teach this discipline, the NBU has launched this year a specialized website *Financial Knowledge Center Talan*. (<https://talan.bank.gov.ua/>) The website contains a lot of useful lesson materials, as well as announcements of the NBU's events, which are free for teachers and students to attend.

The NBU also held a summer school for teachers on basic financial topics. The course included 18 lectures. 264

teachers from all over Ukraine successfully completed the course. Over 3,000 educators enrolled for the next summer school.

Volunteer Initiatives of the Staff

The work on charitable projects has become a separate new area of NBU's focus.

On the first day of war, the NBU opened a special account to collect funds to support the Ukrainian Armed Forces.

The NBU transfers all the funds accumulated on the special account to the defense forces agencies (upon their request and approval of the Ministry of Defense of Ukraine), which then independently distribute the funds.

Since 27 February 2022, the NBU has been continuously informing the public about the status of this special account, as well as organizing and supporting initiatives aimed at raising funds for defense needs.

The National Bank of Ukraine (NBU) launched a charity campaign *Brave Hryvnia*. For three months (from 1 August to 31 October 2022), coins of 10 and 50 kopiikas and 1, 2, 5, and 10 hryvnias were collected throughout Ukraine. All the funds raised were transferred to the NBU's special account. Participants in this charity campaign collected almost UAH 5 million worth of coins.

Preschoolers and school and university students became the driving force of the campaign. Some 2,573 educational institutions from all over Ukraine, even from the temporarily occupied territories, participated in the fundraiser.

On the occasion of Ukraine's Independence Day, the NBU jointly with PrivatBank hosted the charity fundraiser *Get a Coin for Donating to the Armed Forces of Ukraine*. All of the funds collected were put into the special account (almost UAH 8.6 million). Anyone who made a donation for Ukraine's Armed Forces had a chance to receive one of the ten

exclusive commemorative coins *Oh, the Guelder-Rose in the Meadow* (five of them made of silver and the other five made of nickel silver) signed by the NBU's Governor and Commander-in-Chief of the Armed Forces of Ukraine Valerii Zaluzhnyi. (<https://bank.gov.ua/en/news/all/moneta-za-donat-dlya-zsu-uchasniki-blagodiyynogo-zboru-koshtiv-zibrali-mayje-86-mln-griven>)

In May 2022, the NBU's special account was integrated with the United24 fundraising platform, which had been launched at the request of President of Ukraine Volodymyr Zelenskyy.

The culture of charity is part of the financial culture, therefore the NBU sees the need to promote it among young people. In November 2022, the NBU joined the international charity movement *Giving Tuesday* and organized the Charity School for educators. 18 speeches were organized for teachers by speakers from the NBU, charitable foundations, and public organizations.

Over 2,400 educators registered to participate in the School. While 1,429 of them attended webinars online, the others completed the course remotely, by watching the recorded webinars.

After the Charity School, the NBU launched the *Good Deeds Marathon* project, an educational initiative where children and young people learned about charity, did good deeds, and shared them on social media. 679 educational institutions participated in *Good Deeds Marathon*: 75 pre-school institutions, 501 schools, 9 out-of-school educational facilities, 25 vocational schools, 21 pre-university educational institutions, 10 higher education institutions, and 38 other institutions. The Marathon participants did 3,526 good deeds in 2022, 70% whereof were aimed to support the Armed Forces of Ukraine. (<https://promo.bank.gov.ua/giving-tuesday/>)

A total of 18 educational projects to improve financial literacy of the public were organized by the NBU in 2022.

4.2.6. Natural Resources

Environment protection, reduction of negative environmental impact are among the NBU's goals even under the martial law in Ukraine.

The NBU has introduced the environmental management. The process management is aimed at implementation of environmental laws and mitigation of the environmental impact of negative factors.

To mitigate this impact the separate collection of waste is in place. The hazardous waste is transferred to the organizations licensed to handle the hazardous materials. The waste containing valuable resources is sold for recycling.

All the processes within the NBU are conducted in line with the requirements established in environmental laws, including the payment of resource taxes and mandatory payments, such as land tax, fees for the use of the bodies of water, emissions of pollutants into air, etc. In addition, the NBU is engaged into the environmental awareness raising of its employees. The remote training *Environmental Awareness* was organized to provide the necessary information and knowledge on how to prevent the damage to the environment.

	2022		2021	
	Weight, kg	Amount, UAH thousand	Weight, kg	Amount, UAH thousand
Waste paper for recycling	117,814	278.41	84,071	203.49
PET containers (plastic bottles)	-	-	-	-
Mixed polyethylene waste (unsorted)	3,850	1.6	2,120	7.34
Plastic cassettes (plastic containers)	-	-	29,599	72
Lead batteries, damaged or exhausted	10,937	164.07	5,454	136.4
Coin scrap	70,375	3,270.00	45,770	1,262.22
Total		3,714.08		1,681.45

The increasing emissions of CO₂ pollutant from the consumption of natural gas were related to establishing the inventory of types and volumes of pollutants released to the air.

In spite of the martial law introducing in Ukraine, the NBU continues to protect the environment and comply with the environmental requirements, thus confirming its responsible approach. It is demonstrated with the introduction of the measures to maintain the operational condition of the stationary emissions sources, ensure technical maintenance of water treatment systems, control the wastewater quality, separate collection of waste, etc.

Water Consumption

The NBU's water resources management is based on efficient and rational use. To ensure the optimal water consumption by the institution both recirculating water systems and water reuse are used.

The NBU arranges quarterly monitoring of waste water quality and takes measures to reduce the concentration of detergents and hazardous substances in waste water. The NBU's industrial sites are equipped with treatment facilities and sanitary laboratories.

The water withdrawal by the NBU in 2022 and 2021 was as follows:

	2022				2021			
	Head Office	Banknote Printing and Minting Works	Settlement Center	Total	Head Office	Banknote Printing and Minting Works	Settlement Center	Total
Surface waters	-	214.7	-	214.7	-	411.878	-	411.878
Others sources	-	45.6	-	45.6	-	-	-	-
Municipal water supply	30.2		0.672	30.872	29.8	37.965	1.082	68.847
Underground waters	-	55.455	-	55.455	-	66.218	-	66.218
Total, thousand cub. m	30.2	315.755	0.672	346.627	29.8	516.061	1.082	546.943
Number of staff, persons (FTE)	3,335.25	1,145	35.75	4,516	3,457	1,239	40.82	4,736.82
Use of water per 1 person, cub. m	9.05	275.77	18.80	76.75	8.62	416.51	26.51	115.47

Responsible Consumption

Electric energy and natural gas consumption by the NBU in 2021–2022 was as follows:

	2022			2021		
	Volume, thousand units	Number of staff, persons (FTE)	Consumption per 1 person, thousand units	Volume, thousand units	Number of staff, persons (FTE)	Consumption per 1 person, thousand units
Electric energy consumption by the NBU for year, thousand kWh*						
Head Office of the National Bank of Ukraine	7,665.643	3,335.25	2.298	8,758.682	3,457	2.534
Banknote Printing and Minting Works	22,285.327	1,145	19.463	33,841.395	1,239	27.313
Settlement Center	311.460	35.75	8.712	334.191	40.82	8.187
Total	30,262.430	4,516	6.701	42,934.268	4,736.82	9.064
Natural gas consumption by the NBU for year, thousand cub. m						
Head Office of the National Bank of Ukraine	348.890	3,335.25	0.105	388.333	3,457	0.112
Banknote Printing and Minting Works	3,067.982	1,145	2.679	4,238.392	1,239	3.421
Settlement Center	17.763	35.75	0.497	25.818	40.82	0.632
Total	3,434.635	4,516	0.761	4,652.543	4,736.82	0.982

Contaminating Agents Emissions

According to the requirements of environmental laws the NBU performs monitoring of environmental impact. A control system was established covering the entire manufacturing cycle:

- emissions and dumping from facilities undergo laboratory surveillance
- disposal sites are assessed for their impact on soil, ground waters, and air
- air and underground waters at borders of the facility sanitary protection zones are sampled for quality control
- technical condition of environmental facilities and abatement equipment is checked.

	2022			2021		
	Carbon dioxide (CO ₂) emissions related to natural gas consumption, tonnes	Natural gas consumption by the NBU for year, thousand cub. m	Emissions per 1 thousand cub. m of gas, tonnes	Carbon dioxide (CO ₂) emissions related to natural gas consumption, tonnes	Natural gas consumption by the NBU for year, thousand cub. m	Emissions per 1 thousand cub. m of gas, tonnes
Head Office of the National Bank of Ukraine	661.636	348.890	1.896	245.114	388.333	0.631
Banknote Printing and Minting Works	5,513.827	3,067.982	1.797	7,883.792	4,238.392	1.860
Settlement Center	31.970	17.763	1.800	55.742	25.818	2.159
Total	6,207.433	3,434.635	1.807	8,184.648	4,652.543	1.759

The data of monitoring allow to define the level of production impact to environment and to take prompt managerial

decisions aimed at prevention and mitigation of environmental impact.

4.2.7. Interaction with the IMF

In 2021 and 2022 Ukraine continued the active cooperation with the IMF. In relations of Ukraine with the IMF, the NBU is an immediate recipient of the IMF funds both under the SDR distribution and SDR purchases (receives loans from the IMF), and performs the functions of a custodian bank, on the other hand.

The ultimate beneficiary of the funds on behalf of Ukraine under the separate tranches of the IMF-supported credit facilities or the SDR distribution is defined by the IMF at each funds disbursement (Government of Ukraine or the NBU). The party that receives the funds, undertakes to repay the principal and the servicing of such debt (payment of interests, fees, etc.)

The NBU in its role of a custodian bank manages IMF accounts No. 1 and No. 2 and the securities accounts for the liabilities to the IMF.

A debt instrument with respect to quota contributions issued by the NBU on behalf of Ukraine is recognized as the NBU's

liability and accounted in the NBU's consolidated financial statements.

The information below represents the balances under Ukraine's liabilities to the IMF, as distributed between the NBU and the Government of Ukraine.

	2022			2021		
	on behalf of the NBU	on behalf of the Government	Total	on behalf of the NBU	on behalf of the Government	Total
	(UAH millions)					
Liabilities to the IMF for SDR purchases	137,293	236,138	373,431	153,455	119,456	272,911
Liabilities to the IMF for SDR allocations	3,982	154,309	158,291	3,112	120,508	123,620
Account No. 1	246	–	246	193	–	193
Account No. 2	4	–	4	3	–	3
Liabilities with respect to quota contributions	97,651	–	97,651	76,605	–	76,605
Liabilities to the IMF	239,176	390,447	629,623	233,368	239,964	473,332

The detailed information on definition of liabilities under quota can be found in Note 8 to Section II.II Financial assets and liabilities of the Consolidated Financial Statements.

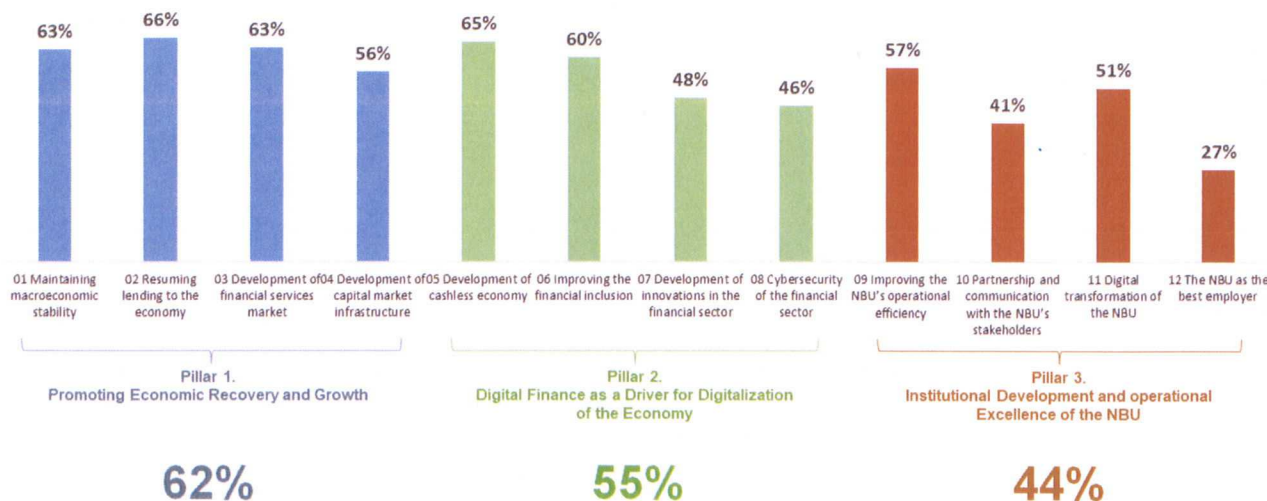
Part 5. Development Prospects

In 2022, despite the full-scale invasion by Russia, the NBU continued to successfully implement the NBU Strategy 2025, which was presented in 2021. In spite of the war, the NBU's activities were aimed at ensuring sustainable development of the central bank and the financial ecosystem of Ukraine.

In 2021–2022, the NBU's overall progress in implementing its strategic goals was 56%. This was only 5 pp lower than planned. The best performance was recorded in Pillar 1.

Promoting Economic Recovery and Growth – 62%. The progress was 55% for Pillar II. Digital Finance as a Driver for Digitalization of the Economy, and 44% for Pillar III. Institutional Development and Operational Excellence of the NBU.

Progress in implementing strategic goals:



The NBU started to update the Strategy of the National Bank of Ukraine and the Strategy of Ukrainian Financial Sector Development, factoring in the risks that the banking system is facing under martial law and will face in the post-war period. In particular, the NBU analyzed developments and changes across several areas: political, economic, social, technological, legal, and environmental.

Based on results of further work by the NBU and other stakeholders, the presentation of updated strategy documents of the NBU and the financial sector is planned for 2023.

In the reporting year, the NBU took an active part in preparing responses to the Questionnaire received from the EU. Based on the submitted Questionnaire, a positive opinion was made on Ukraine's capability to meet its EU membership commitments and the country gained the EU candidate status.

Throughout 2023, the NBU will be involved in the initial assessment of EU acquis implementation progress in terms of negotiation sections and the preparation of the National Program for EU Laws Implementation in Ukraine.

Approved by the Board of the National Bank of Ukraine on 6 April 2023.

Signed on 7 April 2023.

Governor

Andriy PYSHNYI

Chief Accountant,
Director of Accounting Department

Bohdan LUKASEVYCH



National Bank
of Ukraine

Consolidated Financial Statements

for the Year Ended 31 December 2022



Contents

INDEPENDENT AUDITOR'S REPORT

CONSOLIDATED FINANCIAL STATEMENTS:

Consolidated Statement of Financial Position	1
Consolidated Statement of Profit or Loss and Other Comprehensive Income	2
Consolidated Statement of Changes in Equity	3
Consolidated Statement of Cash Flows	4
Notes to Consolidated Financial Statements	5
Section I. Basis for Preparing Financial Statements	5
1. Principal Activities	5
2. Basis of Accounting Policies and Reporting Presentation	7
3. Impact of Economic Conditions on the NBU's Financial Position and Performance	9
Section II.I Financial Instruments	11
4. Accounting policy. Presentation of Financial Instruments by Measurement Categories	11
5. Basic Estimates and Judgments in Applying Principles of Financial Instruments Accounting	17
Section II.II. Financial Assets and Liabilities	20
6. Funds and Deposits in Foreign Currency and Investment Metals	20
7. Foreign Securities	21
8. Transactions with the IMF	25
8.1. SDR Holdings	26
8.2. IMF Quota Contributions	27
8.3. Liabilities to the IMF	27
9. Domestic Securities	28
10. Loans to Banks and Other Borrowers	30
11. Other Financial Assets	38
12. Accounts of Banks	39
13. Accounts of Government and Other Institutions	40
14. Certificates of Deposit Issued by the NBU	41
15. Other Financial Liabilities	42
16. Cash and Cash Equivalents	43
Section II.III. Financial Performance by Financial Instruments.....	44
17. Interest Income and Expenses	45
18. Gains or Losses on Transactions with Financial Assets and Liabilities in Foreign Currency and Monetary Gold	45
19. Gains or Losses on Transactions with Financial Instruments at Fair Value through Profit or Loss	46
20. Gains/(losses) on the Reversal of Impairment/(Impairment) of Financial and Nonfinancial Assets	47
Section II.IV. Fair Value of Financial Assets and Liabilities	48
21. Fair Value of Financial Assets and Liabilities	48
Section III. Risk Management	52

22. Financial Risk Management	52
23. Analysis of Financial Assets and Liabilities by Geographical Concentration Risk	55
24. Credit Risk	57
25. Currency Risk	61
26. Interest Rate Risk	63
27. Liquidity Risk	66
Section IV. Capital Management.....	69
28. Capital Management	69
29. Liabilities to Transfer Distributable Profit to the State Budget of Ukraine	70
Section V.I. Nonfinancial Assets and Liabilities.....	72
30. Property and Equipment and Intangible Assets	72
31. Other Nonfinancial Assets	74
32. Other Nonfinancial Liabilities	75
Section V.II. Other Income and Expenses (except for Financial Results by Financial Instruments)	76
33. Other Income	76
34. Staff Costs	77
35. Administrative and other Expenses	77
Section VI. Other Notes	78
36. Related Party Transactions	78
37. Current and Noncurrent Assets and Liabilities	80
38. Events Subsequent the Reporting Date	81
39. Introduction of New and Amended Standards and Interpretations of the Financial Statements	82

Independent auditor's report

To the Council and the Board of the National Bank of Ukraine

Report on the audit of the consolidated financial statements

Qualified Opinion

We have audited the consolidated financial statements of the National Bank of Ukraine and its subsidiary (further – the National Bank of Ukraine), which are presented on pages 1 to 82 and comprise the consolidated statement of financial position as at 31 December 2022, and the consolidated statement of profit or loss and other comprehensive income, and consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, except for the effects of the matter described in the Basis for qualified opinion section of our report, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the National Bank of Ukraine as at 31 December 2022 and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRSs), and comply with the requirements for the preparation of financial statements established by Law of Ukraine "On accounting and financial statements in Ukraine" No. 996-XIV.

Basis for qualified opinion

The carrying value of domestic securities (debt securities at amortised cost) was UAH 756,580 million as at 31 December 2022. As described in Notes 5 and 9 of the consolidated financial statements, no provision for expected credit losses was recognised for the securities. Also, as disclosed in Note 5, the National Bank of Ukraine developed a number of scenarios under which expected credit losses assessment was different from zero and determined a range of such losses as at 31 December 2022. In our view, in accordance with IFRS 9, Financial Instruments, the expected credit losses on domestic securities should have been recognized. We were not able to determine, taking into account multiple possible scenarios and uncertainty as to their probability, the negative impact of the above on the financial position of the National Bank of Ukraine at 31 December 2022 as well as profit for the year ended 31 December 2022.

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the consolidated financial statements section of our report. We are independent of the National Bank of Ukraine in accordance with the International Ethics Standards Board for Accountants' (IESBA) International Code of Ethics for Professional Accountants (including International Independence Standards) (IESBA Code) together with

(i)

Документ підписано у сервісі Вчасно (підписок)



the ethical requirements that are relevant to our audit of the consolidated financial statements in Ukraine, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our qualified opinion.

Emphasis of matter

We draw attention to Note 3 of the consolidated financial statements, which describes economic conditions in Ukraine under the on-going military aggression of the Russian Federation and its impact on the National Bank of Ukraine's operations. The circumstances referred to in Note 3 could affect the National Bank of Ukraine's financial position and performance in a manner not currently determinable. Our opinion is not qualified in respect of this matter.

Key audit matters incorporating the most significant risks of material misstatements, including assessed risk of material misstatements due to fraud

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. In addition to the matter described in the *Basis for qualified opinion* section, we have determined the matter described below to be the key audit matters to be communicated in our report. This matter was addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For the matter below, our description of how our audit addressed the matter is provided in that context.

We have fulfilled the responsibilities described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the consolidated financial statements. The results of our audit procedures, including the procedures performed to address the matter below, provide the basis for our audit opinion on the accompanying consolidated financial statements.

Key audit matter

How our audit addressed the key audit matter

Valuation of debt securities at fair value through profit or loss

As at 31 December 2022, the foreign securities portfolio of the National Bank of Ukraine included debt securities with a total carrying value of UAH 695,506 million, which were measured at fair value through profit or loss and represented 35% of consolidated total assets (Note 7). These securities were classified under Level 1, 2 and 3 of the fair value hierarchy.

The audit procedures we performed to address valuation of debt securities at fair value through profit or loss as a key audit matter among others included:

- (a) Obtaining understanding of the process of fair value assessments, key sources of inputs and assumptions used by

(ii)



Key audit matter	How our audit addressed the key audit matter
<p>The debt securities classified as at fair value through profit or loss are valued based on quotes on an active market (Level 1 inputs) or, in case of adjustments, based on adjusted quoted prices (Level 2 inputs), or in absence of quotes on an active market, based on valuation models (Level 3) (Note 21). Judgements applied in respect of inputs may result in different classification within fair value hierarchy and fair value amounts.</p> <p>We identified valuation of debt securities at fair value through profit or loss as a key audit matter because of judgments applied in fair value measurements as well as due to the significance of the assets to the consolidated financial statements and the impact of changes in valuation on the profit and loss.</p>	<p>the National Bank of Ukraine to value debt securities;</p> <p>(b) Using our valuation specialists to assess the appropriateness of the methodology and the key underlying assumptions used by Management in fair value measurements of debt securities;</p> <p>(c) Valuing the debt securities of the National Bank of Ukraine independently, using our internal valuation specialists, based on publicly available market data and comparing their valuation to the valuation of the National Bank of Ukraine;</p> <p>(d) Testing of key inputs (discount rates, cash flows) and recalculating fair value amounts for a sample of Level 3 debt securities;</p> <p>e) Analysing disclosures in respect of debt securities at fair value through profit or loss included in the notes to the consolidated financial statements.</p>

Other information included in the Consolidated Management Report of the National Bank of Ukraine for year 2022

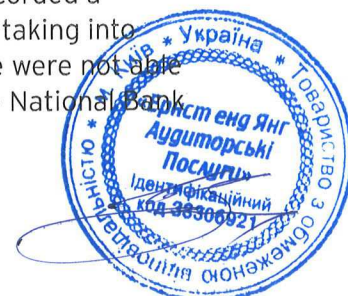
Other information comprises the information included in the Consolidated Management Report of the National Bank of Ukraine for 2022, but does not include the consolidated financial statements and our auditor's report thereon. Management is responsible for the other information.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. As described in the Basis for Qualified Opinion section above, the National Bank of Ukraine should have recorded a provision for expected credit losses in relation to the domestic securities, but taking into account multiple possible scenarios and uncertainty as to their probability, we were not able to determine the negative impact of the above on the financial position of the National Bank

(iii)



of Ukraine at 31 December 2022 as well as profit for the year ended 31 December 2022. We have concluded that the other information is materially misstated for the same reason with respect to the amounts or other items in the Consolidated Management Report of the National Bank of Ukraine for 2022, which are effected by non-recognition of provision for expected credit losses on domestic securities at amortised cost.

Responsibilities of management and the National Bank of Ukraine's Council for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRSs, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the National Bank of Ukraine ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management intends to liquidate the National Bank of Ukraine or to cease operations, or has no realistic alternative but to do so.

The National Bank of Ukraine's Council is responsible for overseeing the National Bank of Ukraine financial reporting process.

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- ▶ Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- ▶ Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the National Bank of Ukraine internal control.

(iv)



- ▶ Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- ▶ Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the ability of the National Bank of Ukraine to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the National Bank of Ukraine to cease to continue as a going concern.
- ▶ Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- ▶ Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities of the National Bank of Ukraine and its subsidiary to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the National Bank of Ukraine and its subsidiary audit. We remain solely responsible for our audit opinion.

We communicate with the Audit Committee of the National Bank of Ukraine's Council regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Audit Committee of the National Bank of Ukraine's Council with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with the Audit Committee of the National Bank of Ukraine's Council, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters.

Report on other legal and regulatory requirements

Pursuant to the requirements of Article 14 paragraph 4 of Law of Ukraine "On audit of financial statements and auditing activity" No. 2258-VIII (the "Law No. 2258-VIII") we provide the following information in our Independent Auditor's Report, which is required in addition to the requirements of International Standards on Auditing.

(v)



Appointment of the auditor and period of engagement

We were first appointed as independent auditors to perform a statutory audit of the National Bank of Ukraine consolidated financial statements on 22 October 2019 by the Council of the National Bank of Ukraine for five years term. The period of total uninterrupted engagement for performing the statutory audit of the National Bank of Ukraine is four years.

Consistency of the independent auditor's report with the additional report to the audit committee

We confirm that our independent auditor's report is consistent with the additional report to the Audit Committee of the National Bank of Ukraine Council, which we issued on 6 April 2023 in accordance with Article 35 of Law No. 2258-VIII.

Provision of non-audit services

We declare that no prohibited non-audit services referred to in Article 6 paragraph 4 of Law No. 2258-VIII were provided. In addition, there are no non-audit services which were provided by us to the National Bank of Ukraine and which have not been disclosed in the consolidated financial statements or the consolidated management report.

The partner in charge of the audit resulting in this independent auditor's report is Studynska Y.S.

For and on behalf Ernst & Young Audit Services LLC

Svistich O.M.
General Director

Studynska Y.S.
Partner

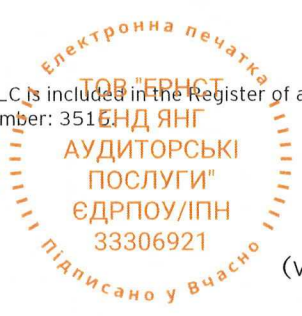
Registration number in the Register of auditors and audit firms: 101250

Registration number in the Register of auditors and audit firms: 101256

Kyiv, Ukraine

10 April 2023

Ernst & Young Audit Services LLC is included in the Register of auditors and audit firms, which is maintained by the Audit Public Oversight Body, registration number: 351



(vi)



Документ підписано у сервісі Вчасно (продовження)

22 NBU - ENG ISA 700 Auditor Report.pdf

Документ відправлено: 15:52 10.04.2023

Власник документу

Електронний підпис

15:52 10.04.2023

ЄДРПОУ/ІПН: 33306921

Юр. назва: ТОВ "ЕРНСТ ЕНД ЯНГ АУДИТОРСЬКІ ПОСЛУГИ"

Власник ключа: Студинська Юлія Сергіївна

Час перевірки КЕП/ЕЦП: 15:52 10.04.2023

Статус перевірки сертифікату: Сертифікат діє

Серійний номер: 3ВВВС90700000000000000000000000000001

Тип підпису: удосконалений

Електронна печатка

15:52 10.04.2023

ЄДРПОУ/ІПН: 33306921

Юр. назва: ТОВ "ЕРНСТ ЕНД ЯНГ АУДИТОРСЬКІ ПОСЛУГИ"

Власник ключа: ТОВ "ЕРНСТ ЕНД ЯНГ АУДИТОРСЬКІ ПОСЛУГИ"

Час перевірки КЕП/ЕЦП: 15:52 10.04.2023

Статус перевірки сертифікату: Сертифікат діє

Серійний номер: 60В29307000000000000000000000000001

Тип підпису: удосконалений

Електронний підпис

16:03 10.04.2023

ЄДРПОУ/ІПН: 33306921

Юр. назва: ТОВ "ЕРНСТ ЕНД ЯНГ АУДИТОРСЬКІ ПОСЛУГИ"

Генеральний директор: СВИСТІЧ ОЛЕКСАНДР МИХАЙЛОВИЧ

Час перевірки КЕП/ЕЦП: 16:03 10.04.2023

Статус перевірки сертифікату: Сертифікат діє

Серійний номер: 13СА93070000000000000000000000000001

Тип підпису: удосконалений



Consolidated Statement of Financial Position

as of 31 December 2022

	Notes	2022	2021
(UAH millions)			
Assets			
Funds and deposits in foreign currency and investment metals	6	241,504	181,279
Foreign securities	7	695,506	644,288
SDR holdings	8.1	62,174	510
Monetary gold		52,272	38,800
Domestic securities	9	757,040	323,943
Loans to banks and other borrowers	10	40,781	99,861
Domestic public debt		1,444	1,541
IMF quota contributions	8.2	97,908	76,807
Property and equipment and intangible assets	30	4,117	4,343
Other assets	11, 31	5,882	5,525
Total assets		1,958,628	1,376,897
Liabilities			
Banknotes and coins in circulation		715,330	627,819
Accounts of banks	12	86,870	57,136
Accounts of government and other institutions	13	53,024	55,133
Liabilities to transfer distributable profit to the State Budget of Ukraine	29	71,868	18,786
Certificates of deposit issued by the NBU	14	457,464	212,926
Borrowings received		–	2,728
Liabilities to the IMF, apart from IMF quota contributions	8.3	141,279	156,570
Liabilities to the IMF with respect to quota contributions	8.3	97,897	76,798
Other liabilities	15, 32	6,695	2,080
Total liabilities		1,630,427	1,209,976
Equity			
Statutory capital	28	100	100
General reserves and retained earnings	28	99,712	80,530
Revaluation reserves for assets and liabilities	28	228,346	86,247
Total equity		328,158	166,877
Noncontrolling interest		43	44
Total capital		328,201	166,921
Total equity and liabilities		1,958,628	1,376,897

Approved by the Board of the National Bank of Ukraine on 6 April 2023.

Signed on 7 April 2023.

Governor



Andriy PYSHNYI

Chief Accountant,
Director of Accounting Department



Bohdan LUKASEVYCH

Notes on pages 5 through 82 are an integral part of these consolidated financial statements.

Consolidated Statement of Profit or Loss and Other Comprehensive Income for 2022

	Note	2022	2021
(UAH millions)			
Interest income	17	109,854	44,026
Interest expenses	17	(46,609)	(15,190)
Net interest income before impairment losses		63,245	28,836
Impairment losses on interest-bearing financial assets	20	(1,204)	(200)
Net interest income after impairment losses		62,041	28,636
Fee and commission income		487	634
Fee and commission expense		(210)	(38)
Net fee and commission income		277	596
Gains or losses on transactions with financial assets and liabilities in foreign currency and monetary gold	18	175,556	(21,319)
Gains or losses on transactions with financial instruments at fair value through profit or loss	19	17	(2,057)
Other income	33	997	1,281
Total net income		238,888	7,137
Staff costs	34	(3,256)	(2,563)
Costs related to the production of banknotes, coins, souvenirs, and other products		(1,920)	(1,990)
Administrative and other expenses	35	(1,521)	(1,244)
Release of provisions for probable contingencies	32	129	–
(Losses)/gains on (impairment)/reversal of impairment of other assets	20	(22)	3
Profit before income tax		232,298	1,343
Income tax expense of subsidiary		(1)	–
Profit for the year		232,297	1,343
Other comprehensive income not to be reclassified subsequently to profit or loss:			
Revaluation of investment metals		851	(521)
Other comprehensive income/(expenses) for the year		851	(521)
Total comprehensive income for the year		233,148	822
Profit for the year attributable to:			
the National Bank of Ukraine		232,298	1,343
Noncontrolling interest		(1)	–
		232,297	1,343
Total comprehensive income attributable to:			
the National Bank of Ukraine		233,149	822
Noncontrolling interest		(1)	–
		233,148	822

Approved by the Board of the National Bank of Ukraine on 6 April 2023.

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Director of Accounting Department



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Consolidated Statement of Changes in Equity for 2022

	Note	Statutory capital	General reserves and retained earnings	Revaluation reserve for assets and liabilities	Total equity	Noncontrol ling interest	Total capital
(UAH millions)							
Balance as of 1 January 2021		100	67,734	117,092	184,926	44	184,970
Total comprehensive income for 2021		–	1,343	(521)	822	–	822
Result on transfer of assets	30	–	(85)	–	(85)	–	(85)
Realized result on revaluation of disposed investment metals	29	–	186	(186)	–	–	–
Realized result on revaluation of disposed securities and derivatives	29	–	7,955	(7,955)	–	–	–
Compensation of unrealized results on revaluation of financial instruments from revaluation reserve	19	–	721	(721)	–	–	–
Compensation of unrealized results on revaluation of financial assets and liabilities in foreign currency and monetary gold from revaluation reserve	18	–	21,462	(21,462)	–	–	–
Portion of 2021 profit subject to distribution and transfer to the State Budget of Ukraine	29	–	(18,786)	–	(18,786)	–	(18,786)
Balance as of 31 December 2021		100	80,530	86,247	166,877	44	166,921
Total comprehensive income for 2022		–	232,298	851	233,149	(1)	233,148
Realized result on revaluation of disposed investment metals	29	–	56	(56)	–	–	–
Realized result on revaluation of disposed securities and derivatives	29	–	883	(883)	–	–	–
Allocation of unrealized results on revaluation of financial instruments to revaluation reserve	19	–	(2,592)	2,592	–	–	–
Allocation of unrealized results on revaluation of financial assets and liabilities in foreign currency and monetary gold to revaluation reserve	18	–	(139,595)	139,595	–	–	–
Portion of 2022 profit subject to distribution and transfer to the State Budget of Ukraine	29	–	(71,868)	–	(71,868)	–	(71,868)
Balance as of 31 December 2022		100	99,712	228,346	328,158	43	328,201

Approved by the Board of the National Bank of Ukraine on 6 April 2023.

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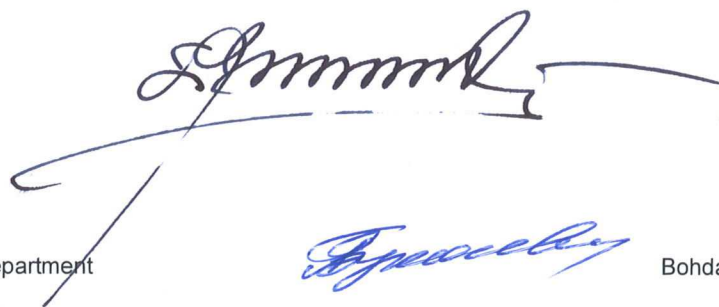
Consolidated Statement of Cash Flows for 2022

	Note	2022	2021
(UAH millions)			
Operating activities			
Interest received		66,753	42,635
Fees and commissions received		487	633
Other income		998	1,265
Interest paid		(45,536)	(15,125)
Fees and commissions paid		(47)	(37)
Other expenses		(6,064)	(5,255)
Taxes, duties, and charges paid		(1,198)	(991)
Transfers to the State Budget of Ukraine	29	(18,786)	(24,434)
Decrease/(increase) in loans to banks and other borrowers		55,279	(32,810)
Domestic public debt repaid		132	132
Increase in accounts of banks on demand		25,307	8,293
Decrease in accounts of government and other institutions		(5,192)	(13,711)
Decrease/(increase) in other assets		1,138	(253)
(Decrease)/increase in other liabilities		(756)	1,093
Other cash flows		628	(127)
Net change in cash flows from operating activities		73,143	(38,692)
Investing activities			
Increase in term deposits placed in gold		(173)	(993)
Net decrease/(increase) in foreign securities		90,059	(1,110)
Purchase of monetary gold		(61)	(13)
Net (increase)/decrease in domestic securities		(388,531)	12,891
Investments in associated company		2	2
Acquisition of property and equipment, and intangible assets		(215)	(516)
Sale of property and equipment, and intangible assets		–	5
Net cash flows from investing activities		(298,919)	10,266
Financing activities			
Banknotes and coins issue in circulation	16	87,511	69,125
Repayment of liabilities to the IMF	16	(53,316)	(25,227)
Certificates of deposit issued by the NBU	16	244,089	49,358
Loan repayments	16	(2,925)	–
Net cash flows from financing activities		275,359	93,256
Effect of changes in exchange rate		70,791	(5,153)
Net change in cash and cash equivalents		120,374	59,677
Cash and cash equivalents at the beginning of the reporting year		178,087	118,410
Cash and cash equivalents at the end of the reporting year	16	298,461	178,087

Approved by the Board of the National Bank of Ukraine on 6 April 2023.

Signed on 7 April 2023.

Governor



Andriy PYSHNYI

Chief Accountant,
Director of Accounting Department



Bohdan LUKASEVYCH

Notes on pages 5 through 82 are an integral part of these consolidated financial statements.

Notes to Consolidated Financial Statements

Section I. Basis for Preparing Financial Statements

1. Principal Activities

The National Bank of Ukraine (NBU) is Ukraine's central bank. Its operations are governed by Ukraine's Constitution, Ukraine's law *On the National Bank of Ukraine*, as well as other Ukrainian laws. In accordance with Ukrainian legislation, the main function of the NBU is safeguarding the stability of the Ukrainian national currency. In performing its main function, the NBU is guided by the priority of achieving and maintaining price stability in the country. The NBU facilitates the stability of the banking system and sustainable economic growth, and supports the economic policies of the Cabinet of Ministers of Ukraine, provided that these do not prevent the NBU from carrying out its primary function of maintaining price stability.

The NBU does not aim to earn profits. The NBU's financial performance and the structure of its assets, liabilities, and capital are determined by the NBU's mandate as a special central authority.

Under the Law of Ukraine *On the National Bank of Ukraine*, the NBU performs the following main functions:

identifies and pursues a monetary policy in accordance with the Monetary Policy Guidelines developed by the NBU Council

solely issues the domestic currency of Ukraine and organizing its circulation

ensures the accumulation and storage of international (gold and FX) reserves of Ukraine and makes transactions with these reserves and investment metals

is the lender of last resort for banks and organizes the refinancing system

conducts banking regulation and supervision on individual and consolidated basis

conducts state regulation and supervision on individual and consolidated basis in the nonbank financial services markets over activities of nonbank financial institutions and other entities other than financial institutions but entitled to provide certain financial services within the limits set by the Law of Ukraine *On Financial Services and State Regulation of Financial Services Markets* and other laws of Ukraine

represents Ukraine's interests in the central banks of other states, international banks and other credit institutions where the cooperation takes place at the level of central banks

carries out currency regulation as per the mandate specified by a special law, determines the procedure for making FX

transactions, organizes and carries out currency supervision of banks and other financial institutions that have been licensed by the NBU to make FX transactions

arranging and carrying out collection of funds and transportation of currency valuables; issuing licenses to legal entities to provide cash collection services to banks, suspending, part one updating and revoking them, as prescribed by the NBU

determines the procedure for the functioning of the banking system of Ukraine in the event of martial law or a special period, carries out the mobilization training of the NBU system

protecting the rights of consumers of financial services provided by banks and other financial institutions as well as by entities other than financial institutions but entitled to provide certain financial services, which are regulated and supervised by the National Bank of Ukraine

organizing work and taking measures to improve the financial literacy of the public

performs other functions in finance within the mandate defined by the Law of Ukraine *On the National Bank of Ukraine*.

Under the Law of Ukraine *On the National Bank of Ukraine*, the NBU issues loans to banks to maintain liquidity, buys and sells securities, currency assets, and precious metals in the open market, sells commemorative coins made out of precious and nonprecious metals in the domestic and foreign markets, performs public debt servicing transactions related to the placement of, redemption of, and payment of income on government securities, maintains accounts of the State Treasury Service of Ukraine and those of international organizations, and performs other transactions necessary to ensure the pursuit of its mandate.

The NBU also acts as a depository of government securities of Ukraine.

The NBU's authorized capital is the property of the state.

As of 31 December 2022 and 2021, the NBU's structure comprised the Head Office and the Banknote Printing and Minting Works, the NBU's standalone unit. These units operate exclusively within the scope of the NBU's tasks and functions, as defined by Ukraine's Law *On the National Bank of Ukraine*.

The NBU's subsidiary is the SETTLEMENT CENTER FOR SERVICING FINANCIAL MARKET AGREEMENTS PJSC (hereinafter the Settlement Center).

The NBU's shareholding in the authorized capital of the Settlement Center was 83.55% as of 31 December 2022 (31 December 2021 – 83.55%).

As of 31 December 2022 and 2021, the authorized capital of the Settlement Center totaled UAH 206.7 million of ordinary registered shares with a face value of UAH 1,000 each.

Under Ukrainian legislation, the Settlement Center carries out professional activities in capital markets, clearing activities to identify liabilities, and clearing activities of a central counterparty.

The Settlement Center performs the following functions, among other things:

makes/ensures cash settlements under concluded derivative contracts and transactions with money market instruments and assets admitted for trading in the organized commodity market, subject to settlements based on the delivery-versus-payment principle, and under transactions with securities subject to settlements based on the delivery-of-securities-versus-payment principle

ensures the exercise of rights (including rights to receive income) with regard to assets deposited in the relevant accounts of the Settlement Center for making/ensuring settlements under derivative contracts and transactions with financial instruments and other assets, and facilitates the filing of claims under bank guarantees

makes transactions with derivative contracts, financial instruments, and other assets to ensure the fulfillment of obligations.

The NBU is the founder of the Corporate Nonstate Pension Fund (CNPF).

The NBU manages and stores the CNPF's assets.

The NBU has analyzed the availability of controls required for consolidation in accordance with International Financial Reporting Standard (IFRS) 10 "Consolidated Financial Statements" with regard to the CNPF. The NBU is the founder of the CNPF, but it does not bear this fund's risks and is not entitled to the variable results of its activities. Under IFRS 10 "Consolidated Financial Statements," the NBU does not control the CNPF, and CNPF data has not been consolidated for the purpose of these consolidated financial statements.

The NBU's investments in the associated company as of 31 December 2022 and 2021 were represented by investments in the authorized capital of the National Depository of Ukraine Public Joint Stock Company (hereinafter the National Depository).

The NBU, the National Securities and Stock Market Commission, and other stock market practitioners are shareholders of the National Depository. Under its charter, the National Depository conducts depository record-keeping, and maintains records of securities and issuers' corporate transactions on clients' securities accounts.

As of 31 December 2022 and 2021, the NBU owned 2,580 ordinary registered shares of the National Depository with a face value of UAH 10,000 each and UAH 25.8 million in total. As of 31 December 2022, the NBU's shareholding in the authorized capital of the National Depository was 25% (31 December 2021 – 25%).

Approval of the consolidated financial statements is within the responsibilities of the NBU Council.

2. Basis of Accounting Policies and Reporting Presentation

This section describes the NBU's accounting policy that relates to financial statements as a whole. If an accounting policy can be applied to a particular note in these financial statements, the accounting policy and related disclosures are provided in the appropriate note.

The NBU's consolidated financial statements have been prepared in accordance with IFRS approved by the International Accounting Standards Board, and the Laws of Ukraine *On the National Bank of Ukraine* and *On Accounting and Financial Reporting in Ukraine*.

These consolidated financial statements have been prepared based on the assumption that the NBU will continue as a going concern in the foreseeable future. The NBU's management assessed events and conditions described in Note 3 and concluded that due to the special status and functions of the NBU as a central bank of the country, as well as the organization of work that ensures the continuity of operations even during martial law, there is no material uncertainty for the NBU to continue performing its functions, as defined by the Law of Ukraine *On the National Bank of Ukraine*, and, therefore, going concern assumption is appropriate.

These consolidated financial statements have been prepared under the historical cost convention, except for financial assets measured at fair value through profit or loss and derivative financial instruments. The consolidated financial statements are presented in the national currency of Ukraine – the hryvnia – which is the functional currency and the presentation currency of the consolidated financial statements. The NBU's consolidated financial statements are prepared in millions of hryvnias.

Basis of Consolidation

The consolidated financial statements comprise the financial statements of the NBU and its subsidiary as of 31 December 2022.

A subsidiary is a company controlled by the NBU. A company is considered to be under control if all of the following conditions are met:

- existing of rights to govern the relevant activities of the investee;
- exposure, or rights, to variable returns and risks from its involvement with the investee;
- ability to use its power over the investee to affect the NBU's results.

A subsidiary is fully consolidated starting from the date the NBU takes control over it (usually the date of acquisition), and consolidation is discontinued on the date that control is lost.

A change in the NBU's stake in a subsidiary without loss of control is recorded as an equity transaction. A subsidiary's

losses are attributed to the noncontrolling interest, even if this results in the noncontrolling interest balance being negative.

If the NBU loses control of a subsidiary, it discontinues the recognition of the subsidiary's assets and liabilities (including related goodwill) and the carrying amount of the noncontrolling interest, recognizes the fair value of the consideration received, the fair value of the remaining investment, and the profit or loss from the transaction, and reclassifies to profit or loss the share in the components previously recognized within other comprehensive income. In case of disposal of a subsidiary by transferring control to the state as represented by the Cabinet of Ministers of Ukraine or other authorities, the result of this transaction is reflected in equity.

The consolidation of a subsidiary's financial statements excludes all intragroup transactions balances, including the amount of income and expenses pertaining to transactions between a subsidiary and the NBU. The NBU and its subsidiary apply a unified accounting policy in the preparation of consolidated financial statements. The financial statements of the subsidiary cover the same reporting period as the consolidated financial statements of the NBU itself.

Investments in Associated Company

An associated company is a company over which the NBU has significant influence. Significant influence means the power to participate in the making of financial and operating policy decisions of a company, but it does not mean control or joint control over those policies.

Investments in associated companies are accounted for using the equity method, taking into account recognized impairment, and are recorded as other assets. Subsequent changes in the carrying amount reflect changes in the NBU's share in the associate company's net assets since the acquisition. The NBU's share of the associated company's profit or loss since the date of investment is recognized in other income or expenses in the consolidated statement of profit or losses and other comprehensive income. The amount of recognized impairment of the associated company's profit or loss since the date of investment, and of the investment are recognized in other income or expenses in the consolidated statement of profit or losses and other comprehensive income. The share of the NBU in other changes in the associated company's equity that have occurred since the investment was made is recognized in the consolidated statements of profit or loss and other comprehensive income and changes in equity. However, if the NBU's share in the losses of the associated company equals or exceeds share in the associated company, the NBU does not recognize further losses, except where it has an obligation to make payments to or on behalf of the associated company. Under the equity method, investments in associated companies are recorded until the last day of the month in which the investee does not meet the criteria of the associated company.

Information on introducing new and amended standards and interpretations of financial statements is provided in Note 39.

Change in Presentation

In compiling these consolidated financial statements the NBU changed the presentation of the overnight deposits placed at the initiative of a correspondent bank in order to enhance the information relevance and understandability. In the note *Funds and Deposits in Foreign Currencies and Investment Metals* of the consolidated financial statements for the year ended 31 December 2021, such overnight deposits are presented in the item *Term Deposits in Foreign Currencies*. To ensure the consequent presentation of the information for 2021 the respective overnight deposits were transferred from

the item *Term Deposits in Foreign Currencies* to the item *Overnight Deposits Placed at the Initiative of Correspondent Bank* of this note. The respective change is applied in notes 6 and 16.

Basic Estimates and Judgments in Applying Accounting Principles

The NBU uses estimates, assumptions, and professional judgment that affect the amounts of assets and liabilities reported in its consolidated financial statements. Estimates and judgements are regularly revised and are based on NBU management's experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. Key estimates and judgements are given in Notes 5, 30, 32, and 36.

3. Impact of Economic Conditions on the NBU's Financial Position and Performance

In 2022, the Ukrainian economy was adversely affected by the full-scale war unleashed by Russia. Real GDP in 2022 plunged by 29.2% (by NBU estimates based on SSSU data from ukrstat.gov.ua) in what was the deepest recession in Ukraine's history. The main reasons were the consequences of the Russian invasion: the occupation of certain territories, the destruction of infrastructure and production facilities, supply chain disruptions, the drop in exports, the reduction in investments, weak consumer demand, including due to active migration, and a harvest that came in significantly lower than a year ago (specifically, the production of grains and legumes plunged by almost 40%). At the end of 2022, a series of large-scale attacks by Russia on Ukraine's energy infrastructure led to a significant shortage of electricity and had an additional adverse impact on economic activity.

However, despite the difficult and changing conditions, businesses and households demonstrated the ability to adapt rather quickly to wartime challenges. Having sustained the shock of the first months of the war, the Ukrainian economy gradually recovered as businesses rerouted their supply chains, relocated their assets, expanded their online services, and repurposed their operations to meet the needs of the military. The liberation of occupied territories, the return of a part of forced migrants to their places of permanent residence, and the launch of the grain corridor also supported the revival of business activity. A significant number of companies also adapted to blackouts by purchasing power-generating equipment. However, not everyone was able to switch to off-grid power systems due to the specifics of production processes and limited financial resources.

The labor market also went into deep recession: the demand and supply of labor decreased. According to NBU estimates, enterprise closures and the slump in business activity led to a rapid increase in the unemployment rate and a reduction in the labor income of households, which was only partially offset by military allowances and social assistance. A large number of migrants within Ukraine and those who left it for other countries had a significant impact on the labor market during the year. Specifically, as of the end of 2022, there were about 8 million Ukrainians outside Ukraine, primarily women and children, according to UN data. They have been gradually adjusting to living abroad. Coupled with the participation of a significant number of people in the hostilities, migration is reshaping the country's demographic landscape and posing long-term risks to the Ukrainian labor market.

The record increase in the consolidated budget deficit in 2022 to more than UAH 844 billion, or to UAH 1,325 billion excluding grants from revenues, was driven by a sharp narrowing of the funding base along with the introduction of emergency tax relief and an unprecedented increase in expenditures amid Russia's full-scale war of aggression. Large budget needs were primarily funded by international assistance (in 2022, Ukraine received more than USD 32 billion in aid, over USD 14.2 billion of it in grants) and

monetary financing. At the same time, the NBU's purchase of domestic government debt securities in H2 2022 was limited to UAH 30 billion a month, in line with arrangements between the NBU and the Ministry of Finance of Ukraine. This helped stabilize expectations and ease pressure on the FX market. Overall, the NBU purchased the agreed UAH 400 billion of domestic government debt securities in 2022. Public and publicly guaranteed debt surged both in absolute terms and as a ratio of GDP (to more than 80% of GDP, by the NBU estimates). On the one hand, this was due to a number of objective reasons, such as significant budgetary needs financed by credit funds, an exchange rate revaluation of FX debt, and a significant wartime drop in GDP. On the other hand, the increase in public debt was fueled by management decisions to provide public guarantees that support businesses and to issue domestic government debt securities for the capitalization of Ukrainian Financial Housing Company PrJSC.

The current account posted a surplus (USD 8 billion) in 2022 thanks to sizeable international financial assistance received in the form of grants, dividend payment restrictions, decreased reinvested earnings, and steady remittances. At the same time, the deficit of trade in goods widened considerably (to USD 15.3 billion versus USD 6.6 billion in 2021). The operation of "grain corridor" slightly slowed the decline in exports of goods. However, the decline was still significant (35.2% yoy) due to the blockade of sea ports, the destruction of production facilities and transport and energy infrastructure, and a lower harvest. Compared to the decrease in exports, the reduction in goods imports (by 19.4%) was more restrained due to their lesser dependence on sea transport, the gradual recovery of domestic demand, higher prices for energy, and a significant increase in the purchases of off-grid power supply goods at the end of the year. Moreover, strong migration abroad drove a large increase in travel services imports, which led to an unusual deficit in trade in services (USD 10.7 billion compared to a USD 4 billion surplus in 2021). The full-scale invasion has caused USD 11.1 billion in financial account outflows. Specifically, as a result of a significant increase in FX cash outside banks and obligations of nonresidents under trade credits, the private sector has suffered USD 24.2 billion in capital outflows. Net inflows to the public sector (USD 13.2 billion) came from the financial assistance of international partners. However, because of a significant current account surplus, the consolidated balance of payments recorded a moderate deficit (USD 2.9 billion). Thanks to financial assistance from partners, international reserves declined only slightly, to USD 28.5 billion as of the end of the year, which was higher than at the onset of the full-scale invasion.

Inflation accelerated to 26.6% in 2022. This was primarily due to the consequences of Russia's war of aggression, which fueled a surge in businesses costs and led to a reduction in supply. Another factor was the pass-through effect on prices from the adjustment of the official hryvnia-to-dollar exchange rate in late July. Pressures from global inflationary processes

were also significant. At the same time, even in such difficult conditions, inflation developments in Ukraine remained manageable, and during the last three months of the year, the inflation rate stayed almost unchanged in annual terms. Inflation was also restrained by unchanged utility prices, the stabilization of inflation expectations, the fixed exchange rate of the hryvnia, and improved logistics. The liberation of Ukrainian territory, an increase in supply of food products, and consumer demand being dampened by Russia's energy terror helped restrain the inflationary pressure.

Foreign exchange interventions, combined with capital movement restrictions, have been the most effective instruments for maintaining macrofinancial stability since the onset of the war. The July correction of the official hryvnia exchange rate, coupled with other measures to match supply and demand, helped ease imbalances in the FX market. This was also facilitated by the maintenance of a high key policy rate since June and the announcement of a gradual tightening of reserve requirements for the banks from the beginning of 2023.

The banking system's liquidity continued to grow: it reached another record high in Q4 2022 (the average daily balances of correspondent accounts and certificates of deposit made nearly UAH 415 billion, compared UAH 268 billion in Q3 2022).

On 25 February 2022, Moody's confirmed Ukraine's credit rating at B3, while Fitch Ratings and Standard & Poor's downgraded it to CCC/C and B-/B respectively. In later rating reviews, Moody's on 4 March 2022 downgraded Ukraine's

credit rating to Caa2, and Standard & Poor's on 11 March 2022 affirmed the rating at B-/B. In the following reviews held in Q2 2022, sovereign ratings of Ukraine deteriorated further: Standard & Poor's downgraded the rating to CCC+/C on 27 May 2022, and Moody's set the rating at Caa3 on 20 May 2022.

The ratings continued to deteriorate at the start of Q3, in particular on the back of the negotiations on postponing for two years the redemption of sovereign Eurobonds and related interest payments. Standard & Poor's downgraded the credit rating to CC/C on 29 July 2022 and to SD/SD on 12 August 2022. Fitch Ratings revised its rating downward to C/C on 22 July 2022 and to RD/C on 12 August 2022. In August 2022, changes to conditions of issuance and placement of government financial instruments were successfully agreed with holders of sovereign Eurobonds and government derivatives (GDP warrants). After that, the ratings were slightly increased: Fitch Ratings on 17 August 2022 raised the credit rating for FX debt to CC/C, and Standard & Poor's on 19 August 2022 upgraded Ukraine's rating to CCC+/C.

In Q4 2022, international rating agencies did not revise Ukraine's sovereign credit ratings.

Going forward, Russia's full-scale military aggression may have an effect on the NBU's performance and financial standing in a manner not currently determinable. The NBU's management is closely monitoring current developments and is taking all necessary actions to mitigate the influence of adverse factors.

Section II.I Financial Instruments

4. Accounting policy. Presentation of Financial Instruments by Measurement Categories

Transactions with Financial Instruments

The NBU classifies all financial assets into the categories that are at fair value through profit or loss and amortized cost depending on the models determined to manage financial assets and cash flow characteristics. The NBU does not classify any assets into the category at fair value through profit or loss in order to remove or reduce significantly accounting discrepancies. The NBU does not classify any assets in to the category at fair value through other comprehensive income.

Financial assets of the NBU are classified as follows:

Funds and Deposits in Foreign Currency at Amortized Cost

Funds and deposits in foreign currency are recorded when the NBU advances foreign currency funds to counterparty banks within a model for management of financial assets with objective is to collect contractual cash flows. Those funds are not related to derivative financial instruments, not quoted in the market, and repayable on fixed or determinable dates.

Debt Securities at Amortized Cost

This category includes the securities in respect of which both of the following conditions are met:

- Securities are held within the model for management of financial assets under which securities are held to collect contractual cash flows.
- Contractual terms prescribe cash flows on specified dates that are solely payments of securities' principal and interest on the principal amount outstanding.

Such securities include domestic government debt securities with fixed coupons, as well as domestic government debt securities with coupon calculated as inflation index for the last 12 month plus a set margin (hereinafter referred to as "inflation indexed government bonds"), and domestic government debt securities with a floating interest rate, which is calculated based on an average NBU's key policy rate for the year that ends on the first date of the month preceding the month of regular coupon payments and starts the first date of the same month of preceding year (hereinafter referred collectively as "domestic government debt securities with a floating interest rate").

Debt Securities Measured at Fair Value through Profit or Loss

The NBU manages a group of such financial instruments in accordance with a documented model for management of financial assets relates to other types of models than a model for management of financial assets with objective to collect cash flows and a model of management of financial assets with objective both to collect cash flows according to contractual (issue) terms and to sell those assets.

Also, this category includes the securities that do not meet the criteria of measurement at amortized cost or at fair value through other comprehensive income based on the analysis of contractual cash flows in respect of the financial assets which are not solely payments of principal and interest on the principal amount outstanding.

The fair value of these securities is determined by reference to market quotations in the principal or most beneficial markets, if no quotations are available, based on the assessment model (Note 21).

Loans to Banks and Other Borrowers at Amortized Cost

Loans to banks and other borrowers are recorded when the NBU lends money to counterparty banks or other borrowers of the model for financial assets management, whose objective is to collect contractual cash flows and the contractual cash flows represent solely payments of principal and interest on the principal amount outstanding.

Domestic Public Debt at amortized cost

Domestic public debt means loans granted to the Government of Ukraine until 2035. Domestic public debt is reported under the model for management of financial assets with objective to collect contractual cash flows and which are solely the principal amount and interest on the principle amount outstanding. Domestic public debt is unsecured.

Cash and Cash Equivalents

For the purposes of reporting cash flows, cash and cash equivalents include cash in foreign currencies, SDR holdings, funds on demand, and deposits in foreign currencies maturing within three months from the origination date and which are available for use at short notice and are subject to insignificant risk of value fluctuations.

Financial Liabilities of the NBU are classified as follows:

- banknotes and coins in circulation. The amount of banknotes and coins in circulation is the nominal value of banknotes and coins (small change, circulating, commemorative, and bullion coins) that are legal tender issued to circulation by the NBU after introducing hryvnia in September 1996. Cash in domestic currency stored in the NBU's vaults and cash desks or transferred by the NBU to custody at authorized banks, is excluded from the amount of banknotes and coins in circulation
- accounts of banks. These liabilities are not derivative instruments
- accounts of government and other institutions are nonderivative liabilities to the government and other customers
- certificates of deposit issued by the NBU
- loans received.

The NBU's financial liabilities other than financial derivative instruments are estimated at amortized cost.

Derivative Financial Instruments

Derivative financial instruments are represented by derivative securities, swaps, forwards, and futures contracts. Derivative financial instruments are measured at fair value through profit or loss. All derivatives are recorded as assets if their fair value is positive and as liabilities if the fair value is negative.

Recognition and Measurement of Financial Instruments

Financial instruments are initially recognized as follows:

transactions with financial instruments are recorded in the consolidated statement of financial position as of the settlement date, which is the date when the title to these assets is transferred to (from) the NBU, other than derivative financial instruments

debt securities, equity instruments, and other financial instruments measured at fair value through profit or loss are initially recognized at fair value as of the settlement date

foreign currency funds and deposits, debt securities at amortized cost, loans to banks and other borrowers, and all financial liabilities (safe for derivative financial instruments) are initially recorded at fair value as of transaction date plus transaction related costs

banknotes and coins in circulation are recognized as liabilities at nominal value after their disbursement to banks and NBU clients.

The best evidence of the fair value of a financial instrument at initial recognition is normally the transaction price (i.e. the fair value of the consideration given or received). If the NBU determines that the fair value at the transaction date differs from the transaction price, the instrument is accounted at the date of initial recognition as follows:

As of 31 December 2022 financial assets were broken down into measurement categories as follows:

	Assets at fair value through profit or loss	Assets at amortized cost	Total
			(UAH millions)
Financial assets			
Funds and deposits in foreign currency	–	236,534	236,534
Foreign securities	695,506	–	695,506
SDR holdings	–	62,174	62,174
Domestic securities	460	756,580	757,040
Loans to banks and other borrowers	–	40,781	40,781
Domestic public debt	–	1,444	1,444
IMF quota contributions	–	97,908	97,908
Other financial assets	5	81	86
Total financial assets	695,971	1,195,502	1,891,473

at the estimated value, which is required at initial recognition, if the fair value is evidenced by a quoted price in an active market for an identical asset or liability (i.e. a Level 1 input) or based on a valuation technique that uses only data from observable markets. The NBU recognizes the difference between the fair value as of the transaction date and the transaction price as profit or loss (except for transactions with the owner which are recognized within the NBU's equity)

in all other cases, at the estimated value, adjusted to defer the difference between the fair value as of the transaction date and the transaction price. After initial recognition, the NBU recognizes the deferred difference as a profit or loss only to the extent that it arises from a change in a factor (including time) that market participants would take into account when pricing the asset or liability.

Subsequent measurement of the NBU's financial instruments is as follows:

debt securities, equity instruments, other financial instruments measured at fair value through profit or loss, and derivative financial instruments are revalued after each change in their fair value, but at least as of the reporting date. Gains or losses from changes in fair value are recognized in financial results of the consolidated statement of profit or loss and other comprehensive income in the period in which they arise

foreign currency cash and deposits, debt securities at amortized cost, loans to banks and other borrowers, as well as the domestic public debt and other financial liabilities, other than derivatives, are measured at amortized cost using the effective interest rate method

banknotes and coins in circulation are accounted at nominal value and are not revalued subsequently.

As of 31 December 2021 financial assets were broken down into measurement categories as follows:

	Assets at fair value through profit or loss	Assets at amortized cost	Total
			(UAH millions)
Financial assets			
Funds and deposits in foreign currency	33	177,552	177,585
Foreign securities	644,288	–	644,288
SDR holdings	–	510	510
Domestic securities	1,082	322,861	323,943
Loans to banks and other borrowers	–	99,861	99,861
Domestic public debt	–	1,541	1,541
IMF quota contributions	–	76,807	76,807
Other financial assets	278	300	578
Total financial assets	645,681	679,432	1,325,113

Financial Assets Impairment Policy and Allowances for Expected Credit Losses Recognition

During estimation of impairment and assessment of expected credit losses for financial assets (except for investments into the authorized capital of associated and subsidiary undertakings), the NBU is guided by requirements of IFRS 9: Financial Instruments.

The NBU defines credit loss as the difference between total cash flows payable by a counterparty/issuer/borrower under the agreement and total cash flows expected to be received by the NBU discounted by the effective interest rate. When determining future cash flows in order to calculate expected credit losses, all conditions of a financial instrument are taken into account during its life (e.g., options of early redemption, extension, early loan repayment, and other similar options). Cash flows that are taken into account include cash flows from selling collateral or other credit enhancements of a financial instrument which are the integral part of the agreement. Professional judgement/assumption is used to assess feasibility of making a reliable assessment of the expected life of a financial instrument.

Allowances for expected credit losses are made by allocation of the respective amount of changes in the allowance to expenses as a part of the *Impairment losses on interest-bearing financial assets* and *(Losses)/gains on (impairment)/reversal of impairment of other assets* items.

Allowances for expected credit losses are made and released pursuant to decisions of the NBU Board at least once a month (at least once a quarter for accounts receivable and contract assets, at least once a year for investments into the authorized capital of associated and subsidiary undertakings) as of the end of the last business day of the month/quarter/year. The NBU recognizes allowances for expected credit losses on financial assets (deposits granted, loans at amortized cost, debt securities at amortized cost, accounts receivable, investments into the authorized capital of associated and subsidiary undertakings) and allowances for credit-related commitments.

The NBU reports its financial instruments (except for the investments into the authorized capital of associated and subsidiary undertakings) as one of the following impairment stages:

Impairment Stage One (Stage 1): financial assets with no significant increase in credit risk as of the reporting date since initial recognition

Impairment Stage Two (Stage 2): financial assets with a significant increase of credit risk as of the reporting date since initial recognition, but no objective evidence of impairment

Impairment Stage Three (Stage 3): financial assets with the objective evidence of impairment as of the reporting date

Purchased or originated credit-impaired financial assets: financial assets with the objective evidence of impairment as of date of initial recognition.

As of the transaction date of financial assets, other than purchased or originated credit-impaired financial assets, are included to Impairment Stage One.

Depending on the impairment stage for financial assets, allowances for expected credit losses are created at an amount equal to expected credit losses:

- 12-month ECLs – for the financial assets at Impairment Stage One
- full lifetime ECLs – for the financial assets at Impairment Stages Two or Three.

Expected credit losses for 12 months are a part of lifetime credit losses, which may arise if the borrower defaults within 12 months after the reporting date (or within a shorter period if the expected lifetime of the financial asset is less than 12 months).

Expected credit losses for 12 months reflect expected amounts of expected cash shortfalls over the full lifetime which may arise in case of a default within 12 months after the reporting date weighted by the probability of a range of

possible scenarios of default (or the financial asset redemption) measured based on the borrower's cumulative probability of default within 12 months after the reporting date (or within the remaining lifetime).

Expected credit losses for the full lifetime of a financial instrument are expected credit losses for the full lifetime which may arise if the borrower defaults during the lifetime of a financial instrument.

Expected credit losses for the full lifetime reflect expected amounts of expected cash shortfalls over the full lifetime, which may arise in case of a default over the full lifetime after the reporting date weighted by the probability of a range of possible scenarios of default (or the financial asset redemption) measured based on the borrower's cumulative probability of default over the full lifetime of a financial instrument that remains after the reporting date.

Purchased or originated credit-impaired financial assets are estimated at fair value with the subsequent recognition of interest income based on credit-adjusted effective interest rate.

After initial recognition, allowances for expected credit losses of purchased or originated credit-impaired financial assets are recognized or released only within the amount of changes in expected credit losses and recognized within profits or losses as gain or loss from impairment.

To determine the impairment stage at each reporting date for financial assets by individual instruments, credit risk is assessed on an individual basis in order to establish:

- a significant increase in credit risk since initial recognition
- objective evidence of impairment.

Significant increases in credit risk are assessed based on two types of information: quantitative and qualitative factors, taking into account, among other things, categories of internal borrower credit rating that takes account of the change in the level of credit risk as of the reporting date.

For reserve assets and nonreserve debt securities (demand deposits and term deposits in foreign currency, securities at amortized cost) the attributes of considerable increase in credit risk include at least one payment delayed over 30 calendar days, revocation of all external credit ratings for a counterparty/issuer, decrease of a category of long-term credit rating for a counterparty/issuer since the date of initial recognition for more than three rating scores.

For the state's liabilities denominated in its domestic currency and liabilities of a foreign central bank denominated in a currency of this central bank's home country, the attribute of considerable increase in credit risk since the date of initial recognition is at least one payment delayed over 30 calendar days as of the reporting date.

For loans to banks and other borrowers the attributes of considerable increase in credit risk since the date of initial recognition include contractual payments delayed from two to seven calendar days, actual decrease of the borrower's internal credit rating since the date of initial recognition according to the rating migration matrix, actual decrease of the borrower's external credit rating under liabilities in domestic currency by four levels, violation by a borrower of the established regulatory requirements, classification of a borrower as problem.

Objective evidence of impairment for financial assets includes information about the following loss events:

significant financial difficulties experienced by the borrower or the issuer

breach of contract by the borrower or breach of the issuance conditions by the securities issuer

possibility of bankruptcy or other financial reorganization of the borrower or the issuer

granting to the borrower or issuer concessions associated with financial difficulties of the borrower that the lender would not otherwise consider (such as a change in the interest rate or extension)

observable data indicating that there is a measurable decrease in the estimated future returns from a group of financial assets since the initial recognition of those assets.

Objective evidence of impairment are recognized at the level of the financial instrument. The financial-instrument-level approach envisages that if there is at least one attribute of an objective evidence of impairment at the level of the financial instrument, the financial instrument and all financial instruments of this borrower are deemed to have objective evidence of impairment. An event of default is one of the attributes of the objective evidence of impairment.

For all asset groups the NBU defines a default as incapability or unwillingness of a counterparty/issuer/borrower to fulfill their financial obligations towards the NBU which leads to direct financial losses from materialization of credit risk.

An event of default on obligations towards the NBU is recognized, in particular, for the financial assets with at least one payment past due for more than 90 calendar days as of the reporting date.

If no own historical data are available or historical data on losses are insufficient, other institutions' historical data on similar asset groups may be used. Professional judgement of the NBU's employees may also be used.

Own loss experience is adjusted on the basis of current information and forecast of the future economic situation in order to reflect the impact of current and forecast economic conditions that did not apply in the period of the available

historical loss data and to exclude the impact of conditions of this historical period which were absent as of the reporting date.

When using own historical loss statistics to estimate future cash flows, such historical data are applied only to those groups of assets that are determined on the basis of principles similar to those used for the groups on which these historical loss data are based.

Information on the actual and forecast values of future economic conditions (macroeconomic indicators) is used to determine the probability of default taking into account the impact of future economic conditions, and when choosing discounts to be applied to the value of collateral depending on the stage of the economic cycle.

Therefore, the applied methods allow to use historical data on losses for a group of assets with similar credit risk characteristics and current data that reflect current conditions and forecasts of the future economic situation.

The NBU estimates its impairment losses on individual and collective basis.

Assessment on individual basis is conducted for financial assets that were found to show objective evidence of impairment, and assets that make up public and publicly guaranteed debt, or liabilities of state-owned enterprises and organizations (including state-owned banks and the Deposit Guarantee Fund).

Assessment on collective basis is conducted for financial instruments with common credit risk features (for example, deposits in foreign banks are grouped by credit ratings set by international rating companies like Fitch Ratings, Moody's, and Standard & Poor's; and loans issued to Ukrainian banks to support liquidity – according to ratings according to the NBU's internal methodology).

The NBU uses the following three approaches to calculate expected credit losses:

1) assessment on a collective basis (credit risk parameters), according to which the expected credit loss is the product of exposure at risk of default, the probability of default, and the level of losses in case of default, taking into account the forecast scenarios weighted by the probability

2) assessment on a collective basis (repayment scenarios) taking into account the unconditional probability of their occurrence, according to which the expected credit loss is the present value of the difference between the envisaged contractual cash flows payable to the NBU under loan agreements, discounted at the effective interest rate, and total cash flows that the NBU expects to receive under probable loan repayment scenarios, discounted at the effective interest rate

3) assessment on an individual basis (customized repayment scenario), according to which the expected credit loss is the present value of the difference between the envisaged contractual cash flows payable to the NBU under a loan agreement, discounted at the effective interest rate, and total cash flows that the NBU expects to receive under the customized loan repayment scenario, discounted at the effective interest rate.

Credit losses on insignificant accounts receivable and contract assets are assessed by a simplified method.

Impairment of the investments into the authorized capital of associated and subsidiary undertakings is assessed and recognized pursuant to the requirements of IAS 36. Impairment of Assets and IAS 28. Investments in Associates and Joint Ventures.

In the event the amount of expected credit losses decreases as a result of the events that evidence on the decrease in credit risk on the financial instrument, the amount of such allowance for financial instrument is reversed. The amount of decrease in expected credit losses is reported as profit or loss in the consolidated statement of profit or loss and other comprehensive income.

For banknotes and coins in cash stocks, cash handling offices, and ATMs the presence of which is unconfirmed and over which control is lost, are provisioned against cash losses. Such provisioning is recognized in profit or loss in the consolidated statement of profit or loss and other comprehensive income.

Written off Financial Assets

Irrecoverable financial assets are written off partially or completely against the created allowance for expected credit losses upon completion of all required procedures on the asset recoverable amount, when there are no reasonable expectations of recovering contractual cash flows.

Change in Classification

Securities may be reclassified – as an exception between categories (at amortized cost, at fair value through profit or loss, or at fair value through other comprehensive income) – if the model of financial assets management changes. Classification and measurement requirements related to the new category applied prospectively from the first day of the reporting period after the changes to the model for financial asset management that led to reclassification were recognized.

Changes (modification) of Financial Assets' Terms and Conditions

If terms and conditions under a financial asset change significantly, the NBU derecognizes such an asset and recognizes a new financial asset at fair value in profit or loss in the consolidated statement of profit or loss and other comprehensive income.

If the change in terms and conditions is not significant, then the gross carrying amount of those assets are adjusted. The adjustment amount is determined as a difference between the present value of new cash flows at the revised terms discounted at the original effective interest rate (or the current effective interest rate, if loans are granted at floating rates), and the gross carrying amount of the financial asset at the date of the terms' change and is recognized as income/expenses on the change (modification) of financial assets' terms and conditions in the consolidated statement of profit or loss and other comprehensive income.

Repo Transactions

Funds paid under the agreements for purchase and sale of securities with counterparty banks with a subsequent repurchase obligation (reverse repo) are recorded as loans to banks. The difference between the purchase and resale prices is treated as interest income recognized over the life of the repo agreements using the effective interest rate method.

Funds received under repo agreements are included in accounts of banks in the consolidated statement of financial position. The securities sold under repo agreements are retained as the assets of the NBU. The difference between the sale and repurchase prices is treated as interest expense and accrued over the life of the repo agreement using the effective interest rate method.

Transactions in Foreign Currency and Monetary Gold

Monetary assets and liabilities in foreign currency and monetary gold are estimated according the official hryvnia exchange rate to foreign currencies/accounting prices of investment metals on whichever date comes earlier: settlement date or accrual date of monetary assets and liabilities and later on reassessed each time the official exchange rate/accounting price changes.

As of 31 December 2021 and until 23 February 2022 (inclusive), the calculation of the official hryvnia exchange rate against the U.S. dollar took into account the information about all TOD, TOM, and SPOT transactions to buy/sell U.S. dollars that were conducted in the FX market by banks with other banks and with the NBU on the day of the calculation of the official exchange rate and that were reported to the NBU by trading information systems via relevant information exchange channels.

As of 31 December 2021 and until 23 February 2022 (inclusive), the official hryvnia exchange rate to other currencies was set based on the information on the official hryvnia exchange rate to the U.S. dollar and on BFIX quotes (value of weighted average exchange rate/price quotes Bloomberg Generic Price for foreign currencies on the SPOT market against the U.S. dollar/ the U.S. dollar to foreign currencies according to TIC BLOOMBERG) for the currencies, for which TIS BLOOMBERG publishes the BFIX quotation on the day the official hryvnia exchange rate is calculated.

From 24 February 2022 for the period of martial law, in order to maintain macroeconomic stability in Ukraine, ease the panic, and prevent the inflationary spiral, the NBU fixed the UAH/USD exchange rate at the level of 24 February 2022, namely 29.2549 UAH per 1 USD. The NBU changed the official exchange rate of the hryvnia against the U.S. dollar by 25%, to UAH/USD 36.5686, effective 9 a.m. 21 July 2022. The reasoning behind the decision was the shift in the fundamental parameters of the Ukrainian economy during the war and the strengthening of the dollar against other currencies. This step was helped make Ukrainian producers more competitive, harmonize exchange rate conditions for various groups of businesses and households, and support the economy's resilience in wartime.

From 24 February through 20 March 2022, the official exchange rate of the hryvnia against foreign currencies, special drawing rights, as well as the estimated price of investment metals, were fixed at the levels at which they stood on 24 February 2022.

From 21 March 2022 the official hryvnia exchange rate to other currencies and accounting prices of investment metals were set according to the procedure that was in place before the martial law introduction - based on the information on the official hryvnia exchange rate to the U.S. dollar and on BFIX quotes.

In 2021-2022, the official hryvnia-to-U.S. dollar exchange rate was set each business day.

Monetary assets and liabilities in foreign currency and monetary gold are reported in the consolidated financial statements according the official hryvnia exchange rate to foreign currencies/accounting prices of investment metals set/estimated by the NBU as of the date of the consolidated statement of financial position.

Monetary gold stands for gold reserves in bullions of global standard and coins not less than 995 fineness that belong to the NBU and make up international reserves. Monetary gold transactions can only be transacted between monetary regulators of different states or between those regulators and international lending institutions.

The gold owned by the NBU but included in reserve assets is not recognized as monetary gold.

Monetary gold is reported by weight in Troy ounces and its value in hryvnia according to accounting price of investment metals. Accounting price of investment metals is estimated based on BFIX price quotations in U.S. dollars against investment metals released by TIS BLOOMBERG (or information on the last available price of investment metals received from the website of the London Bullion Market Association or TIC) and the official hryvnia exchange rate against the U.S. dollar.

Gold in foreign banks generating interest is reported as funds and deposits in foreign currency and investment metals (nonfinancial assets) and recognized in the consolidated

financial statements at the accounting price of investment metals as of the date of the consolidated statement of financial position.

The main official exchange rates of hryvnia against foreign currencies/accounting price of investment metals used for reporting the monetary items of the consolidated statement of financial position and monetary gold, were as follows:

	31 December 2022 (in hryvnias)	31 December 2021 (in hryvnias)
1 U.S. dollar	36.5686	27.2782
1 SDR	48.667093	38.178401
1 euro	38.951	30.9226
1 GBP	44.0048	36.8392
1 Troy ounce of gold	66,075.8	49,115.22

Revaluation of monetary assets and liabilities in foreign currency and monetary gold, as well as gold held in foreign banks, due to changes in the official hryvnia exchange rate against foreign currencies/accounting price of investment metals are reported as financial results in the consolidated statement of profit or loss and other comprehensive income in the period in which they occurred.

Offsetting

Offsetting of financial assets and liabilities (with only the net amount being included in the consolidated statement of financial position) may be carried out only based on a legally defined right to offset the recognized amounts in case of an intention to simultaneously sell an asset and settle liabilities or make settlements on the basis of a net amount.

Approach to Disclosure of Information on Changes in Carrying Amount of Financial Instruments for the Reporting Year

In these consolidated financial statements the following approach to disclosure of information is used:

to financial assets measured at amortized cost: changes in the gross carrying amount and allowances for expected loan losses are reflected only for those financial assets, on which there were outstanding debts at the start and/or end of the reporting period (Note 10)

to financial assets measured at fair value through profit or loss: changes in fair value are reflected only for those financial assets that are included into Level 3 of fair value measurement and on which there were outstanding debts as of the start and/or end of the reporting period (Note 21).

5. Basic Estimates and Judgments in Applying Principles of Financial Instruments Accounting

A professional judgment/assumption is a documented reasoned decision of the NBU's employees, which is based on:

compliance of actual actions to determine each component of the expected credit loss assessment with the NBU's methodology on assessing expected credit losses from financial instruments

comprehensive and unbiased analysis of all information that influences the determination of the size of components and factors (events, attributes) of assessing credit risk and expected credit losses

the NBU's own experience which is based on reliable, uninterrupted, complete, and integral statistical data accumulated over at least previous three consecutive years

ensuring a comprehensive, timely, and objective assessment of credit risk and expected credit losses in compliance with

the principles set out in the NBU's methodology on assessing expected credit losses from financial instruments

Measurement of Allowances for Expected Credit Losses on Demand Deposits and Term Deposits in Foreign Currency and Monetary Gold

The NBU regularly revises demand deposits and term deposits in foreign currency and monetary gold measured at amortized cost as to their potential impairment.

The NBU's management uses consolidated statistics from international rating agencies Fitch Ratings, Moody's and Standard & Poor's for a period allowing to consider the impact of the economic cycle (at least 10 years) to estimate the probability of default (PD) and loss given default (LGD) in order to determine a need for recognizing the cost of provisions allowances for expected credit losses.

Demand deposits and term deposits in foreign currency are considered to have low credit risk, if the long-term credit rating of the counterparty under the relevant financial instrument on the reporting date is not lower than BBB-, that

is, belongs to an investment class confirming the counterparty's high ability to fulfill all its contractual obligations in near future (its high current creditworthiness), even if adverse changes in the economic environment and long-term business activity may, but not necessarily, reduce creditworthiness of such counterparty.

Demand and term deposits in foreign currency and monetary gold are considered to be conditionally devoid of credit risk, if they are direct liabilities of:

- The International Monetary Fund (IMF) or the Bank of International Settlements, denominated in any currency
- the country, denominated in the currency of this country, except for liabilities in euro
- a foreign central bank, denominated in the currency of the central bank's home country, except for liabilities in euro
- the European Central Bank, government of the Federal Republic of Germany and Deutsche Bundesbank denominated in euro.

As at 31 December 2022 and 2021 all demand funds and term deposits in foreign currency and monetary gold had a low level of credit risk or were conditionally devoid of credit risk.

Measurement of Allowances for Expected Credit Losses on Securities at Amortized Cost

The NBU regularly reassesses its securities portfolio measured at amortized cost for impairment.

The NBU's management applies their professional judgment about factors of significant increase in credit risk (Note 4) and cash shortfalls under the securities portfolio in order to determine a need for recognizing the expenses on allowances for expected credit losses. Such factors may include data that indicate a negative change in the issuer's solvency.

Government debt securities denominated in the domestic currency of the issuing country, except for euro obligations, are considered to be conditionally devoid of credit risk. For debt securities that are considered to be conditionally devoid of credit risk, the probability of default for a period of 12 months and for the maturity of the financial instrument is deemed insignificant, i.e. close to zero.

To estimate expected credit losses on the hryvnia-denominated government debt securities of Ukraine in the NBU's portfolio, the NBU's management uses all available internal and external information relevant to this financial instrument.

The NBU has a special status. Its functions, characteristics, and activities differ from those of Ukraine's other financial entities. Specifically, the NBU maintains the accounts of the State Treasury Service of Ukraine, performs transactions to service the public debt, the functions of a depository of government securities of Ukraine, the functions of a depository bank in Ukraine's relations with the IMF, represents the interests of Ukraine in the central banks of

other countries, international banks and other credit institutions, regularly collects data, analyzes it and forecasts the dynamics of macroeconomic, monetary, foreign exchange, and financial indicators, including the preparation of the balance of payments, and is the sole issuer of the hryvnia, Ukraine's domestic currency. Through Ukraine's membership of international financial institutions, the NBU, jointly with Ukraine's Ministry of Finance, actively cooperates with institutions such as the IMF, the World Bank Group, the EBRD, the Black Sea Trade and Development Bank, and the European Investment Bank.

Taking into account the special role the NBU plays as a central bank both at the level of the country and in relation to the Government of Ukraine and as a party that provides banking and depository services to its own state, the NBU receives and has a practical opportunity to evaluate more relevant and timely data about an issuer of securities in real time.

When analyzing the risk of the issuer default on obligations, the NBU takes into account both data from international rating agencies and the information available to the NBU, given its special role. In particular, the NBU takes into account the lack of information on payment delays and failures to make payments by the state both in the reporting period and in historical periods when, according to rating agencies, Ukraine was assessed as close to declaring default (1998 and 2015). However, the government of Ukraine has never delayed payments on hryvnia debt securities – not before 2022, not in 2022 and 2023, when significant international support started to come in. The NBU takes into account historical information and forecasts regarding the formation and servicing of the national debt of Ukraine. The NBU pays attention to differences in the economic and the political situations of the countries that compile the default data presented in the official reports of external rating agencies, etc.

The NBU's management has analyzed the fulfillment of low-credit-risk criteria for the Ukrainian-issued hryvnia government debt securities of Ukraine in the NBU's portfolio. Based on the analysis of the data available to the NBU, including statistics and forecasts regarding the public debt and the State Budget of Ukraine, the NBU's management believes that the issuer of state securities has strong capacity to meet its hryvnia-denominated contractual obligations in the short term, including due to international support that has actually been received, support pledged under firm commitments, and projected support, as well as taking into account economic and financial policies and opportunities and plans for raising funds in the domestic market. Therefore, as of the reporting date, the risk of default on hryvnia obligations has been considered as low. Adverse changes in economic and political conditions may, but not necessarily, in the long run, reduce the issuer's ability to meet its obligations. Based on the above, the NBU's management has come to a conclusion that the hryvnia government debt securities of Ukraine in the NBU portfolio have a low credit risk.

During the analysis of expected credit losses (the present value of the shortfalls), the NBU developed a number of scenarios of the probability of credit losses. Those included scenarios in which losses did not occur and those in which the result of the assessment of probable losses was different from zero. Expected credit losses under such scenarios ranged from UAH 12,177 million to UAH 29,345 million. The probabilities of those scenarios cannot be reliably estimated. Based on the scenario analysis performed and the conclusion about low credit risk, the NBU management believes that as of 31 December 2022, there was no significant increase in credit risk for hryvnia government debt securities of Ukraine in the NBU's portfolio. Since the date of their initial recognition, such securities have been conditionally free of credit risk. Accordingly, the NBU's management has determined that the amount of credit losses expected by the NBU on the hryvnia government debt securities of Ukraine in the NBU's portfolio is close to zero (note 9). The NBU makes its own macroeconomic forecasts on a quarterly basis and publishes them in its Inflation Report, which allows the central bank to make prompt revisions of its risk management strategy. On a regular basis, at least once a quarter, and based on the macroeconomic forecasting, the NBU analyzes the issuer capabilities and the economic and political situation in the country in order to maintain up-to-date estimates of expected credit losses for the specified financial instruments.

Measurement of Allowances for Expected Credit Losses on Loans Granted to Banks and Other Borrowers

The NBU regularly revises its loan portfolio for impairment.

A majority of loans to banks and other borrowers are assessed on a group basis against redemption scenarios. Repayment scenarios and their probability are estimated based on NBU statistics on repayment of loans issued by

Ukrainian banks, taking into account the possible impact of the future economic conditions, and are subject to regular revision of the NBU Board.

Loans to the banks under liquidation, declared insolvent or having significant financial difficulties (stage 3) are evaluated on individual basis. While estimating expected credit losses under said loans, the NBU's management applies judgment and estimates future cash flows primarily from sale of collateral.

The NBU measures the cost of real estate pledged as collateral for loans at fair value. Estimated value of collateral impacts the allowances for expected credit losses, which requires professional judgment. Accounting estimates related to the valuation of real estate, when there are no market prices formed in an active market, are a main source for uncertainty in valuation, as (i) it is characterized by high variability from period to period and (ii) the recognition of changes in estimates could potentially have a significant impact. The methodology and assumptions used to estimate the amounts and timing of future cash flows are constantly reviewed to avoid any discrepancies between the estimated and actual costs.

A 10% decrease or increase in future discounted cash flows under the loans that are at stage 3 and assessed on an individual basis, which is possible due to differences in the amounts and maturities of cash flows, will lead to an increase in the expected credit losses by UAH 365 million or a decrease by UAH 365 million, respectively, as of 31 December 2022 (as of 31 December 2021 this would have led to an increase in the allowances for expected credit losses by UAH 427 million or decrease by UAH 427 million, respectively).

Section II.II. Financial Assets and Liabilities

6. Funds and Deposits in Foreign Currency and Investment Metals

	2022	2021
		(UAH millions)
Financial assets at amortized cost		
Foreign currency cash	39,474	20,677
Demand deposits	83,227	58,631
Overnight deposits placed at the initiative of correspondent bank	113,833	49,200
Term deposits in foreign currency	–	49,049
Allowances for expected credit losses on deposits in foreign currency at amortized cost	–	(5)
Total financial assets at amortized cost	236,534	177,552
Financial assets at fair value through profit or loss		
Demand deposits for settling futures transactions	–	33
Total financial assets	236,534	177,585
Nonfinancial assets		
Term deposits in gold	4,970	3,694
Total nonfinancial assets	4,970	3,694
Total funds and deposits in foreign currency and investment metals	241,504	181,279

As of 31 December 2022 and 2021, all funds and deposits in foreign currency are not secured.

As of 31 December 2022, the gross carrying value of demand deposits was UAH 83,227 million and it changed mostly due to increase in balances on nonresident correspondent bank accounts (as of 31 December 2021, it was UAH 58,631 million and it changed over 2021 mostly due to decrease in balances on correspondent accounts of nonresident banks).

During 2022 and 2021, all demand deposits were at stage 1 for assessing expected credit losses. In 2022 and 2021, no provisions for expected credit losses on the demand accounts were recognised (Note 5).

As of 31 December 2022, the gross carrying value of the overnight deposits placed at the initiative of a correspondent bank was UAH 113,833 million and it changed mostly due to increase in amounts of those deposits (as of 31 December 2021 it was UAH 49,200 million and it changed over 2021 due to deposits made).

In 2022 and 2021, all overnight deposits placed at the initiative of a correspondent bank were at stage 1 for assessing expected credit losses. In 2022 and 2021, no provisions for expected credit losses on overnight deposits placed at the initiative of a correspondent bank were recognised (Note 5).

For the purposes of the consolidated statement of cash flows, cash flows on term deposits in gold are classified as investment activities.

Funds and deposits in foreign currency are analyzed by geographical concentration risk in Note 23, by credit risk – in Note 24, by foreign currency risk – in Note 25, by interest rate risk – in Note 26, and by liquidity risk – in Note 27.

Information on funds and deposits in foreign currency and investment metals broken down into current and noncurrent funds is available in Note 37.

7. Foreign Securities

As of 31 December 2022, foreign securities were comprised of the following:

	Government bonds	Securities issued by international agencies, banks and other issuers	Total
(UAH millions)			
Foreign securities at fair value through profit or loss:			
Debt securities by issuers:			
securities issued by U.S. issuers:			
denominated in USD	583,952	–	583,952
securities issued by EU issuers:			
denominated in USD	946	22,302	23,248
denominated in EUR	–	975	975
securities issued by other issuers:			
denominated in USD	–	55,652	55,652
denominated in EUR	–	9,701	9,701
denominated in AUD	797	408	1,205
denominated in GBP	3,664	1,532	5,196
denominated in Chinese renminbi	–	10,456	10,456
denominated in JPY	409	4,088	4,497
Total debt securities	589,768	105,114	694,882
Equity instruments:			
shares of the Black Sea Trade and Development Bank	–	624	624
Total equity instruments	–	624	624
Total foreign securities at fair value through profit or loss	589,768	105,738	695,506

Securities issued by international agencies, banks and other issuers include debt securities issued by foreign central and investment banks, international agencies and other issuers.

Foreign securities are analyzed by geographical concentration risk in Note 23, by credit risk – in Note 24, by

foreign currency risk – in Note 25, by interest rate risk – in Note 26, and by liquidity risk – in Note 27.

Information on securities broken down into current and noncurrent ones is available in Note 37.

As of 31 December 2021, foreign securities were comprised of the following:

	Government bonds	Securities issued by international agencies, banks and other issuers	Total
(UAH millions)			
Foreign securities at fair value through profit or loss:			
Debt securities by issuers:			
securities issued by U.S. issuers:			
denominated in USD	462,574	299	462,873
denominated in GBP	–	844	844
securities issued by EU issuers:			
denominated in USD	2,337	21,679	24,016
denominated in EUR	–	10,218	10,218
denominated in GBP	–	2,029	2,029
securities issued by other issuers:			
denominated in USD	3,178	85,487	88,665
denominated in EUR	1,546	21,877	23,423
denominated in AUD	665	297	962
denominated in GBP	3,555	2,830	6,385
denominated in Chinese renminbi	–	14,687	14,687
denominated in JPY	355	9,710	10,065
Total debt securities	474,210	169,957	644,167
Equity instruments:			
shares of the Black Sea Trade and Development Bank	–	120	120
investment in the Interstate Bank	–	1	1
Total equity instruments	–	121	121
Total foreign securities at fair value through profit or loss	474,210	170,078	644,288

Information about the nominal value, coupon rate and maturities of foreign debt securities as of 31 December 2022 is presented in the table below:

	Total nominal value in foreign currency, in millions	Total nominal value in hryvnia equivalent, UAH millions	Coupon rate, % p.a.	Frequency of coupon payments	Maturity
Debt securities at fair value through profit or loss by issuers:					
Government bonds:					
securities issued by U.S. issuers:					
denominated in USD	16,183	591,782	0–2.75	Every 6 months, without coupon payments	From 15 days to 11.6 months
securities issued by EU issuers:					
denominated in USD	26	954	0–0.625	Once a year, without coupon payment	From 2.5 months to 3.9 months
securities issued by other issuers:					
denominated in AUD	32	784	5.5	Every 6 months	3.7 months
denominated in GBP	84	3,674	0.125	Every 6 months	1 month
denominated in JPY	1,500	410	0.02	Every 6 months	2.5 years
Bonds issued by international agencies, banks and other issuers:					
securities issued by EU issuers:					
denominated in USD	614	22,457	0–4.89514	Quarterly, every 6 months, once a year, without coupon payments	From 17 days to 1.2 years
denominated in EUR	25	974	2.593	Quarterly	2.2 months
securities issued by other issuers:					
denominated in USD	1,521	55,623	0–5.72271	Quarterly, every 6 months, once a year, without coupon payments	From 3 days to 2.3 years
denominated in EUR	250	9,738	0	Without coupon payment	From 1.3 months to 2.6 months
denominated in AUD	17	410	0	Without coupon payment	2 months
denominated in GBP	35	1,540	0	Without coupon payment	1.6 months
denominated in Chinese renminbi	2,000	10,503	0–3.4	Every 6 months, once a year, without coupon payments	From 1 month to 2.6 years
denominated in JPY	15,000	4,104	0–0.295	Every 6 months, without coupon payments	From 5.2 months to 1.8 years

Information about the nominal value, coupon rate and maturities of foreign debt securities as of 31 December 2021 is presented in the table below:

	Total nominal value in foreign currency, millions	Total nominal value in the hryvnia equivalent, UAH millions	Coupon rate, % p.a.	Frequency of coupon payments	Maturity
Debt securities at fair value through profit or loss by issuers:					
Government bonds:					
securities issued by U.S. issuers:					
denominated in USD	16,800	458,264	0–2.5	Every 6 months, without coupon payments	From 15 days to 1.1 years
securities issued by EU issuers:					
denominated in USD	85	2,319	0.125–1.875	Every 6 months, once a year	From 6.9 months to 9.6 months
securities issued by other issuers:					
denominated in USD	115	3,137	2.125–2.625	Every 6 months	From 25 days to 10.2 months
denominated in EUR	50	1,546	0.125	Once a year	4.9 years
denominated in AUD	33	650	0.25–5.75	Every 6 months	From 6.5 months to 2.9 years
denominated in GBP	97	3,581	0.125–0.75	Every 6 months	From 6.8 months to 2.1 years
denominated in JPY	1,500	355	0.02	Every 6 months	3.5 years
Bonds issued by international agencies, banks and other issuers:					
securities issued by U.S. issuers:					
denominated in USD	11	303	0.625–0.75	Once a year	From 4.1 months to 4.1 years
denominated in GBP	24	884	0.25	Once a year	5.7 years
securities issued by EU issuers:					
denominated in USD	792	21,600	0–2.75	Quarterly, every 6 months, once a year, without coupon payment	From 18 days to 4.8 years
denominated in EUR	330	10,204	0–0.5	Quarterly, once a year, without coupon payment	From 2.4 months to 6.9 years
denominated in GBP	55	2,026	0–1	Once a year, without coupon payment	From 1.2 months to 11.6 months
securities issued by other issuers:					
denominated in USD	3,133	85,460	0–3.25	Quarterly, every 6 months, once a year, without coupon payment	From 11 days to 4.8 years
denominated in EUR	704	21,770	0–0.75	Quarterly, once a year	From 24 days to 6.7 years
denominated in AUD	15	297	0	Without coupon payment	5 months
denominated in GBP	77	2,837	0–0.375	Once a year, without coupon payment	From 12 days to 1.6 years
denominated in Chinese renminbi	3,459	14,804	0–3.4	Every 6 months, once a year, without coupon payment	From 1.5 months to 3.6 years
denominated in JPY	41,000	9,713	0–0.295	Every 6 months, without coupon payment	From 4.8 months to 2.8 years

8. Transactions with the IMF

Accounting Policy

The NBU acts as a custodian bank in relations between Ukraine and the IMF.

NBU consolidated financial statements show all fund claims of Ukraine to the IMF and liabilities to the IMF for the funds received by the NBU.

The respective assets include

- SDR holdings
- IMF quota contributions (including the reserve position of the IMF).

The respective liabilities include:

- the value of securities issued to the IMF by the NBU for its quota and borrowings
- funds on IMF accounts No. 1 and No. 2. The IMF's account No. 1 is used for IMF transactions, including quota subscription payments, purchase and repurchase of funds. Account No. 2 is used for settlements with the IMF in the Ukrainian currency.

Assets and liabilities denominated in SDR, including the IMF quota contributions, are translated into UAH at the NBU's official exchange rate of hryvnia against SDR at the date of the consolidated statement of financial position. The official exchange rate of UAH against SDR is calculated based on the information about the exchange rate of SDR against USD set by the IMF and the NBU's official hryvnia against the U.S. dollar exchange rate. The NBU classifies SDR holdings and IMF quota contributions according to amortized cost.

Return on SDR holdings is recognized as interest income, and charges paid in respect of the use of the IMF's funds are recognized as interest expenses and fees and commissions in the consolidated statement of profit or loss and other comprehensive income. The fees under the arrangement on SDR purchase, which are paid at the beginning of each 12-months period of the respective arrangement and are subject to reimbursement upon receipt of individual tranches, are recognized within other assets. Nonreimbursable fees under arrangements on SDR purchases are recorded as fees and commissions. Expenses related to operations with the IMF are amortized using the effective interest rate method and recorded as interest expense.

8.1. SDR Holdings

SDR holdings are demand deposits denominated in SDR on the account opened at the IMF for Ukraine.

Cash flows in the SDR holding accounts in 2022 and 2021 were as follows:

	2022	2021
		(UAH millions)
Balance of SDR holdings as of 1 January	510	128
Proceeds from the IMF:		
in favor of the government	88,181	18,756
Proceeds from international donor financial aid to Ukraine:		
in favor of the government	87,648	–
Proceeds from the SDR allocation	–	72,817
Purchase of SDRs	25,326	44,805
Other proceeds and payments	26	540
Loan repayment:		
on behalf of the NBU (Note 8.3)	(53,316)	(25,227)
on behalf of the Government	(14,161)	(12,409)
Payment of loan-related fees and commissions	(441)	(215)
Conversion of SDRs to other foreign currencies:		
in favor of the NBU	(71,884)	–
in favor of the government	–	(92,188)
Payment of interest for the use of IMF loans:		
on behalf of the NBU	(4,912)	(4,278)
on behalf of the Government	(5,351)	(2,729)
Payment of interest for the use of funds received under SDR allocation:		
on behalf of the NBU	(31)	(6)
on behalf of the Government	(1,112)	(32)
Other payments	(1)	(1)
Income on SDR holdings	688	7
Exchange rate differences	11,004	542
Balance of SDR holdings as of 31 December	62,174	510

In 2022 and 2021, there were no proceeds from the IMF to the NBU under loan programs.

In April 2022, the IMF's Executive Board approved the opening of the IMF administered account for Ukraine providing a safe way for donors to direct financial aid for Ukraine in the form of grants and loans. In 2022, SDR 2,081 million or UAH 87,648 million were transferred from said account to the SDR holding account at the official UAH/SDR exchange rate as of the transaction date in favor of the Government and credited to the account of the State Treasury Service of Ukraine.

In June 2021, SDR 12.53 million or UAH 486 million were credited to the SDR holding account at the official UAH/SDR exchange rate on the transaction date, based on a decision by the IMF Executive Board. The proceeds were recognized as the NBU's income and included into the item *Other income* of the Consolidated Statement of Profit or Loss and Other Comprehensive Income.

The IMF, pursuant to the decision of the IMF's Board of Governors, approved the general SDR allocation to support liquidity in the global economic system by replenishing the currency reserves of IMF member states. In August 2021, funds were credited to the SDR holding account in the amount of SDR 1,928 million (UAH 72,817 million at the official exchange rate at the transaction date) under the general SDR allocation, converted in U.S. dollars and euro and credited to the accounts of the State Treasury Service of Ukraine in September and December.

SDR holdings are analyzed by geographical concentration risk in Note 23, by foreign currency risk – in Note 25, by interest rate risk – in Note 26, and by liquidity risk – in Note 27.

Information on SDR holdings broken down into current and noncurrent ones is available in Note 37.

8.2. IMF Quota Contributions

The quota balance is a special type of asset that represents Ukraine's contribution as an IMF member. Quotas vary based on the economic size of each country and are determined by the IMF Board of Governors. The quota determines a member's voting power in the IMF, the limits of its access to the financial resources of the fund, and a participant's share in the allocation of SDRs, the fund's unit of accounting. The major part of Ukraine's quota was paid in the form of non-interest-bearing debt instrument issued by the NBU to the IMF, with the remainder being credited to the IMF accounts No. 1 and No. 2 (Note 8.3).

As of 31 December 2022, Ukraine's total quota in the IMF amounted to SDR 2,012 million (UAH 97,908 million at the year-end official UAH/SDR exchange rate) (31 December 2021: SDR 2,012 million, or UAH 76,807 million at the year-end official UAH/SDR exchange rate). The quota does not earn interest.

The reserve position in the IMF is a specific type of asset that is created by converting a part of the contribution of a member country to the IMF liquidity quota. The reserve position is part of a country's currency reserves.

As of 31 December 2022, the reserve position of Ukraine in the IMF amounted to SDR 241,031 (UAH 11.7 million at the official UAH/SDR exchange rate as of the end of the reporting period) (as of 31 December 2021, it was SDR 241,031, or UAH 9.2 million at the year-end official UAH/SDR exchange rate). The amount of the reserve position is included into the item *IMF Quota contributions* of the Consolidated Statement of Financial Position.

IMF quota contributions are analyzed by geographical concentration risk in Note 23, by foreign currency risk – in Note 25, and by liquidity risk – in Note 27.

Information on IMF quota contributions broken down into current and noncurrent ones is available in Note 37.

8.3. Liabilities to the IMF

	2022	2021
	(UAH millions)	
Liabilities to the IMF for SDR purchases	137,293	153,455
Liabilities to the IMF for SDR allocations	3,982	3,112
IMF account No. 2	4	3
Liabilities to the IMF apart from quota contributions	141,279	156,570
Liabilities to the IMF on quota contributions	97,651	76,605
IMF account No. 1	246	193
Liabilities to the IMF on quota contributions	97,897	76,798
Total liabilities to the IMF	239,176	233,368

Liabilities to the IMF for SDR allocation represent funds received by the NBU as a result of the special SDR allocation.

Liabilities to the IMF for purchases of SDRs represent loans received from the IMF to accounts with the NBU. In 2022 and 2021, there were no proceeds from the IMF to the NBU (Note 8.1).

IMF account No. 1 is the IMF account with the NBU in domestic currency that is used for transactions with the IMF related to the servicing and repayment of IMF loans. IMF account No. 2 is the IMF account with the NBU in the domestic currency that is used by the IMF for receipts and administrative disbursements in UAH in Ukraine.

Liabilities to the IMF on quota contributions represent liabilities for quota settlement. In 2022 and 2021, there were no changes in liabilities on quota contributions related to the IMF's administrative disbursements in hryvnias.

In 2022 and 2021, no changes occurred in the size of the quota (Note 8.2).

In 2022, liabilities worth SDR 1,211 million (UAH 53,316 million at the official exchange rate as of the transaction date, or UAH 47,859 million at the annual exchange rate of the IMF) were repaid to the IMF [in 2021, repayments of liabilities to the IMF worth SDR 649 million (UAH 25,227 million at the official exchange rate as of the transaction date, or UAH 24,996 million at the annual exchange rate of the IMF were repaid)] (Note 8.1).

Liabilities to the IMF are analyzed by geographical concentration risk in Note 23, by foreign currency risk – in Note 25, by interest rate risk – in Note 26, and by liquidity risk – in Note 27.

Information on liabilities to the IMF broken down into current and noncurrent ones is available in Note 37.

9. Domestic Securities

	2022	2021
		(UAH millions)
Securities at fair value through profit or loss:		
in foreign currencies:		
government derivatives denominated in US dollars	460	1,082
Total securities at fair value through profit or loss	460	1,082
Debt securities at amortized cost:		
in domestic currency:		
domestic government debt securities (at a fixed interest rate)	292,165	171,759
domestic government debt securities (at a floating interest rate)	464,415	151,102
Total debt securities at amortized cost	756,580	322,861
Total domestic securities	757,040	323,943

According to Article 54 of the Law of Ukraine *On the National Bank of Ukraine*, the NBU has no right to acquire at a primary market securities, which are issued by the Cabinet of Ministers of Ukraine, a state institution, or other legal entity whose property is state-owned.

However, according to Law of Ukraine No. 2118-IX *On Amendments to the Tax Code of Ukraine and Other Laws of Ukraine Regarding the Specific Taxation and Reporting Under Martial Law* dated 3 March 2022, this article was temporarily suspended from 7 March 2022 for the duration of martial law in Ukraine.

Therefore, in March-December 2022, the NBU acquired at the primary market from the issuer, the Ministry of Finance of Ukraine, domestic government debt securities at a fixed interest rate and domestic government debt securities at a floating interest rate with the total nominal value of UAH 400,000 million. Those domestic government debt securities have nominal value UAH 1,000 each, with UAH 120,000 million related to securities at a fixed interest rate and UAH 280,000 on securities at a floating interest rate.

In 2021, the NBU did not purchase domestic government debt securities.

Each government derivative has a notional value of USD 1,000 or such aggregate value that is an integer multiple equal to USD 1,000 (hereinafter referred to as the notional value). Payments on government derivatives depend on reaching certain GDP indicators and the indicator of real GDP growth for 2019–2038.

Domestic securities are analyzed by credit risk in Note 24, by foreign currency risk – in Note 25, by interest rate risk – in Note 26, and by liquidity risk – in Note 27. Estimated fair value of domestic securities is given in Note 21.

Information on domestic securities broken down into current and noncurrent ones is available in Note 37.

Information on the nominal value, yield to maturity, coupon income, and maturities of domestic securities as of 31 December 2022 is presented in the table below:

	Total nominal value and notional value in the UAH equivalent, UAH millions	Total nominal value in foreign currency, millions	Yield to maturity, % p.a.	Coupon rate, % p.a.	Frequency of coupon payments	Maturity
Securities at fair value through profit or loss:						
in foreign currency:						
government derivatives	1,603	44	–	–	–	Up to 17.4 years
Debt securities at amortized cost:						
in domestic currency:						
domestic government debt securities (at a fixed interest rate)	279,572	–	12.27–22.28	8.12–21.33	Once a year, every 6 months	From 0.6 months to 14.3 years
domestic government debt securities (at a floating interest rate)	425,173	–	5.95–15.92	21.50–27.50	Once a year	From 10.4 years to 29.4 years

Information on the nominal value, yield to maturity, coupon income, and maturities of domestic securities as of 31 December 2021 is presented in the table below:

	Total nominal value and notional value in the UAH equivalent, UAH millions	Total nominal value in foreign currency, millions	Yield to maturity, % p.a.	Coupon rate, % p.a.	Frequency of coupon payments	Maturity
Securities at fair value through profit or loss:						
in foreign currency:						
government derivatives	1,196	44	–	–	–	Up to 18.4 years
Debt securities at amortized cost:						
in domestic currency:						
domestic government debt securities (at a fixed interest rate)	167,579	–	9.67–13.10	8.12–17.25	Every six months	From 0.2 months to 13.9 years
domestic government debt securities (at a floating interest rate)	145,173	–	6.97–9.39	9.9–12.4	Once a year	From 14.4 years to 25.9 years

As of 31 December 2022, the gross carrying value of domestic government securities was UAH 756,580 million (as of 31 December 2021, it was UAH 322,861 million). During 2022 and 2021, all debt securities at amortized cost (government securities) were at stage 1. Changes in gross

carrying value in 2022 were primarily due to the domestic government debt securities purchases (in 2021 - due to securities repayments). In 2022 and 2021, the NBU did not make provisions for expected credit losses on government securities (Note 5).

10. Loans to Banks and Other Borrowers

Loans to banks and other borrowers by their designated purpose are classified as follows:

	2022	2021
		(UAH millions)
Loans granted to banks to support their liquidity:		
for stabilizing banking activities	37,853	38,955
through tenders conducted by the NBU:		
long-term	36,899	88,852
short-term	1,542	6,578
overnight	–	470
other	10	10
Loans granted under credit lines to support small and medium businesses using funds received from the European Bank for Reconstruction and Development (the EBRD)	21	36
Other	–	2
Provisions for expected credit losses on loans to banks and other borrowers	(35,544)	(35,042)
Total loans to banks and other borrowers	40,781	99,861

In 2022, the NBU supported the liquidity of banks by establishing a standing refinancing line (overnight loans), refinancing banks for a period from 14 up to 90 days and up to one year by holding tenders [in 2021 - through a standing refinancing line (overnight loans), refinancing banks for a period from 14 up to 90 days and from one to five years by holding tenders].

The NBU performs banks refinancing by providing the banks with overnight loans and refinancing loans and has the outstanding debts under those loans as of 31 December 2022 and 31 December 2021. The NBU grants to banks the overnight and refinancing loans secured by a pool that may consist of the following asset (property) types: securities [Ukrainian government bonds, bonds of international financial institutions (issued in accordance with the Ukrainian laws), corporate bonds placed against the CMU's guarantees, domestic municipal bonds], including property rights to future cash flows in national and/or foreign currency as payment of income and/or repayment of pledged securities to separate bank accounts at the NBU; the NBU's certificates of deposit,

including property rights to future cash receipts as payment of income and/or repayment of pledged certificates of deposit to separate bank accounts at the NBU; foreign currency (US dollars, euros, GB pounds, Swiss francs, Japanese yens); cash in national and/or foreign currency transferred as payment of income and/or repayment of pledged securities and/or certificates of deposit, property rights to future receipts pledged as collateral.

The securities (Ukraine's government bonds, corporate bonds, including those placed under the CMU's guarantees), foreign currency, shares of the owners of a bank's qualifying holding, real estate, and property rights under loan agreements were accepted as collateral against stabilization loans issued to banks to support their liquidity before 2017 and which remained outstanding as of 31 December 2022 and 2021. Since 2017, the NBU has not granted the stabilization loans. Instead of stabilization loans, the NBU may issue to banks loans for emergency liquidity assistance, but no such loans have been issued yet.

In 2022, the movements in gross carrying value of loans for stabilizing banking activities were as follows:

	Stage 1	Stage 2	Stage 3	Initially impaired assets	Total
					(UAH millions)
Gross carrying value of loans for stabilizing banking activities, as of 1 January 2022	–	–	38,955	–	38,955
Purchased/originated loans	–	–	–	–	–
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or repaid loans (except for written-off and partly repaid)	–	–	–	–	–
Writing off assets against provisions (including in part)	–	–	(31)	–	(31)
Other changes (including partial repayment)	–	–	(1,071)	–	(1,071)
Gross carrying value of loans for stabilizing banking activities, as of 31 December 2022	–	–	37,853	–	37,853

Changes in allowance for expected credit losses on loans for stabilizing banking activities in 2022 were as follows:

	Stage 1	Stage 2	Stage 3	Initially impaired assets	Total
					(UAH millions)
Allowance for expected credit losses on loans for stabilizing banking activities, as of 1 January 2022	–	–	34,688	–	34,688
Purchased/originated loans	–	–	–	–	–
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or repaid loans (except for written-off and partly repaid)	–	–	–	–	–
Writing off assets against provisions (including in part)	–	–	(31)	–	(31)
Adjustment of interest income under loans	–	–	(689)	–	(689)
Change in parameters/models used for calculating allowances and their partial repayment	–	–	233	–	233
Allowance for expected credit losses on loans for stabilizing banking activities, as of 31 December 2022	–	–	34,201	–	34,201

In 2021, the changes in gross carrying value of loans granted for stabilizing banking activities were as follows:

	Stage 1	Stage 2	Stage 3	Initially impaired assets	Total
					(UAH millions)
Gross carrying value of loans for stabilizing banking activities, as of 1 January 2021	–	–	41,434	–	41,434
Purchased/originated loans	–	–	–	–	–
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or repaid loans	–	–	(5)	–	(5)
Assets written off and otherwise derecognized loans against allowances	–	–	(1,233)	–	(1,233)
Other changes (including partial repayment)	–	–	(1,241)	–	(1,241)
Gross carrying value of loans for stabilizing banking activities, as of 31 December 2021	–	–	38,955	–	38,955

Changes in allowance for expected credit losses on loans for stabilizing banking activities in 2021 were as follows:

	Stage 1	Stage 2	Stage 3	Initially impaired assets	Total
					(UAH millions)
Allowance for expected credit losses on loans for stabilizing banking activities, as of 1 January 2021	–	–	36,470	–	36,470
Purchased/originated loans	–	–	–	–	–
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or repaid loans (except for written-off and partly repaid)	–	–	(5)	–	(5)
Writing off assets against provisions (including in part)	–	–	(1,233)	–	(1,233)
Adjustment of interest income under loans	–	–	(779)	–	(779)
Change in parameters/models used for calculating allowances and their partial repayment	–	–	235	–	235
Allowance for expected credit losses on loans for stabilizing banking activities, as of 31 December 2021	–	–	34,688	–	34,688

In 2022, the changes in gross carrying value of long-term loans issued to banks by holding tenders were as follows:

	Stage 1	Stage 2	Stage 3	Initially impaired assets	Total
	(UAH millions)				
Gross carrying value of long-term loans issued to banks by holding tenders, as of 1 January 2022	88,852	–	–	–	88,852
Purchased/originated loans	–	–	–	–	–
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	(5,647)	5,647	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or repaid loans (except for written-off and partly repaid)	(48,172)	–	–	–	(48,172)
Writing off assets against provisions (including in part)	–	–	–	–	–
Other changes (including partial repayment)	(2,596)	(1,185)	–	–	(3,781)
Gross carrying value of long-term loans issued to banks by holding tenders as of 31 December 2022	32,437	4,462	–	–	36,899

Changes in allowance for expected credit losses on long-term loans issued to banks by holding tenders in 2022 were as follows:

	Stage 1	Stage 2	Stage 3	Initially impaired assets	Total
	(UAH millions)				
Allowance for expected credit losses on long-term loans issued to banks by holding tenders as of 1 January 2022	24	–	–	–	24
Purchased/originated loans	–	–	–	–	–
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	(2)	2	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or repaid loans (except for written-off and partly repaid)	(18)	–	–	–	(18)
Writing off assets against provisions (including in part)	–	–	–	–	–
Adjustment of interest income under loans	–	–	–	–	–
Change in parameters/models used for calculating allowances and their partial repayment	252	750	–	–	1,002
Allowance for expected credit losses on long-term loans issued to banks by holding tenders as of 31 December 2022	256	752	–	–	1,008

In 2021, the movements in gross carrying value of long-term loans issued to banks by holding tenders were as follows:

	Stage 1	Stage 2	Stage 3	Initially impaired assets	Total
					(UAH millions)
Gross carrying value of long-term loans issued to banks by holding tenders as of 1 January 2021	48,381	–	–	–	48,381
Purchased/originated loans	42,954	–	–	–	42,954
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or repaid loans (except for written-off and partly repaid)	(1,663)	–	–	–	(1,663)
Writing off assets against provisions (including in part)	–	–	–	–	–
Other changes (including partial repayment)	(820)	–	–	–	(820)
Gross carrying value of long-term loans issued to banks by holding tenders as of 31 December 2021	88,852	–	–	–	88,852

Changes in allowance for expected credit losses on long-term loans issued to banks by holding tenders in 2021 were as follows:

	Stage 1	Stage 2	Stage 3	Initially impaired assets	Total
					(UAH millions)
Allowance for expected credit losses on long-term loans issued to banks by holding tenders as of 1 January 2021	5	–	–	–	5
Purchased/originated loans	16	–	–	–	16
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or repaid loans (except for written-off and partly repaid)	–	–	–	–	–
Writing off assets against provisions (including in part)	–	–	–	–	–
Adjustment of interest income under loans	–	–	–	–	–
Change in parameters/models used for calculating allowances and their partial repayment	3	–	–	–	3
Allowance for expected credit losses on long-term loans issued to banks by holding tenders as of 31 December 2021	24	–	–	–	24

In 2022, the movements in gross carrying value of short-term loans issued to banks by holding tenders were as follows:

	Stage 1	Stage 2	Stage 3	Initially impaired assets	Total
	(UAH millions)				
Gross carrying value of short-term loans issued to banks by holding tenders as of 1 January 2022	6,296	–	282	–	6,578
Purchased/originated loans	1,259	–	–	–	1,259
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or repaid loans (except for written-off and partly repaid)	(6,295)	–	–	–	(6,295)
Writing off assets against provisions (including in part)	–	–	–	–	–
Other changes (including partial repayment)	–	–	–	–	–
Gross carrying value of short-term loans issued to banks by holding tenders as of 31 December 2022	1,260	–	282	–	1,542

Changes in allowance for expected credit losses on short-term loans issued to banks by holding tenders in 2022 were as follows:

	Stage 1	Stage 2	Stage 3	Initially impaired assets	Total
	(UAH millions)				
Allowance for expected credit losses on short-term loans issued to banks by holding tenders as of 1 January 2022	–	–	282	–	282
Purchased/originated loans	22	–	–	–	22
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or repaid loans (except for written-off and partly repaid)	–	–	–	–	–
Writing off assets against provisions (including in part)	–	–	–	–	–
Adjustment of interest income under loans	–	–	–	–	–
Change in parameters/models used for calculating allowances and their partial repayment	–	–	–	–	–
Allowance for expected credit losses on short-term loans issued to banks by holding tenders as of 31 December 2022	22	–	282	–	304

In 2021, the movements in gross carrying value of short-term loans issued to banks by holding tenders were as follows:

	Stage 1	Stage 2	Stage 3	Initially impaired assets	Total
(UAH millions)					
Gross carrying value of short-term loans issued to banks by holding tenders as of 1 January 2021	13,473	–	443	–	13,916
Purchased/originated loans	6,296	–	–	–	6,296
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or repaid loans (except for written-off and partly repaid)	(13,473)	–	(161)	–	(13,634)
Writing off assets against provisions (including in part)	–	–	–	–	–
Other changes (including partial repayment)	–	–	–	–	–
Gross carrying value of short-term loans issued to banks by holding tenders as of 31 December 2021	6,296	–	282	–	6,578

Changes in allowance for expected credit losses on short-term loans issued to banks by holding tenders in 2021 were as follows:

	Stage 1	Stage 2	Stage 3	Initially impaired assets	Total
(UAH millions)					
Allowance for expected credit losses on short-term loans issued to banks by holding tenders, as of 1 January 2021	–	–	326	–	326
Purchased/originated loans	–	–	–	–	–
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or repaid loans (except for written-off and partly repaid)	–	–	(44)	–	(44)
Writing off assets against provisions (including in part)	–	–	–	–	–
Adjustment of interest income under loans	–	–	–	–	–
Change in parameters/models used for calculating allowances and their partial repayment	–	–	–	–	–
Allowance for expected credit losses on short-term loans issued to banks by holding tenders as of 31 December 2021	–	–	282	–	282

As of 31 December 2022 and 2021, other loans were at stage 3, gross carrying value was UAH 10 million, allowance for expected credit losses was UAH 10 million.

As of 31 December 2022 and 2021, loans granted under credit lines to support small and medium entities from funds

received from the EBRD and other loans remained at stage 3, gross carrying value was UAH 21 million and allowance for expected credit losses was UAH 21 million as of 31 December 2022 (as of 31 December 2021, gross carrying value was UAH 38 million, allowance for expected credit losses was UAH 38 million).

The information on gross carrying value of loans by collateral types as of 31 December 2022 is given below:

	Loans granted to banks to support their liquidity	Loans granted to support small and medium enterprises based on funds received from the European Bank for Reconstruction and Development (EBRD)	Loans granted to the Deposit Guarantee Fund, and others	Domestic public debt	Total
(UAH millions)					
Loans secured by:					
immovable property	4,819	–	–	–	4,819
securities	36,790	–	–	–	36,790
property rights under credit agreements	666	–	–	–	666
other collateral types	1,845	–	–	–	1,845
Unsecured loans	32,184	21	–	1,444	33,649
Total loans to banks and other borrowers	76,304	21	–	1,444	77,769

The information on gross carrying value of loans by collateral types as of 31 December 2021 is given below:

	Loans granted to banks to support their liquidity	Loans granted to support small and medium enterprises based on funds received from the European Bank for Reconstruction and Development (EBRD)	Loans granted to the Deposit Guarantee Fund, and others	Domestic public debt	Total
(UAH millions)					
Loans secured by:					
real assets	5,434	–	–	–	5,434
securities	81,509	–	–	–	81,509
property rights under credit agreements	590	–	–	–	590
other collateral types	14,662	–	–	–	14,662
other collateral types	300	–	–	–	300
Unsecured loans	32,370	36	2	1,541	33,949
Total loans to banks and other borrowers	134,865	36	2	1,541	136,444

Loans to banks and other borrowers are analyzed by geographical concentration risk in Note 23, by credit risk – in Note 24, by foreign currency risk – in Note 25, by interest rate risk – in Note 26, and by liquidity risk – in Note 27. Estimated fair value of loans to banks and other borrowers is presented in Note 21. Information on loans to banks and other borrowers broken down into current and noncurrent ones is available in Note 37.

Loan commitments

As of 31 December 2022, the NBU had commitments for granting loans to the Deposit Guarantee Fund under an open revolving credit line totaling UAH 3,000 million (as of 31 December 2021, the NBU had no commitments for granting those loans).

11. Other Financial Assets

	2022	2021
		(UAH millions)
Other financial assets at amortized cost:		
NBU loans due from employees	37	46
allowance for expected credit losses on loans to employees	(12)	(5)
claims under bonds of other government institutions	–	37
allowances for expected credit losses on claims under bonds of other government institutions	–	(37)
receivables	51	228
allowance for expected credit losses on receivables	(17)	(13)
other	22	44
Total financial assets at amortized cost	81	300
Other financial assets at fair value through profit or loss:		
derivative financial assets (FX swap)	–	273
rights of claim under credit agreements transferred to the NBU	5	5
Total other financial assets	86	578

Other financial assets are unsecured.

As of 31 December 2022 and 2021, loans to employees were at stages 1, 2, and 3 (Note 24). During the year ended 31 December 2022, no transition between stages, nor other substantial changes occurred (during the year ended 31 December 2021, no transition between stages, nor other substantial changes occurred).

As of 31 December 2021, claims on bonds of other government institutions included claims on bonds of the State Mortgage Institution with additional collateral in the form of state guarantee on issuer's obligations provided by the Cabinet of Ministers of Ukraine (SMI bonds), for which the repayment period expired under the terms of issue.

In May 2022, the debt under SMI bonds was repaid and the respective allowances for expected credit losses were freed up.

As of 31 December 2022, FX swap and interest rate swap transactions generated no derivative financial assets at fair value (as of 31 December 2021, other financial assets included derivative financial assets on FX swap transactions. Interest rate swap transactions generated no derivative financial assets at fair value). Derivative financial liabilities on interest rate swaps and interest rate swaps with the description of transactions are presented in other financial liabilities (Note 15).

For the purpose of managing international reserves, in 2022 and 2021, the NBU made FX swaps with foreign banks with a maturity of up to one month as of 31 December 2022, and a maturity of up to three months as of 31 December 2021.

As of 31 December 2022, the NBU had two foreign currency swap deals with UAH 1,834 million in receivables, and with USD 47.5 million (UAH 1,737 million at the official exchange rate as of the end of the year) in payables.

As of 31 December 2021, the NBU had 15 foreign currency swap deals with USD 770 million (UAH 21,004 million according to the official exchange rate as of the end of the year) in receivables, UAH 2,684 million in receivables, JPY 87,564 million (UAH 20,745 million according to the official exchange rate as of the end of the year) in payables, and USD 100 million (UAH 2,728 million according to the official exchange rate as of the end of the year) in payables.

Other financial assets are analyzed by geographical concentration risk in Note 23, by credit risk – in Note 24, by foreign currency risk – in Note 25, by interest rate risk – in Note 26, and by liquidity risk – in Note 27.

Information on other financial assets broken down into current and noncurrent ones is available in Note 37.

12. Accounts of Banks

	2022	2021
		(UAH millions)
Correspondent accounts:		
in domestic currency	77,245	34,843
in foreign currency	66	–
Other accounts of banks on demand:		
in foreign currency	4,562	–
Accounts of banks on special use terms:		
in domestic currency	2,518	1,644
in foreign currency	671	148
Funds placed to ensure the repayment of the debts of banks to the NBU:		
in foreign currency	1,615	20,501
Bank funds to ensure execution liabilities to the NBU:		
in foreign currency	193	–
Total accounts of banks	86,870	57,136

As of 31 December 2022 and 2021, setting the interest rates on the balances in the domestic currency in the correspondent accounts was not provided for by NBU regulations, therefore the interest was not accrued.

Other demand accounts of banks included the funds placed by resident banks with the NBU in line with NBU regulations and signed agreements. As of 31 December 2022, balances of other foreign-currency demand deposits of banks bore an interest rate of 4.25% (no transactions were conducted as of 31 December 2021).

Accounts of banks on special-use terms as of 31 December 2022 and 2021 included funds placed for the purposes of liquidation committees of banks to make settlements in the process of a bank's liquidation, as well as in other cases specified by the laws of Ukraine and the NBU's regulations.

Funds of banks used to ensure discharge of liabilities to the NBU as of 31 December 2022 included funds of the pool of assets (property) that ensure the fulfillment of obligations

under refinancing loans, transferred as payment of income and/or repayment of pledged securities, property rights for future proceeds of which had been pledged (as of 31 December 2021 – no transactions were conducted). Interest on said funds was not accrued.

Funds placed to ensure the repayment of bank debts to the NBU include the funds of resident banks placed in accounts with the NBU as collateral for liabilities under loans granted under loan agreements and as security for interest rate swap transactions.

Accounts of banks are analyzed by geographical concentration risk in Note 23, by foreign currency risk – in Note 25, by interest rate risk – in Note 26, and by liquidity risk – in Note 27.

Information on accounts of banks broken down into current and noncurrent ones is available in Note 37.

13. Accounts of Government and Other Institutions

	2022	2021
		(UAH millions)
Funds of budgets and budget entities:		
in domestic currency	15,102	15,672
in foreign currency	35,974	38,638
Deposit Guarantee Fund:		
in domestic currency	947	675
Other:		
in domestic currency	714	54
in foreign currency	287	94
Total accounts of government and other institutions	53,024	55,133

The NBU services the accounts of the State Budget of Ukraine and local budgets, which are consolidated on the single treasury account.

In accordance with the Law of Ukraine *On the National Bank of Ukraine*, all budget accounts are non-interest-bearing, except for the accounts of the Deposit Guarantee Fund, which bore interest of 4.49% as of 31 December 2022 (31 December 2021: 4.80%).

Accounts of government and other institutions are analyzed by geographical concentration risk in Note 23, by foreign currency risk – in Note 25, by interest rate risk – in Note 26, and by liquidity risk – in Note 27.

Information on accounts of government and other institutions broken down into current and noncurrent ones is available in Note 37.

14. Certificates of Deposit Issued by the NBU

The certificates of deposit issued by the NBU are one of its monetary policy instruments. They are debt securities issued by the NBU in nondocumentary form that confirm the placement of banks' funds with the NBU and the right of banks to receive at their maturity the funds they placed,

together with the interest accrued. The expenses on the certificates of deposit are set based on the NBU's interest rate policy framework taking into account the policy's current objectives.

	2022	2021
		(UAH millions)
Certificates of deposit at amortized cost:		
overnight certificates of deposit	457,464	112,147
certificates of deposit with maturities up to 100 days	–	100,779
Total amount of certificates of deposit at amortized cost	457,464	212,926

As of 31 December 2022 and 2021, the nominal value of the certificates of deposit issued by the NBU was UAH 1 million each.

Information on the nominal value, weighted average loss, interest rate, and period of placement as of 31 December 2022 is presented in the table below:

	Total nominal value of certificates of deposit, in UAH millions	Weighted average loss, % p.a.	Interest rate, % p.a.	Frequency of interest payments	Period of placement, calendar days
Certificates of deposit at amortized cost:					
overnight certificates of deposit	456,888	23.00	23.00	One time during repayment	3
certificates of deposit with maturities up to 100 days	–	–	–	–	–

Information on the nominal value, weighted average loss, interest rate, and period of placement as of 31 December 2021 is presented in the table below:

	Total nominal value of certificates of deposit, UAH millions	Weighted average loss, % p.a.	Interest rate, % p.a.	Frequency of interest payments	Maturity, calendar days
Certificates of deposit at amortized cost:					
overnight certificates of deposit	112,122	8.00	8.00	One time during repayment	4
certificates of deposit with maturities up to 100 days	100,677	9.00	9.00	One time during repayment	15

Certificates of deposit are analyzed by geographical concentration risk in Note 23, by foreign currency risk – in Note 25, by interest rate risk – in Note 26, and by liquidity risk – in Note 27.

Information on certificates of deposit broken down into current and noncurrent ones is available in Note 37.

15. Other Financial Liabilities

	2022	2021
		(UAH millions)
Other financial liabilities at amortized cost:		
allowances for employee benefits liabilities	648	531
accounts payable	1,357	154
other	28	46
Total other financial liabilities at amortized cost	2,033	731
Other financial liabilities at fair value through profit or loss:		
derivative financial liabilities (currency swap and interest rate swap transactions)	4,453	1,105
other	7	3
Total other financial liabilities	6,493	1,839

As of 31 December 2022, other financial liabilities included derivative financial liabilities for interest rate swap transactions in the amount of UAH 4,390 million and FX swap transactions in the amount of UAH 63 million (as of 31 December 2021 – UAH 1,105 million for interest rate swap transactions). Derivative financial assets under interest rate swap transactions, FX swap transactions as well as their terms are presented in Note 11.

As of 31 December 2022, the NBU had 60 interest rate swap agreements in the total amount of UAH 16,981 million with maturity terms from two to five years (including: face value of transactions maturing in two years was UAH 550 million, maturing in three years – UAH 8,961 million, maturing in four years – UAH 4,470 million, maturing in five years – UAH 3,000 million). From 1 October 2021, performance of these transactions was suspended due to rolling back of emergency monetary measures.

As of 31 December 2021, the NBU had 72 interest rate swap agreements in the total amount of UAH 19,411 million with maturity terms from two to five years (including: face value of transactions maturing in two years was UAH 2,980 million, maturing in three years – UAH 8,961 million, maturing in four years – UAH 4,470 million, maturing in five years – UAH 3,000 million).

Other financial liabilities are analyzed by geographical concentration risk in Note 23, by foreign currency risk – in Note 25, by interest rate risk – in Note 26, and by liquidity risk – in Note 27.

Information on other financial liabilities broken down into current and noncurrent ones is available in Note 37.

16. Cash and Cash Equivalents

	Note	2022	2021
(UAH millions)			
Foreign currency cash	6	39,474	20,677
Demand deposits	6	83,235	58,661
Overnight deposits placed at the initiative of correspondent bank	6	113,833	49,200
Short-term deposits with maturities of up to three months (other than deposits in gold)	6	–	49,041
SDR holdings	8.1	61,919	508
Total cash and cash equivalents		298,461	178,087

Changes in liabilities that resulted from financial activities in 2022:

	Note	As of 1 January 2022	Issued/ raised/ (repayment) of liabilities	Interest expenses paid	Changes in exchange rates	Interest expenses accrued	Other	As of 31 December 2022
(UAH millions)								
Banknotes and coins in circulation		627,819	87,511	–	–	–	–	715,330
Liabilities to the IMF	8.3	233,368	(53,316)	(4,943)	58,510	5,433	124	239,176
Borrowings received		2,728	(2,925)	(15)	197	15	–	–
Certificates of deposit issued by the NBU	14	212,926	244,089	(40,317)	–	40,766	–	457,464

In March 2022, the NBU repaid a loan received from the Swiss National Bank in the amount of USD 100 million (UAH 2,925 million at the official exchange rate as of the transaction date).

The NBU classifies interests paid as cash flows from operating activity in the consolidated statement of cash flows.

Changes in liabilities that resulted from financial activities in 2021:

	Note	As of 1 January 2021	Issue/ attraction/ (repayment) of liabilities	Interest expenses paid	Changes in exchange rates	Interest expenses accrued	Other	As of 31 December 2021
(UAH millions)								
Banknotes and coins in circulation		558,694	69,125	–	–	–	–	627,819
Liabilities to the IMF	8.3	275,388	(25,227)	(4,284)	(16,795)	4,127	159	233,368
Certificates of deposit issued by the NBU	14	163,485	49,358	(10,573)	–	10,656	–	212,926

Section II.III. Financial Performance by Financial Instruments

Accounting Policy

Recognition of Income and Expenses

Interest Income and Expenses

Interest income and expense are recognized in the consolidated statement of profit or loss and other comprehensive income for all debt instruments (other than financial assets measured at fair value through profit or loss) on accrual basis using the effective interest rate method:

for financial assets in the first and second stages of impairment – based on gross carrying amount

for financial assets in the third stage of impairment and for financial liabilities – based on amortized cost

for purchased or originated credit-impaired financial assets – based on the effective interest rate, adjusted for credit risk, that is applied to amortized cost.

The NBU records inflation indexed government bonds as floating-rate debt instruments and recognizes interest income using an effective interest rate that is revised monthly on the basis of actual inflation rates for the reporting period and not on the basis of inflation expectations or projections.

The NBU records government bonds with a floating rate, that is calculated on the basis of the average annual value of the NBU key policy rate, as floating-rate debt instruments and recognizes interest income using an effective interest rate that is revised monthly on the basis of the actual key policy rate of the NBU effective during the reporting period and not on the basis of the NBU key policy rate expectations or projections.

Interest income on debt securities measured at fair value through profit or loss is determined based on the nominal interest rate and is recognized in the consolidated statement of profit or loss and other comprehensive income within results on transactions with debt securities at fair value.

Fee and Commission Income

Other commission income and expenses are recognized on an accrual basis in the reporting period in which the respective services are provided or received.

Gains/Losses on Revaluation of Assets and Liabilities

Unrealized gains/losses from revaluation of assets and liabilities denominated in foreign currencies (investment metals) and monetary gold are recognized in connection with changes in the exchange rate of the hryvnia against foreign currencies and the book value of investment metals during the reporting year.

Unrealized gains/losses from revaluation of assets and liabilities classified into the fair value category through profit or loss are recognized as securities, derivatives and other financial instruments due to their revaluation to the current fair value.

Gains/losses from revaluation of assets and liabilities are recognized as realized on disposal or redemption of the relevant revalued assets and liabilities. The amount so recognized equals the cumulative unrealized revaluations as of the date of said disposal or redemption.

Gains/losses from revaluation of foreign currency, monetary gold, and investment metals are recognized as realized at the end of the reporting month in case of decrease of the total open position in foreign currency, monetary gold, and investment metals. The amount so recognized is proportional to the amount of said decrease.

Revaluation of monetary assets and liabilities in foreign currency and monetary gold, as well as gold held in foreign banks, due to changes in the official hryvnia exchange rate against foreign currencies/accounting price of investment metals, as well as revaluation results of assets and liabilities at fair value through profit and loss, are reported as financial results in the consolidated statement of profit or loss and other comprehensive income in the period in which they occurred.

17. Interest Income and Expenses

	2022	2021
	(UAH millions)	
Interest income		
Income on domestic securities at amortized cost	90,626	36,850
Income on loans to banks	15,569	6,922
Income on accounts and deposits in foreign currencies	2,842	97
Income on SDR holdings	688	7
Income on domestic public debt	126	134
Other	3	16
Total interest income at the effective interest rate	109,854	44,026
Interest expenses		
Expenses on certificates of deposit issued by the NBU	(40,766)	(10,656)
Expenses on operations with the IMF	(5,557)	(4,266)
Expenses on Deposit Guarantee Fund accounts	(210)	(70)
Expenses on borrowings received	(15)	(85)
Expenses on banks' funds	(14)	–
Total interest expenses at the effective interest rate	(46,562)	(15,077)
Interest expenses on demand deposits and term deposits with a negative interest rate	(47)	(113)
Net interest income	63,245	28,836

Other interest income includes interest income on loans to employees.

In 2022, income on domestic securities at amortized cost included income on domestic government debt securities at a floating interest rate worth UAH 64,308 million (in 2021 – UAH 18,233 million).

18. Gains or Losses on Transactions with Financial Assets and Liabilities in Foreign Currency and Monetary Gold

	2022	2021
	(UAH millions)	
Unrealized result on transactions with financial assets and liabilities in foreign currency and monetary gold	139,595	(21,462)
Realized result on transactions with financial assets and liabilities in foreign currency and monetary gold	35,961	143
Total results on operations with financial assets and liabilities in foreign currency and monetary gold	175,556	(21,319)

19. Gains or Losses on Transactions with Financial Instruments at Fair Value through Profit or Loss

	2022	2021
	(UAH millions)	
Foreign securities at fair value through gains or losses		
Interest income	5,585	7,549
Unrealized gains allocated to revaluation reserve for financial instruments at fair value	2,909	268
Unrealized losses covered by revaluation reserve for financial instruments at fair value	(144)	(965)
Unrealized losses not compensated by revaluation reserves of financial instruments to their fair value	(479)	(2,051)
Total unrealized results on foreign securities at fair value through profit or loss	2,286	(2,748)
Realized results on foreign securities measured at fair value through profit or loss (previously unrealized results of the current year that were realized)	(3,013)	(6,101)
Total gains or losses from foreign securities at fair value through profit or loss	4,858	(1,300)
Derivative financial instruments		
Unrealized gains allocated to revaluation reserve for financial instruments at fair value	–	157
Unrealized losses covered by revaluation reserve for financial instruments at fair value	(676)	(181)
Unrealized losses not compensated by revaluation reserves of financial instruments to their fair value	(3,485)	(922)
Total amount of unrealized results on derivative financial instruments	(4,161)	(946)
Realized result on derivative financial instruments (previously unrealized results of the current year that were realized)	(1,182)	189
Total amount of gains or losses from derivative financial instruments	(5,343)	(757)
Capital instruments at fair value through gains or losses		
Unrealized gains allocated to revaluation reserve for capital instruments to their fair value	503	–
Unrealized losses not covered by revaluation reserve for capital instruments at fair value	(1)	–
Total amount of unrealized gains or losses from capital instruments	502	–
Total results on transactions with financial instruments at fair value after revaluation in profit or loss	17	(2,057)

In 2022, interests received on foreign securities included in the net increase of foreign securities in the Consolidated Cash Flow Statement amounted to UAH 7,076 million (in 2021 – UAH 6,956 million). Unrealized gains directed to revaluation reserve and unrealized expenses covered by revaluation reserve are presented on a net basis in the Consolidated Statement of Changes in Equity.

20. Gains/(losses) on the Reversal of Impairment/(Impairment) of Financial and Nonfinancial Assets

Gains/(losses) on the reversal of impairment/(impairment) of financial and nonfinancial assets:

	2022	2021
	(UAH millions)	
Gains /(losses) on the reversal of impairment/(impairment) on deposits in foreign currency at amortized cost	4	(5)
Gains on the reversal of impairment on claims under debt securities of other government institutions at amortized cost	37	14
Impairment losses on loans to banks	(1,238)	(210)
(Losses)/gains on the (impairment)/reversal of impairment of loans to employees	(7)	1
Impairment losses on interest-bearing financial assets	(1,204)	(200)
(Losses)/gains on the (impairment)/reversal of impairment of receivables	(5)	3
Impairment losses from other nonfinancial assets	(12)	–
Impairment losses on investments to authorized capital of associated company	(5)	–
(Losses)/gains on the (impairment)/reversal of impairment of other assets	(22)	3

Section II.IV. Fair Value of Financial Assets and Liabilities

21. Fair Value of Financial Assets and Liabilities

The market where the NBU usually performs transactions to sell an asset or transfer a liability is deemed to be the principal market or, in the absence of a principal market, the most advantageous one for the asset or liability. The NBU should have access to the principal or the most advantageous market as of the measurement date. The NBU measures the fair value of an asset or liability using the same assumptions used by market participants for forming a price for the asset or liability, and assuming that the market participants act in their economic interests.

If the principal market for an asset or liability exists, fair value measurement represents a price on this market (irrespective of the fact whether the price is publicly available, or it was calculated using a different measurement method), even if the price on other market is potentially more advantageous at the measurement date.

To establish the fair value of financial instruments regarding which no information on market prices is available from external sources, such valuation methods are used as discounted cash flow and analysis of financial information on investment objects. The use of the valuation methods may require the assumptions not supported with market data. In these consolidated financial statements, the information on assumptions is disclosed in the cases when the replacement of such assumption with a possible alternative option may lead to substantial change in amounts of profits, income, losses, the total amount of assets or liabilities.

The NBU uses the valuation methods in conformity with the circumstances and for which the data are sufficient to evaluate fair value, using at maximum the proper, publicly available inputs and minimizing the use of confidential inputs.

All assets and liabilities whose fair value is measured or disclosed in consolidated financial statements are classified according to the hierarchy of fair value levels specified below, on the basis of the lowest level inputs, which are substantial for fair value measurement in general:

- Level 1 – quoted prices of the similar assets or liabilities on active markets (without any adjustment)
- Level 2 - evaluation models in which the inputs substantial for fair valuation in general and belonging to the lowest hierarchical level are directly or indirectly observable in the market
- Level 3 - evaluation models in which the inputs substantial for fair valuation in general and belonging to the lowest hierarchical level are not observable in the market.

The NBU determines the estimated fair value of financial assets and liabilities using available market information, where it exists, and the appropriate evaluation methodologies. However, professional judgment is required to interpret market data to measure fair value. Given the low activity in the financial market of Ukraine, the measured fair

value may not be fully reflective of the value that could be realized by the NBU in the current circumstances.

Financial Assets and Liabilities at Fair Value

Financial instruments carried at fair value include foreign securities and derivative financial instruments.

The fair value of foreign debt securities (except for capital instruments) is defined on quoted prices on the active market (Level 1 inputs), other quotations from trading information systems (Level 2 inputs), or in the absence of information on quoted prices on the active market, the fair value is based on an income approach and Level 3 inputs (the yield of the securities during their initial placement by the issuer and the assumption that the yield will remain unchanged until the maturity date of the relevant securities, taking into account their short maturities). The fair value of capital instruments is determined by an external appraiser using the cost method based on Level 3 inputs.

The fair value of derivative financial instruments (futures, government derivatives) is determined on the basis of quoted prices on an active market (Level 1 inputs).

When determining the fair value of derivative financial instruments such as interest rate and currency swaps, a valuation method is used for data that is openly observed on the market (Level 2). Fair value is determined with valuation models based on the current market-based and contractual value of the underlying instruments and other drivers. The models include various data, namely forward and spot exchange rates, exchange rate volatility, interest rate indices on interbank markets, yield curves, and so on.

Financial Assets and Liabilities at Amortized Cost

The NBU has determined that the fair value of certain financial assets and liabilities carried at amortized cost does not materially differ from their carrying value for the purposes of disclosing the fair value. These financial assets and liabilities include funds and deposits in foreign currencies, SDR holdings and IMF quota contributions, other financial assets, banknotes and coins in circulation, accounts of banks, accounts of state and other institutions, NBU certificates of deposit, liabilities to the IMF, and other financial liabilities.

Financial instruments carried at amortized cost, the fair value of which may differ significantly from their carrying values, include domestic securities, domestic public debt in domestic currency, and loans to banks and other borrowers. None of these financial instruments have an active market.

For the purposes of disclosing in its consolidated financial statements the fair values of financial assets and liabilities for which no active market exists, the NBU estimates the fair values of such assets and liabilities using the discounted

cash flow method (the income approach). The said model takes into account future interest payments and principal repayments, the repayment period, and the discount rate.

The NBU estimates the fair value of domestic securities on the basis of the income approach and the following information:

for long-term inflation-indexed government bonds – Level 2 inputs (spot rates calculated on the basis of the zero-coupon yield curve built using data from actually concluded and executed agreements on domestic government debt securities, using the Svensson parametric model, and the actual consumer price index calculated month-on-month over the period from April to November 2022), and Level 3 inputs (the December 2022 FOCUSECONOMICS consensus forecast of consumer price indices for 2022-2027 and target consumer price indices established by the NBU for the period from 2028 to 2047)

for other Ukrainian government bonds – Level 2 inputs (spot rates calculated on the basis of the zero-coupon yield curve

built using data from actually concluded and executed agreements on domestic government debt securities, using the Svensson parametric model, key policy rates from the NBU's forecasts).

To measure the fair value of domestic public debt in the domestic currency, the NBU's weighted average rate on all refinancing instruments (Level 3 inputs) is used as the discount rate.

As of 31 December 2022, the NBU applied the market rate (the NBU's key policy rate established by the NBU's interest rate policy as a margin interest rate (the lower point of the range) for loans to banks) at the measurement date (Level 3 inputs) as the discount rate used to measure the fair value of loans to banks and other borrowers. As of 31 December 2021, the NBU applied the market rate (the NBU's key policy rate plus 1% for overnight loans and the NBU's key policy rate for other refinancing loans) at the measurement date (Level 3 inputs) as the discount rate used to measure the fair value of loans to banks and other borrowers.

The discount rates used were as follows:

	2022	2021
	Discount rate, in % per annum	Discount rate, in % per annum
Domestic securities in domestic currency:		
domestic government debt securities (at a fixed interest rate)	12.27–22.28	9.67–13.10
domestic government debt securities (at a floating interest rate)	5.95–15.92	6.97–9.39
Domestic public debt in domestic currency (1994–1996)	27.00	9.92
Loans to banks and other borrowers in domestic currency	25.00	9.00–10.00

The following table summarizes the carrying amounts and measured fair values of the financial assets that do not appear in the NBU's Consolidated Statement of Financial Position at their fair value:

	2022		2021	
	Carrying amount	Fair value	Carrying value	Fair value
	(UAH millions)			
Domestic securities in domestic currency:				
domestic government debt securities (at a fixed interest rate)	292,165	242,168	171,759	161,952
domestic government debt securities (at a floating interest rate)	464,415	474,623	151,102	134,319
Domestic public debt	1,444	757	1,541	1,451
Loans to banks and other borrowers	40,781	42,754	99,861	100,987

Taking into account that fair value estimates are based on certain assumptions, it should be noted that the information provided above may not be fully reflective of the value that could be realized.

The fair value of financial instruments was categorized as follows:

	2022			2021		
	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
	(UAH million)					
Assets carried at fair value						
Funds and deposits in foreign currency (futures)	–	–	–	33	–	–
Foreign securities carried at fair value	607,882	59,957	27,667	498,539	128,800	16,949
Domestic securities carried at fair value:						
government derivatives	460	–	–	1,082	–	–
Other financial assets at fair value:						
currency swap	–	–	–	–	273	–
Assets for which fair value is disclosed						
Domestic securities in domestic currency:						
domestic government debt securities (at a fixed interest rate)	–	242,168	–	–	161,952	–
domestic government debt securities (at a floating interest rate)	–	311,705	162,918	–	–	134,319
Domestic public debt	–	–	757	–	–	1,451
Loans to banks and other borrowers	–	–	42,754	–	–	100,987
Liabilities measured at fair value:						
Other financial liabilities at fair value:						
interest rate swap	–	4,390	–	–	1,105	–
currency swap	–	63	–	–	–	–

In 2022, there were neither material transfers of financial instruments between Levels 1 and 2 of the fair value hierarchy, nor transfers of financial instruments to or from Level 3 of the fair value hierarchy.

Long-term inflationary domestic bonds – the fair values of which are disclosed – are included in Level 3 of the fair value hierarchy.

The change in the fair value of foreign securities that are measured at the reporting date at fair value, and are included in Level 3 of the fair value hierarchy, is presented as follows:

Fair value of foreign securities that are measured at fair value through profit or loss and are attributed to Level 3 of the fair value hierarchy	
(UAH millions)	
Foreign securities as of 1 January 2021	24,999
Income/(expense) recognized during the reporting period as part of profit or loss, including:	(1,599)
unrealized gain/(loss) from revaluation financial instruments to their fair value	16
unrealized gain/(loss) from revaluation due to change in the official exchange rate of the hryvnia against foreign currencies	(171)
Purchases of foreign securities	16,999
Redemptions of foreign securities	(23,450)
Foreign securities as of 31 December 2021	16,949
Income/(expense) recognized during the reporting period as part of profit or loss, including:	2,323
unrealized gains/(losses) from revaluation of financial instruments to their fair value	622
unrealized gain/(loss) from revaluation due to change in the official exchange rate of the hryvnia against foreign currencies	982
Purchases of foreign securities	26,190
Redemptions of foreign securities	(17,795)
Foreign securities as of 31 December 2022	27,667

Income and expenses from change in the fair value of foreign securities measured as of the reporting date and assigned to Level 3 of the fair value hierarchy are included in profits or losses from transactions with financial assets and liabilities in foreign currencies and monetary gold, and profits or losses from transactions with financial instruments at fair value through profit or loss of the consolidated statement of profit or loss and other comprehensive income (Note 18 and 19, respectively).

The average weighted modified duration under financial assets at fair value that are included in Level 3 of the fair

value hierarchy (except for equity instruments at fair value through profit or loss) was 0.19 as of 31 December 2022 (0.45 as of 31 December 2021). An increase in the yield rates used to determine the fair value of these financial assets as of 31 December 2022 (Level 3 inputs) by 1 basis point would decrease the fair value of the relevant assets by UAH 52 million (by UAH 76 million as of 31 December 2021), while a decrease in these yield rates by 1 basis point would increase the fair value of these assets by UAH 52 million (UAH 76 million as of 31 December 2021).

Section III. Risk Management

22. Financial Risk Management

The NBU manages its financial risks in order to limit potential losses of the NBU's financial assets, fulfill its financial obligations in due time, and protect its capital to achieve its strategic goals and effectively perform its functions, as set forth in the Ukrainian Law *On the National Bank of Ukraine*, as well as supporting its institutional capacity and independence.

Financial risk management processes are broken down into the following stages:

- 1) setting up a system of financial risk management
- 2) identifying adverse events/financial risks in the NBU's processes/products
- 3) measuring financial risks
- 4) deciding on and taking measures in response to financial risks (addressing financial risks)
- 5) controlling risks
- 6) communicating and reporting risks
- 7) monitoring the system of financial risk management.

The NBU detailed the stages of financial risk management processes in its process procedures and other executive orders related to financial risk management.

The NBU Board is responsible for implementing the risk management system and ensuring that NBU risks are managed.

In accordance with the Ukrainian Law *On the National Bank of Ukraine*, the NBU Board established an asset and liability management committee, and charged it with managing the central bank's assets and liabilities, including Ukraine's foreign exchange reserves, as well as with monitoring risks arising from, and profits or losses incurred from, transactions with NBU assets and liabilities.

The NBU Board or the Asset and Liability Management Committee, within the powers delegated to it by the NBU Board, choose and approve measures in response to financial risks (address financial risks) based on proposals submitted by the NBU units that carry out transactions with financial instruments and by the Risk Management Department. These measures are chosen and approved through taking decisions on financial risk management and/or through outlining such measures in the central bank's regulations and/or executive orders.

The NBU units that are responsible for carrying out and/or carry out transactions with financial instruments are the first

line of defense in financial risk management processes. These units have been charged with identifying and measuring financial risks, deciding on and taking measures in response to financial risks, and reporting financial risks that arise from the operations that fall under their mandate.

The Risk Management Department is the second line of defense in financial risk management processes and is responsible for the following:

- 1) providing methodological, coordinative and logistical support for the central bank's financial risk management processes, among other things, through updating financial risk management policies
- 2) developing and supporting procedures and methodologies for measuring financial risks
- 3) overseeing, monitoring, and conducting an independent analysis of financial risks at the level of the central bank's second line of defense
- 4) analyzing, on request, new operations with financial instruments, new financial instruments, and changes to operations involving financial instruments so as to see how they could affect the NBU's financial risks, and making recommendations on responses to identified financial risks (addressing risks)
- 5) assessing the NBU's financial risk profile
- 6) reporting the NBU's financial risks to the central bank's Asset and Liability Management Committee.

The NBU's financial risks are grouped as follows:

- financial risks related to the policies determined and conducted by the NBU. These risks arise from financial instruments and are related to the central bank's performance of its main function and other functions, as set forth in Articles 6 and 7 of the Ukrainian Law *On the National Bank of Ukraine*, with the exception of Article 7 paragraph 15 of the Ukrainian Law *On the National Bank of Ukraine*
- financial risks arising from Ukraine's international reserves
- other financial risks of the NBU.

The measures the NBU takes in response to financial risks depend on the central bank's tolerance to certain risk groups.

The main measures the NBU relies on to address financial risks are as follows:

- 1) avoiding or preventing a financial risk by taking a conscious decision not to carry out operations or use financial

instruments that pose risks to the central bank, where such risks exceed the level of the NBU's tolerance towards the group of risks in question

2) mitigating or decreasing financial risks through:

- diversification
- setting limits on the quantitative indicators of risks
- establishing the conditions and rules for the qualitative indicators of risks
- using various types of collateral to make sure that borrowers or counterparties discharge their obligations, and adjusting the fair value of such collateral, taking into account risk discounts or adjusting factors

3) using hedges to transfer financial risks

4) accepting financial risks through making provisions and covering financial risks with the NBU's own funds.

The NBU distinguishes between credit, market and liquidity risks based on the factors that generate the respective financial risks.

Credit Risk

Credit risk is the possibility of incurring losses, additional expenses or receiving less income due to the failure of a borrowing bank, or the failure of any other borrower or counterparty to discharge their obligations to the NBU in accordance with the terms and conditions agreed. Credit risk can manifest itself through:

default risk, arising from the failure of a counterparty/issuer/borrower to discharge their obligations to the NBU. This includes pre-settlement risk (the possibility that a counterparty will fail to meet their obligations to the NBU, resulting in default before the settlement date), and settlement risk (the possibility that, once the NBU has discharged its obligations to a counterparty, the counterparty will fail to meet their obligations to the NBU, resulting in default on the settlement date)

the risk of a counterparty/issuer credit rating downgrading below the minimum acceptable credit rating that allows to include the assets in its international reserves.

Market Risks

Market risk is defined as the possibility of incurring losses, additional expenses or receiving less income due to unfavorable movements in market prices, such as exchange rates, interest rates, and prices for financial instruments and goods. Market risks can manifest themselves through:

currency risk, which is defined as a market risk arising from unfavorable fluctuations in exchange rates

interest rate risk is a market risk arising from unfavorable changes in market interest rates that adversely affect the value of debt securities or other fixed-income instruments, as well as the value of derivative financial instruments (derivatives)

credit spread risk is a market risk arising from a widening (increase) in credit spreads between the yield to maturity of a fixed-income security or another financial instrument and risk free yields to maturity with a similar duration, which has an adverse impact on the market value of such instruments. A widening in a credit spread can result from a downgrading in the credit rating or a decrease in the credit quality of the issuer of a financial instrument, or from overall changes in market conditions

equity risk, a market risk arising from unfavorable changes in the market value of non-fixed-income shares and other securities

commodity risk, a market risk arising from unfavorable changes in the market value of commodities, including precious metals (such as gold)

volatility risk, a market risk arising from unfavorable changes in the volatility of market prices, interest rates, market indices, and exchange rates, which decrease the value of options, including those that have been embedded in other financial instruments.

Among the market risks, the foreign exchange and interest rate risks influence the NBU most.

The table below shows an analysis of the sensitivity of the NBU's positions to currency risk, based on the assumption of a 20% increase/decrease in the exchange rates of the U.S. dollar, Euro, SDR and other currencies against the hryvnia in 2022 and 2021, respectively. The analysis factors in only the

foreign currency amounts (apart from nonmonetary assets) that were available at the end of the period. Exchange rates adjusted by 20% in relation to those that were in effect in late 2022 and 2021 were used to translate those amounts into hryvnias.

The effect of exchange rate changes on profit or loss and the profit for year is presented as follows:

	31 December 2022		31 December 2021	
	+20%	-20%	+20%	-20%
	(UAH millions)			
USD	165,116	(165,116)	133,310	(133,310)
EUR	6,766	(6,766)	9,725	(9,725)
SDRs	(16,781)	16,781	(31,174)	31,174
GBP	1,652	(1,652)	2,570	(2,570)
Other currencies	4,641	(4,641)	6,039	(6,039)

The following table summarizes sensitivity analysis of NBU positions to interest rate risk. Impact on profit or loss and the profit for the year is presented as follows:

	31 December 2022		31 December 2021	
	+100 bp	-100 bp	+100 bp	-100 bp
	(UAH millions)			
Sensitivity of interest-bearing financial assets	9,687	(9,687)	4,715	(4,715)
Sensitivity of interest-bearing financial liabilities	(5,926)	5,926	(3,730)	3,730
Net impact on profit or loss and the distributable profit	3,761	(3,761)	985	(985)

Sources of interest rate risk are identified through analyzing the existing composition of interest-bearing assets and liabilities. The NBU assesses interest rate risk using an analysis of its sensitivity to interest rate movements, i.e. changes in the market value of instruments and portfolios as a result of movements in the yield curve by a certain number of basis points. In accordance with the relevant methodology, the scenarios used included a parallel shift in the entire curve by 1 percentage point (+/-100 basis points). Sensitivity to interest rate risk is estimated on the basis of a scenario according to which all interest rate curves are believed to change in the same manner for all financial instruments and currencies. The assessments take into account interest rate risk arising from all of the NBU's positions in instruments with fixed and floating interest rates, as defined by the respective model.

Liquidity Risk

The NBU breaks liquidity risk down into:

the liquidity risk of international reserves. This risk can arise when the NBU has difficulties in quickly selling or recalling a large amount of assets in which international reserves are held. Sometimes unfavorable market conditions can also decrease the prices of such assets

FX liquidity risk, which can arise when the NBU is unable to meet its foreign currency obligations as they fall due.

Due to the fact that according to paragraph 2, Article 7 of the Ukrainian Law *On the National Bank of Ukraine*, the NBU has a monopoly on issuing Ukraine's national currency and is responsible for arranging cash circulation, the NBU is not exposed to national currency liquidity risk. This risk is defined as the central bank's possible failure to meet its national currency obligations as they fall due.

The NBU manages its liquidity risk through:

- maintaining certain amounts of cash, as required by the relevant regulations, on its correspondent accounts
- holding sufficient amounts of highly liquid financial instruments that can be easily monetized
- setting requirements on the liquidity of the assets in which international reserves are held.

For a detailed assessment of financial risks, see Notes 23 to 27.

23. Analysis of Financial Assets and Liabilities by Geographical Concentration Risk

As of 31 December 2022, the geographical concentration risk of the NBU's financial assets and liabilities was presented as follows:

	Ukraine	OECD	IMF	Other	Total
					(UAH millions)
Financial assets					
Funds and deposits in foreign currency	39,543	196,991	–	–	236,534
Foreign securities	–	653,181	–	42,325	695,506
SDR holdings	–	–	62,174	–	62,174
Domestic securities	757,040	–	–	–	757,040
Loans to banks and other borrowers	40,781	–	–	–	40,781
Domestic public debt	1,444	–	–	–	1,444
IMF quota contributions	–	–	97,908	–	97,908
Other financial assets	63	23	–	–	86
Total financial assets	838,871	850,195	160,082	42,325	1,891,473
Financial liabilities					
Banknotes and coins in circulation	715,330	–	–	–	715,330
Accounts of banks	86,870	–	–	–	86,870
Accounts of government and other institutions	53,024	–	–	–	53,024
Certificates of deposit issued by the NBU	457,464	–	–	–	457,464
Liabilities to the IMF, apart from IMF quota contributions	–	–	141,279	–	141,279
Liabilities to the IMF with respect to quota contributions	–	–	97,897	–	97,897
Other financial liabilities	6,372	118	–	3	6,493
Total of financial liabilities	1,319,060	118	239,176	3	1,558,357
Net balance sheet position	(480,189)	850,077	(79,094)	42,322	333,116
Off-balance sheet assets and liabilities					
Assets receivable under swap agreements	–	1,834	–	–	1,834
Loan commitments to banks and other borrowers	3,000	–	–	–	3,000
Assets payable under swap agreements	–	1,737	–	–	1,737
Net off-balance sheet position	(3,000)	97	–	–	(2,903)
Net position	(483,189)	850,174	(79,094)	42,322	330,213

As of 31 December 2021, the geographical concentration risk of the NBU's financial assets and liabilities was presented as follows:

	Ukraine	OECD	IMF	Other	Total
					(UAH millions)
Financial assets					
Funds and deposits in foreign currency	20,677	156,903	–	5	177,585
Foreign securities	–	577,242	–	67,046	644,288
SDR holdings	–	–	510	–	510
Domestic securities	323,943	–	–	–	323,943
Loans to banks and other borrowers	99,861	–	–	–	99,861
Domestic public debt	1,541	–	–	–	1,541
IMF quota contributions	–	–	76,807	–	76,807
Other financial assets	103	296	179	–	578
Total financial assets	446,125	734,441	77,496	67,051	1,325,113
Financial liabilities					
Banknotes and coins in circulation	627,819	–	–	–	627,819
Accounts of banks	57,136	–	–	–	57,136
Accounts of government and other institutions	55,132	1	–	–	55,133
Certificates of deposit issued by the NBU	212,926	–	–	–	212,926
Borrowings received	–	2,728	–	–	2,728
Liabilities to the IMF, apart from IMF quota contributions	–	–	156,570	–	156,570
Liabilities to the IMF with respect to quota contributions	–	–	76,798	–	76,798
Other financial liabilities	1,781	58	–	–	1,839
Total financial liabilities	954,794	2,787	233,368	–	1,190,949
Net balance sheet position	(508,669)	731,654	(155,872)	67,051	134,164
Off-balance sheet assets and liabilities					
Assets receivable under swap agreements	–	23,688	–	–	23,688
Loan commitments to banks and other borrowers	–	–	–	–	–
Assets payable under swap agreements	–	23,473	–	–	23,473
Net off-balance sheet position	–	215	–	–	215
Net position	(508,669)	731,869	(155,872)	67,051	134,379

24. Credit Risk

The following information provides gross carrying amounts of the NBU's financial assets assessed by impairment stages and credit ratings of counterparties assigned by the following international rating agencies: Fitch Ratings, Moody's, and Standard & Poor's. The following disclosures as of

31 December 2022 and 2021 consider a lower of the two best ratings assigned to an entity by the above rating agencies. The ratings are listed below as per coding of the rating agency of Fitch Ratings using the rating correspondence table of Bloomberg.

The information below is provided as of 31 December 2022:

	Credit rating	Total	% in the financial assets' item	Stage 1	Stage 2	Stage 3
(UAH millions)						
Funds and deposits in foreign currency						
demand deposits	AAA	65,676	27.8	65,676	–	–
	AA+	10	–	10	–	–
	AA	3,955	1.7	3,955	–	–
	AA-	1,526	0.6	1,526	–	–
	A+	2,272	1.0	2,272	–	–
	A	9,656	4.1	9,656	–	–
	A-	63	–	63	–	–
	CCC-	69	–	69	–	–
overnight deposits placed at the initiative of a correspondent bank	AA+	93,699	39.6	93,699	–	–
	AA	9,171	3.9	9,171	–	–
	A+	10,963	4.6	10,963	–	–
foreign currency cash	Risk-free	39,474	16.7	39,474	–	–
Total funds and deposits in foreign currency		236,534	100.0	236,534	–	–
Foreign securities:						
government bonds	AAA	584,750	84.2	584,750	–	–
	AA+	945	0.1	945	–	–
	AA-	3,664	0.5	3,664	–	–
	A+	409	0.1	409	–	–
Securities issued by international agencies, banks, and other issuers:	AAA	7,868	1.1	7,868	–	–
	AA+	942	0.1	942	–	–
	AA	6,189	0.9	6,189	–	–
	AA-	6,714	1.0	6,714	–	–
	A+	27,817	4.0	27,817	–	–
	A	52,267	7.5	52,267	–	–
	A-	3,317	0.5	3,317	–	–
Total foreign debt securities		694,882	100.0	694,882	–	–
Domestic securities:						
government securities	CCC-	757,040	100.0	757,040	–	–
Total domestic securities		757,040	100.0	757,040	–	–
Loans to banks and other borrowers:						
loans to banks	CCC	5,899	7.7	2,617	3,282	–
	CCC-	18,451	24.2	18,451	–	–
	No rating available	51,954	68.1	12,628	1,180	38,146
loans to other borrowers	No rating available	21	–	–	–	21
Total loans to banks and other borrowers		76,325	100.0	33,696	4,462	38,167
Domestic public debt	CCC-	1,444	100.0	1,444	–	–
Other financial assets						
	AAA	13	11.3	13	–	–
	AA	2	1.7	2	–	–
	A+	8	7.0	8	–	–
	No rating available	92	80.0	83	1	8
Total other financial assets		115	100.0	106	1	8

The information below is provided as of 31 December 2021:

	Credit rating	Total	% in the financial assets' item	Stage 1	Stage 2	Stage 3
(UAH millions)						
Funds and deposits in foreign currency						
demand deposits	AAA	33,293	18.8	33,293	–	–
	AA+	7	–	7	–	–
	AA	204	0.1	204	–	–
	AA-	2	–	2	–	–
	A+	21,568	12.1	21,568	–	–
	A	3,590	2.0	3,590	–	–
overnight deposits placed at the initiative of a correspondent bank	AA+	34,395	19.4	34,395	–	–
	A+	7,985	4.5	7,985	–	–
	A	6,820	3.8	6,820	–	–
term deposits	AAA	34,937	19.7	34,937	–	–
	AA-	153	0.1	153	–	–
	A+	6,312	3.6	6,312	–	–
	A	7,647	4.3	7,647	–	–
foreign currency cash	Risk-free	20,677	11.6	20,677	–	–
Total funds and deposits in foreign currency		177,590	100	177,590	–	–
Foreign securities:						
government bonds	AAA	464,881	72.2	464,881	–	–
	AA+	1,385	0.2	1,385	–	–
	AA-	4,659	0.7	4,659	–	–
	A+	3,285	0.5	3,285	–	–
Securities issued by international agencies, banks, and other issuers:	AAA	11,663	1.9	11,663	–	–
	AA+	3,415	0.5	3,415	–	–
	AA	9,908	1.5	9,908	–	–
	AA-	11,314	1.8	11,314	–	–
	A+	41,515	6.4	41,515	–	–
	A	83,680	13.0	83,680	–	–
	A-	8,462	1.3	8,462	–	–
Total foreign debt securities		644,167	100.0	644,167	–	–
Domestic securities:						
government securities	B	323,943	100.0	323,943	–	–
Total domestic securities		323,943	100.0	323,943	–	–
Loans to banks and other borrowers:						
loans to banks	B+	620	0.5	620	–	–
	B	42,714	31.7	42,714	–	–
	B-	8,614	6.4	8,614	–	–
	No rating	82,917	61.4	43,670	–	39,247
loans to other borrower	Unrated	38	–	–	–	38
Total loans to banks and other borrowers		134,903	100.0	95,618	–	39,285
Domestic public debt	B	1,541	100.0	1,541	–	–
Other financial assets						
	AAA	170	28.5	170	–	–
	AA	105	17.6	105	–	–
	No rating	321	53.9	321	–	–
Total other financial assets		596	100.0	596	–	–

Loans granted to banks that do not have international ratings assigned include the loans to domestic banks to support their liquidity the ratings of which are determined in accordance with the internal methodology of the NBU.

As of 31 December 2022, the gross carrying value balance in the amount of UAH 13,808 million had the internal ratings as follows: A in the amount of UAH 854 million, BBB – in the amount of UAH 3,271 million, BB – in the amount of UAH 6,106 million, B – UAH 2,944 million, CCC – UAH 489 million, CC – UAH 144 million (as of 31 December 2021, UAH 43,670 million had the internal ratings as follows: AAA – in the amount of UAH 558 million, AA – in the amount of UAH 2,096 million, A – in the amount of UAH 9,809 million, BBB – UAH 24,672 million, BB – UAH 3,821 million, B – UAH 2,267 million, CCC – UAH 447 million).

The NBU determines internal ratings as follows:

AAA rating is the highest grade of a counterparty's creditworthiness. The counterparty's financial position is assessed as strong and stable in a long-term perspective, and the ability to repay on a timely basis and in full the interest and principal on debt obligations is very high

AA rating is the very high grade of a counterparty's creditworthiness. The counterparty's financial position is assessed as strong and stable in a long-term perspective, and the ability to repay on a timely basis and in full the interest and principal on debt obligations is high

A rating is the high grade of a counterparty's creditworthiness. The counterparty's financial position is assessed as strong and stable in a long-term perspective, and the ability to repay on a timely basis and in full the interest and principal on debt obligations is beyond any doubts

BBB rating is a medium grade of a counterparty's creditworthiness. The counterparty's financial position is assessed as strong and stable in a mid-term perspective, the counterparty's debt obligations have a higher risk of nonpayment compared to counterparties with higher ratings. However, difficulties may arise with timely and full repayment of the interest and principal on debt obligations in the event of occurrence of unfavorable changes in commercial, financial, and economic conditions, although, in the nearest future, a probability of the counterparty's failure to meet its debt obligations is treated as insignificant.

BB rating is a medium grade of a counterparty's creditworthiness. The counterparty's financial position is assessed as satisfactory and stable in a short-term perspective, the counterparty is able, at the date of assessment, to repay the interest and principal on debt obligations, but has a higher probability of default on obligations than the counterparty with BBB rating.

B rating is a grade of a counterparty's creditworthiness that is somewhat lower than medium. Key indicators of the counterparty's financial position are assessed as satisfactory and stable in a short-term perspective, it has a sufficient level of financial reliability. Timely and complete payments on debt obligations mostly depend on commercial, financial, and economic conditions.

CCC rating is a lower than medium grade of a counterparty's creditworthiness. Key indicators of the counterparty's financial position are assessed as satisfactory, but their stability in a short-term perspective is doubtful, it has a low level of financial reliability. The counterparty bank's ability to pay is fully dependent on domestic economic situation.

CC rating is a low grade of a counterparty's creditworthiness. Key indicators of the counterparty's financial position are assessed as satisfactory, but their deterioration in a short-term perspective is considered as highly probable, it has a very low level of financial reliability. The counterparty bank's ability to pay is fully dependent on domestic economic situation.

C rating is a very low grade of a counterparty's creditworthiness. The counterparty's financial position is unstable and is assessed as unsatisfactory. Repayments of interest and principal on debt obligations may be suspended by the counterparty without obtaining a consent of lenders on the debt restructuring before maturities. The counterparty bank's ability to pay is fully dependent on domestic economic situation.

Total loans granted to five banks with the highest level of credit exposures as of 31 December 2022 amounted to UAH 45,352 million (as of 31 December 2021: UAH 53,796 million), or 59% (as of 31 December 2021 – 40%) of total loans to banks and other borrowers, before allowance. Loan loss allowances for expected credit losses recognized on the loans granted to these five banks amounted to UAH 22,364 million as of 31 December 2022 (UAH 15,606 million as of 31 December 2021).

The information below on net credit risk by types of pledged loan collateral as of 31 December 2022:

	Maximum permissible credit risk	Collateral accepted as security	Other collateral	Net credit risk (loans to banks)	Net credit risk (domestic public debt)
(UAH millions)					
Loans secured by:					
immovable property	2,782	4,874	–	2,782	–
securities	35,771	66,766	–	–	–
other collateral types	2,228	2,831	–	871	–
Unsecured loans	1,444	–	–	–	1,444
Total loans to banks and other borrowers	42,225	74,471	–	3,653	1,444

The information below on net credit risk by types of pledged loan collateral as of 31 December 2021:

	Maximum permissible credit risk	Collateral value	Other collateral	Net credit risk (loans to banks)	Net credit risk (domestic government debt)
(UAH millions)					
Loans secured by:					
immovable property	3,128	5,477	–	3,128	–
securities	81,486	115,764	–	–	–
other collateral	14,965	21,067	–	857	–
other collateral types	282	–	300	282	–
Unsecured loans	1,541	–	–	–	1,541
Total loans to banks and other borrowers	101,402	142,308	300	4,267	1,541

Maximum credit risk exposure is represented by the carrying amounts of loans outstanding at the reporting date. Collateral accepted as security is the fair value of collateral used by the NBU in the calculation of allowance at the reporting date.

For other NBU's financial instruments, their book value corresponds to the best estimate of the maximum credit risk exposure as of the reporting date.

25. Currency Risk

As of 31 December 2022, the NBU had the following positions in currencies:

	UAH	USD	EUR	SDR	GBP	Other	Nonmonetary	Total
	(UAH millions)							
Financial assets								
Funds and deposits in foreign currency	–	187,267	39,119	–	3,077	7,071	–	236,534
Foreign securities	–	662,852	10,676	–	5,196	16,158	624	695,506
SDR holdings	–	–	–	62,174	–	–	–	62,174
Domestic securities	756,580	460	–	–	–	–	–	757,040
Loans to banks and other borrowers	40,781	–	–	–	–	–	–	40,781
Domestic public debt	1,444	–	–	–	–	–	–	1,444
IMF quota contributions	–	–	–	97,908	–	–	–	97,908
Other financial assets	61	10	15	–	–	–	–	86
Total financial assets	798,866	850,589	49,810	160,082	8,273	23,229	624	1,891,473
Financial liabilities								
Banknotes and coins in circulation	715,330	–	–	–	–	–	–	715,330
Accounts of banks	79,763	5,580	1,522	–	2	3	–	86,870
Accounts of government and other institutions	16,763	17,328	14,119	4,809	5	–	–	53,024
Certificates of deposit issued by the NBU	457,464	–	–	–	–	–	–	457,464
Liabilities to the IMF, apart from IMF quota contributions	–	–	–	141,279	–	–	–	141,279
Liabilities to the IMF with respect to quota contributions	–	–	–	97,897	–	–	–	97,897
Other financial liabilities	5,765	365	340	–	4	19	–	6,493
Total of financial liabilities	1,275,085	23,273	15,981	243,985	11	22	–	1,558,357
Net balance sheet position	(476,219)	827,316	33,829	(83,903)	8,262	23,207	624	333,116
Off-balance sheet assets and liabilities								
Assets receivable under swap agreements	1,834	–	–	–	–	–	–	1,834
Loan commitments to banks and other borrowers	3,000	–	–	–	–	–	–	3,000
Assets payable under swap agreements	–	1,737	–	–	–	–	–	1,737
Net off-balance sheet position	(1,166)	(1,737)	–	–	–	–	–	(2,903)
Net position	(477,385)	825,579	33,829	(83,903)	8,262	23,207	624	330,213

As of 31 December 2021, the NBU had the following positions in currencies:

	UAH	USD	EUR	SDR	GBP	Other	Nonmonetary	Total
	(UAH millions)							
Financial assets								
Funds and deposits in foreign currency	-	106,513	41,236	-	3,592	26,244	-	177,585
Foreign securities	-	575,554	33,641	-	9,258	25,714	121	644,288
SDR holdings	-	-	-	510	-	-	-	510
Domestic securities	322,861	1,082	-	-	-	-	-	323,943
Loans to banks and other borrowers	99,861	-	-	-	-	-	-	99,861
Domestic public debt	1,541	-	-	-	-	-	-	1,541
IMF quota contributions	-	-	-	76,807	-	-	-	76,807
Other financial assets	376	-	23	179	-	-	-	578
Total financial assets	424,639	683,149	74,900	77,496	12,850	51,958	121	1,325,113
Financial liabilities								
Banknotes and coins in circulation	627,819	-	-	-	-	-	-	627,819
Accounts of banks	36,487	5,565	15,080	-	1	3	-	57,136
Accounts of government and other institutions	16,401	26,574	11,164	-	-	994	-	55,133
Certificates of deposit issued by the NBU	212,926	-	-	-	-	-	-	212,926
Borrowings received	-	2,728	-	-	-	-	-	2,728
Liabilities to the IMF, apart from IMF quota contributions	-	-	-	156,570	-	-	-	156,570
Liabilities to the IMF with respect to quota contributions	-	-	-	76,798	-	-	-	76,798
Other financial liabilities	1,781	7	31	-	-	20	-	1,839
Total of financial liabilities	895,414	34,874	26,275	233,368	1	1,017	-	1,190,949
Net balance sheet position	(470,775)	648,275	48,625	(155,872)	12,849	50,941	121	134,164
Off-balance sheet assets and liabilities								
Assets receivable under swap agreements	2,684	21,004	-	-	-	-	-	23,688
Assets payable under swap agreements	-	2,728	-	-	-	20,745	-	23,473
Net off-balance sheet position	2,684	18,276	-	-	-	(20,745)	-	215
Net position	(468,091)	666,551	48,625	(155,872)	12,849	30,196	121	134,379

Assets and liabilities in other currencies mainly included positions in CHF, AUD, JPY, and CNY.

26. Interest Rate Risk

As of 31 December 2022, the NBU had the following structure of the weighted average interest rates by major currencies for monetary financial interest-bearing instruments. Interest rates on each financial instrument has been calculated as weighted-average contractual rates at the reporting date.

	UAH	USD	EUR	SDR	GBP	Other	Total weighted average interest rate (%)
Financial assets							
Overnight deposits placed at the initiative of correspondent bank	–	4.30	–	–	–	–	4.30
Foreign securities	–	2.81	2.05	–	1.65	1.82	2.77
SDR holdings	–	–	–	2.92	–	–	2.92
Domestic securities	18.90	–	–	–	–	–	18.90
Loans to banks and other borrowers	28.14	–	–	–	–	–	28.14
Domestic public debt	8.67	–	–	–	–	–	8.67
Financial liabilities							
Other accounts of banks on demand	–	4.25	–	–	–	–	4.25
Deposit Guarantee Fund	4.49	–	–	–	–	–	4.49
Certificates of deposit issued by the NBU	23.00	–	–	–	–	–	23.00
Liabilities to the IMF, apart from IMF quota contributions	–	–	–	5.36	–	–	5.36

The sign “–” in the table above means that the NBU has no respective interest-bearing assets or liabilities in corresponding currency.

Domestic securities include domestic government debt securities with a fixed interest rate and domestic government debt securities with a floating interest rate.

Interest is accrued at floating rates on SDR holdings and liabilities to the IMF (interest rates are reviewed on a weekly basis).

Interest rates used for accruing expenses on accounts of the Deposit Guarantee Fund are not fixed, and their amounts correspond to weighted average interest rates on demand deposits of individuals in the domestic currency.

Interest on foreign securities is accrued at both variable and fixed rates.

As of 31 December 2021, the NBU had the following structure of the weighted average interest rates by major currencies for monetary financial interest-bearing instruments. Interest rates on each financial instrument has been calculated as weighted-average contractual rates at the reporting date.

	UAH	USD	EUR	SDR	GBP	Other	Total weighted average interest rate (%)
Financial assets							
Term deposits in OECD	–	0.12	–	–	0.09	2.49	0.19
Foreign securities	–	0.36	0.04	–	0.61	1.72	0.40
SDR holdings	–	–	–	0.08	–	–	0.08
Domestic securities	10.14	–	–	–	–	–	10.14
Loans to banks and other borrowers	9.50	–	–	–	–	–	9.50
Domestic public debt	8.67	–	–	–	–	–	8.67
Financial liabilities							
Deposit Guarantee Fund	4.80	–	–	–	–	–	4.80
Certificates of deposit issued by the NBU	8.47	–	–	–	–	–	8.47
Borrowings received	–	3.05	–	–	–	–	3.05
Liabilities to the IMF, apart from IMF quota contributions	–	–	–	2.44	–	–	2.44

Analysis of financial assets and liabilities by periods of interest rate repricing

The table below presents analysis of assets and liabilities by periods of interest rate repricing.

For financial assets and liabilities with fixed interest rates, classification was determined based on the contractual maturity date from the consolidated statement of financial position date. For assets and liabilities with variable interest rates, classification was determined taking into account the earlier of repricing period or maturity date.

As of 31 December 2022, financial assets and liabilities by periods of interest rate repricing were as follows:

	On demand and up to 1 month	1–3 months	3–12 months	1–5 years	Over 5 years	Non- interest bearing	Total
(UAH millions)							
Financial assets							
Funds and deposits in foreign currency	113,833	–	–	–	–	122,701	236,534
Foreign securities	127,855	211,453	349,953	5,621	–	624	695,506
SDR holdings	62,174	–	–	–	–	–	62,174
Domestic securities	306,861	5,294	167,321	50,536	226,568	460	757,040
Loans to banks and other borrowers	3,653	282	956	35,890	–	–	40,781
Domestic public debt	–	53	152	620	619	–	1,444
IMF quota contributions	–	–	–	–	–	97,908	97,908
Other financial assets	16	–	1	5	19	45	86
Total financial assets	614,392	217,082	518,383	92,672	227,206	221,738	1,891,473
Financial liabilities							
Banknotes and coins in circulation	–	–	–	–	–	715,330	715,330
Accounts of banks	4,551	–	–	–	–	82,319	86,870
Accounts of government and other institutions	947	–	–	–	–	52,077	53,024
Certificates of deposit issued by the NBU	457,464	–	–	–	–	–	457,464
Liabilities to the IMF, apart from IMF quota contributions	140,012	–	–	–	–	1,267	141,279
Liabilities to the IMF with respect to quota contributions	–	–	–	–	–	97,897	97,897
Other financial liabilities	–	–	–	–	–	6,493	6,493
Total of financial liabilities	602,974	–	–	–	–	955,383	1,558,357
Net gap	11,418	217,082	518,383	92,672	227,206	(733,645)	333,116
Cumulative gap	11,418	228,500	746,883	839,555	1,066,761	333,116	
Off-balance sheet assets and liabilities							
Contingent claims with fixed rate under interest rate swap	1,603	190	7,821	8,970	–	–	18,584
Contingent liabilities with floating rate under interest rate swap	2,795	14,517	–	–	–	–	17,312
Net gap	(1,192)	(14,327)	7,821	8,970	–	–	1,272
Cumulative gap	(1,192)	(15,519)	(7,698)	1,272	1,272	1,272	
Total net gap	10,226	202,755	526,204	101,642	227,206	(733,645)	334,388
Total cumulative gap	10,226	212,981	739,185	840,827	1,068,033	334,388	

As of 31 December 2021, financial assets and liabilities by periods of interest rate repricing were as follows:

	On demand and up to 1 month	1–3 months	3–12 months	1–5 years	Over 5 years	Non- interest bearing	Total
(UAH millions)							
Financial assets							
Funds and deposits in foreign currency	98,249	–	–	–	–	79,336	177,585
Foreign securities	57,250	123,769	398,012	59,736	5,400	121	644,288
SDR holdings	510	–	–	–	–	–	510
Domestic securities	2,668	–	160,422	50,300	109,471	1,082	323,943
Loans to banks and other borrowers	11,032	240	168	88,421	–	–	99,861
Domestic public debt	–	55	156	640	690	–	1,541
IMF quota contributions	–	–	–	–	–	76,807	76,807
Other financial assets	5	1	4	11	6	551	578
Total financial assets	169,714	124,065	558,762	199,108	115,567	157,897	1,325,113
Financial liabilities							
Banknotes and coins in circulation	–	–	–	–	–	627,819	627,819
Accounts of banks	–	–	–	–	–	57,136	57,136
Accounts of government and other institutions	675	–	–	–	–	54,458	55,133
Certificates of deposit issued by the NBU	212,926	–	–	–	–	–	212,926
Borrowings received	–	2,728	–	–	–	–	2,728
Liabilities to the IMF, apart from IMF quota contributions	155,946	–	–	–	–	624	156,570
Liabilities to the IMF with respect to quota contributions	–	–	–	–	–	76,798	76,798
Other financial liabilities	–	–	–	–	–	1,839	1,839
Total of financial liabilities	369,547	2,728	–	–	–	818,674	1,190,949
Net gap	(199,833)	121,337	558,762	199,108	115,567	(660,777)	134,164
Cumulative gap	(199,833)	(78,496)	480,266	679,374	794,941	134,164	
Off-balance sheet assets and liabilities							
Contingent claims with fixed rate under interest rate swap	1,196	–	2,431	16,981	–	–	20,608
Contingent liabilities with floating rate under interest rate swap	3,121	16,315	–	–	–	–	19,436
Net gap	(1,925)	(16,315)	2,431	16,981	–	–	1,172
Cumulative gap	(1,925)	(18,240)	(15,809)	1,172	1,172	1,172	
Total net gap	(201,758)	105,022	561,193	216,089	115,567	(660,777)	135,336
Total cumulative gap	(201,758)	(96,736)	464,457	680,546	796,113	135,336	

As of 31 December 2022, the share of foreign securities bearing variable interest rates amounted to 4.7% of the total portfolio (31 December 2021 – 5.4%).

27. Liquidity Risk

For the purposes of measuring liquidity risk, financial assets are grouped by their contractual term set as of the reporting date for receiving the cash flows to be repaid taking into account the period remaining as of the reporting date to the contractual date of the cash flows repayment. IMF quota contributions are presented as assets on demand, based on Article XXVI of the IMF Agreement, but such presentation does not mean that there are expectations that Ukraine will take advantage of this article. Financial liabilities are grouped by maturity taking into account the remaining contractual maturity as of the reporting date.

The amounts of financial assets and liabilities disclosed in the liquidity risk table below are the contractual discounted cash flows from financial instruments carried at fair value. Derivatives settled on a net basis are included at the net

amounts expected to be paid. Impaired loans are included at their carrying value based on the expected timing of cash inflows.

Foreign securities are included in the table taking into account the remaining contractual maturity as of the reporting date. Judging from historical data, this timing is not significantly different to the expected timing of disposal of such securities.

When the amounts payable are not fixed, such amounts are presented in the liquidity analysis taking into account the conditions at the reporting date. Foreign currency items are translated using the spot exchange rates at the reporting date.

The NBU's liquidity risk position as of 31 December 2022 was as follows:

	On demand and up to 1 month	1–3 months	3–12 months	1–5 years	Over 5 years	Maturity date not determined	Total
(UAH millions)							
Financial assets							
Funds and deposits in foreign currency	236,534	–	–	–	–	–	236,534
Foreign securities	117,454	197,309	366,352	13,767	–	624	695,506
SDR holdings	62,174	–	–	–	–	–	62,174
Domestic securities	2,749	5,294	7,018	50,536	691,443	–	757,040
Loans to banks and other borrowers	3,653	282	956	35,890	–	–	40,781
Domestic public debt	–	53	152	620	619	–	1,444
IMF quota contributions	97,908	–	–	–	–	–	97,908
Other financial assets	30	–	16	5	19	16	86
Total financial assets	520,502	202,938	374,494	100,818	692,081	640	1,891,473
Financial liabilities							
Banknotes and coins in circulation	715,330	–	–	–	–	–	715,330
Accounts of banks	86,870	–	–	–	–	–	86,870
Accounts of government and other institutions	53,024	–	–	–	–	–	53,024
Certificates of deposit issued by the NBU	457,464	–	–	–	–	–	457,464
Liabilities to the IMF, apart from IMF quota contributions	–	21,507	38,518	77,287	–	3,967	141,279
Liabilities to the IMF with respect to quota contributions	97,897	–	–	–	–	–	97,897
Other financial liabilities	654	3,804	–	–	–	2,035	6,493
Loan commitments	3,000	–	–	–	–	–	3,000
Total financial liabilities	1,414,239	25,311	38,518	77,287	–	6,002	1,561,357
Liquidity gap arising from financial instruments	(893,737)	177,627	335,976	23,531	692,081	(5,362)	330,116
Cumulative liquidity gap	(893,737)	(716,110)	(380,134)	(356,603)	335,478	330,116	

The NBU's liquidity risk position as of 31 December 2021 was as follows:

	On demand and up to 1 month	1–3 months	3–12 months	1–5 years	Over 5 years	Maturity date not determined	Total
(UAH millions)							
Financial assets							
Funds and deposits in foreign currency	177,585	–	–	–	–	–	177,585
Foreign securities	49,832	100,702	403,944	84,289	5,400	121	644,288
SDR holdings	510	–	–	–	–	–	510
Domestic securities	2,667	–	9,320	50,300	261,656	–	323,943
Loans to banks and other borrowers	11,032	240	168	88,421	–	–	99,861
Domestic public debt	–	55	156	640	690	–	1,541
IMF quota contributions	76,807	–	–	–	–	–	76,807
Other financial assets	326	2	24	22	14	190	578
Total financial assets	318,759	100,999	413,612	223,672	267,760	311	1,325,113
Financial liabilities							
Banknotes and coins in circulation	627,604	–	–	–	–	215	627,819
Accounts of banks	57,136	–	–	–	–	–	57,136
Accounts of government and other institutions	55,133	–	–	–	–	–	55,133
Certificates of deposit issued by the NBU	212,926	–	–	–	–	–	212,926
Borrowings received	–	2,728	–	–	–	–	2,728
Liabilities to the IMF, apart from IMF quota contributions	–	16,398	30,216	104,512	2,335	3,109	156,570
Liabilities to the IMF with respect to quota contributions	76,798	–	–	–	–	–	76,798
Other financial liabilities	9	5	155	1,068	–	602	1,839
Loan commitments	–	–	–	–	–	–	–
Total financial liabilities	1,029,606	19,131	30,371	105,580	2,335	3,926	1,190,949
Liquidity gap arising from financial instruments	(710,847)	81,868	383,241	118,092	265,425	(3,615)	134,164
Cumulative liquidity gap	(710,847)	(628,979)	(245,738)	(127,646)	137,779	134,164	

The amounts stated in the tables below do not correspond to the amounts recorded in the Consolidated Statement of Financial Position, since the below information includes maturity analysis of financial liabilities which reflects the total

amount of future undiscounted contractual payments (including interest payable) not defined in the Consolidated Statement of Financial Position.

Repayment periods under contractual undiscounted cash flows from financial liabilities in line with agreements as of 31 December 2022 were as follows:

	On demand and up to 1 month	1–3 months	3–12 months	1–5 years	Over 5 years	Maturity date not determined	Total
(UAH millions)							
Financial liabilities							
Banknotes and coins in circulation	715,330	–	–	–	–	–	715,330
Accounts of banks	86,870	–	–	–	–	–	86,870
Accounts of government and other institutions	53,024	–	–	–	–	–	53,024
Certificates of deposit issued by the NBU	457,752	–	–	–	–	–	457,752
Liabilities to the IMF, apart from IMF quota contributions	–	23,345	42,568	81,949	1,156	3,967	152,985
Liabilities to the IMF with respect to quota contributions	97,897	–	–	–	–	–	97,897
Other financial liabilities	5	–	–	–	–	2,035	2,040
Loan commitments	3,000	–	–	–	–	–	3,000
Liabilities on swaps, including:	649	3,804	–	–	–	–	4,453
swaps settled on a net basis	586	3,804	–	–	–	–	4,390
swaps settled on a gross basis:							
amounts due from	1,834	–	–	–	–	–	1,834
amounts due to	1,737	–	–	–	–	–	1,737
Total future payments on financial liabilities	1,414,527	27,149	42,568	81,949	1,156	6,002	1,573,351

Repayment periods under contractual undiscounted cash flows from financial liabilities in line with agreements as of 31 December 2021 were as follows:

	On demand and up to 1 month	1–3 months	3–12 months	1–5 years	Over 5 years	Maturity date not determined	Total
(UAH millions)							
Financial liabilities							
Banknotes and coins in circulation	627,604	–	–	–	–	215	627,819
Accounts of banks	57,136	–	–	–	–	–	57,136
Accounts of government and other institutions	55,133	–	–	–	–	–	55,133
Certificates of deposit issued by the NBU	213,252	–	–	–	–	–	213,252
Borrowings received	–	2,742	–	–	–	–	2,742
Liabilities to the IMF, apart from IMF quota contributions	–	17,325	32,453	107,067	2,348	3,109	162,302
Liabilities to the IMF with respect to quota contributions	76,798	–	–	–	–	–	76,798
Other financial liabilities	9	4	118	–	–	603	734
Liabilities on swaps, including:	–	–	37	1,068	–	–	1,105
swaps settled on a net basis	–	–	37	1,068	–	–	1,105
swaps settled on a gross basis:							
amounts due from	23,688	–	–	–	–	–	23,688
amounts due to	23,473	–	–	–	–	–	23,473
Total future payments on financial liabilities	1,029,932	20,071	32,608	108,135	2,348	3,927	1,197,021

Section IV. Capital Management

28. Capital Management

The NBU's capital function is to ensure economic independence and its ability to perform the functions defined by the legislation of Ukraine. As of 31 December 2022, the total amount of capital managed by the NBU was UAH 328,158 million (UAH 166,877 million as of 31 December 2021). No requirements are set for the NBU's equity, except for the amount of authorized capital and general reserves established by the Law of Ukraine *On the National Bank of Ukraine*.

Statutory Capital

According to the Law of Ukraine *On the National Bank of Ukraine*, the statutory capital is UAH 10 million. It was increased to UAH 100 million by the decision of the NBU Council based on 2007 performance.

General Reserves

The NBU creates general reserves, which are used to cover its losses, in accordance with the Law of Ukraine *On the National Bank of Ukraine*.

General reserves made in the reporting year must equal 10% of the average annual monetary liabilities of the NBU, which in 2022 amounted to UAH 996,750 million (in 2021 – UAH 804,893 million).

Reserve Capital

Reserve capital includes a reserve fund raised by the NBU's subsidiary by paying in annual contributions from the subsidiary's net profit – in accordance with the Law of Ukraine *On Banks and Banking* (before 30 June 2021) and the Law of Ukraine *On Joint Stock Companies* (as of 1 July 2021). Contributions to the reserve fund must be at least 5% of the

net profit until the reserve fund reaches 25% of the subsidiary's regulatory capital (before 30 June 2021) and 15% of the authorized capital (as of 1 July 2021).

Revaluation Reserves for Assets and Liabilities

According to the Law of Ukraine *On the National Bank of Ukraine*, unrealized gains from revaluation of foreign currency and monetary gold due to changes in the official exchange rate of the hryvnia to foreign currencies/accounting price of gold throughout the reporting year, unrealized gains from revaluation of securities, capital instruments, and derivative financial instruments in connection with their revaluation to fair value, and unrealized gains or losses from revaluation of bank metals due to changes in the accounting price of bank metals are attributed by the NBU to the item Revaluation Reserves for Assets and Liabilities in the Equity section of the consolidated statement of financial position and the consolidated statement of changes in equity.

The amount of revaluation reserves is used to offset the amount of unrealized expenses from revaluation of foreign currency, monetary gold, securities, capital instruments, and derivative financial instruments carried at fair value if they accumulate throughout the reporting year.

The amount of revaluation reserves for foreign currency, monetary gold, securities, capital instruments, derivative financial instruments, and investment metals that are disposed of is included into the distributable profit in the corresponding reporting periods.

As of 31 December 2022 and 2021, the equity of the NBU consisted of the following components:

	2022	2021
	(UAH millions)	
Statutory capital	100	100
General reserves	80,489	67,691
Retained earnings	19,192	12,803
Reserve capital	31	36
Revaluation reserves of foreign currency and monetary gold	223,450	83,856
Revaluation reserves of investment metals	1,409	613
Revaluation reserves of financial instruments to their fair value	3,487	1,778
Total equity	328,158	166,877

29. Liabilities to Transfer Distributable Profit to the State Budget of Ukraine

Accounting Policy

Pursuant to the Tax Code of Ukraine, the NBU makes settlements with the State Budget in line with Article 5¹ of the Law of Ukraine *On the National Bank of Ukraine*.

The NBU transfers its portion of distributable profit to the State Budget of Ukraine in accordance with the Law of Ukraine *On the National Bank of Ukraine*. Distributable profit is determined by reducing the profit by the amount of unrealized gains for the reporting period, which are directed to revaluation reserves. A gain becoming realized in the following periods is recognized in the distributable profit of the respective reporting periods. The NBU redeems the excess of unrealized expenses over revaluation reserve against the current year's profit, and in the case of shortage – against general reserves. These transactions are presented in the Consolidated Statement of Changes in Equity.

Upon validation by an external auditor and approval by the NBU Council of the NBU's annual consolidated financial statements, a part of the distributable profit that is left after allocating general reserves is subject to transferring to the State Budget of Ukraine.

As of 31 December 2022, the NBU's liabilities to the state budget for transferring a share of distributable profit for 2022 amounts to UAH 71,868 million (UAH 18,786 million, as of 31 December 2021).

In 2022, the NBU transferred UAH 18,786 million to the State Budget of Ukraine (UAH 24,434 million in 2021).

Due to the full-scale military aggression of the Russian Federation against Ukraine, the transfer of funds by the NBU to the State Budget of Ukraine in 2022 was conducted on 24 February 2022 according to a special procedure (before the validation by the external auditor and approval by the NBU Council of the annual consolidated financial statements for 2021) in the amount determined by the NBU Board and sent to the audit firm for validation within the annual consolidated financial statements. The part of the 2021 distributable profit that was transferred to the State Budget of Ukraine was later validated by the external auditor and approved by the NBU Council.

Reconciliation of the operating profit with the profit of the NBU for 2022:

	NBU's income and expenses	Consolidation adjustments	Income and expenses according to the Consolidated Statement of Profit or Loss and Other Comprehensive Income
			(UAH millions)
Net interest income	63,225	20	63,245
Interest income on financial assets at fair value through profit or loss	5,585	–	5,585
Net fee and commission income	277	–	277
Net increase in reserves for assets and liabilities	(1,097)	–	(1,097)
Other income and expenses	(5,676)	(24)	(5,700)
Operating profit	62,314	(4)	62,310
Gains or losses on transactions with financial assets and liabilities in foreign currency and monetary gold	175,556	–	175,556
Result on transactions with financial instruments at fair value through profit or loss (net of interest income)	(5,568)	–	(5,568)
Results on financial instruments	169,988	–	169,988
Profit for the year	232,302	(4)	232,298

Net increase in reserves for assets and liabilities includes the following items of the Consolidated Statement of Profit or Loss and Other Comprehensive Income: Losses from impairment on interest-bearing financial assets; Release of provisions for probable contingencies; and (Losses)/gains on (impairment)/reversal of impairment of other assets. Other

income and expenses include the following items of the Consolidated Statement of Profit or Loss and Other Comprehensive Income: Staff Costs, Costs Related to Production of Banknotes, Coins, Souvenirs and Other Products, Administrative and Other Expenses, Expenses on Income Tax of the Subsidiary, and Other Income.

Reconciliation of the operating income with the income of the NBU for 2021:

	NBU's income and expenses	Consolidation adjustments	Income and expenses according to the Consolidated Statement of Profit or Loss and Other Comprehensive Income
			(UAH million)
Net interest income	28,818	18	28,836
Interest income on financial assets at fair value through profit or loss	7,549	–	7,549
Net fee and commission income	596	–	596
Net increase in reserves for assets and liabilities	(197)	–	(197)
Other income and expenses	(4,496)	(20)	(4,516)
Operating profit	32,270	(2)	32,268
Gains or losses on transactions with financial assets and liabilities in foreign currency and monetary gold	(21,319)	–	(21,319)
Result on transactions with financial instruments at fair value through profit or loss (net of interest income)	(9,606)	–	(9,606)
Results on financial instruments	(30,925)	–	(30,925)
Profit for the year	1,345	(2)	1,343

Liabilities for transferring distributable profit to the State Budget, which are determined in accordance with the Law of Ukraine *On the National Bank of Ukraine*, are calculated as follows:

	Note	2022	2021
			(UAH million)
Operating profit of the NBU		62,314	32,270
Realized result on transactions with financial assets and liabilities in foreign currency and monetary gold	18	35,961	143
Realized result on transactions with financial instruments at fair value through profit or loss	19	(4,195)	(5,912)
Unrealized losses not compensated by revaluation reserves of financial instruments to their fair value	19	(3,965)	(2,973)
Unrealized result on revaluation of previous years that was realized in the current year on disposed securities and derivatives (financial instruments)		883	7,955
Realized result on disposed investment metals		56	186
Result of free transfer of assets		–	(85)
Distributable profit for the year		91,054	31,584
General reserves created		(19,186)	(12,798)
Portion of distributable profit subject to transfer to the State Budget		71,868	18,786

Section V.I. Nonfinancial Assets and Liabilities

30. Property and Equipment and Intangible Assets

Accounting Policy

Property and equipment (PE) items are carried at initial cost, less accumulated depreciation and impairment loss.

Initial cost of acquired PE items includes the costs on acquisition and set-up.

Costs on enhancement of any PE item which increases the expected economic benefits are included in the cost of such PE items. Costs on minor repairs and maintenance and obtaining initially estimated future economic benefits from using PE are expensed when incurred. Costs of replacing major parts or components of PE items are capitalized and the residual value of the replaced part is charged to expenses in the consolidated income statement of the reporting period.

In case of impairment of PE the cost is reduced to the expected recoverable amount of whichever assessment is higher: fair value less costs to sales or value in use. The decrease of carrying amount is reported as profit or loss in the consolidated statement of profit or loss and other comprehensive income. Impairment cost of assets recognized in previous periods is reversed if estimates were changed used to determine the expected recoverable amount.

Result of disposal of fixed assets determined as the difference between the proceeds and the asset's carrying amount are recognized in profit or loss of the consolidated statement of profit or loss and other comprehensive income.

Capital investments in progress are carried at initial cost. Upon completion of construction, assets are included in the buildings and constructions entry and are measured at initial cost. Capital investments in progress are not depreciated until the asset is ready for use.

Depreciation of PE and Investment Property

Depreciation of property and equipment commences in the month following the commissioning of assets and ceases upon disposal of assets or at completely depreciated PE (in

case of the latter, useful life is reviewed and adjusted as necessary). Depreciation is calculated using the straight-line method for an even decrease in initial cost to residual value over the estimated useful lives as follows:

buildings and facilities	20–50 years
vehicles	7–28 years
machinery and equipment	4–20 years
tools, fixtures, and fittings	4–10 years
other	2–25 years.

Land and capital investments in progress are not depreciated.

The residual value of an asset is the estimated amount that the NBU would currently obtain from disposal of the asset, less the estimated costs of disposal, if the asset is out-of-date and in the condition expected at the end of its useful life. The residual value of an asset is equal to nil if the NBU expects to use the asset until the end of its useful life.

Intangible Assets

All of the NBU's intangible assets have definite useful lives and primarily include computer software and licenses for its use.

The initial cost of acquired intangible assets includes the costs incurred to acquire and bring them to use. Acquired intangible assets are amortized on a straight-line basis over the expected useful lives from two to eight years and subsequently measured at initial cost less accumulated amortization and impairment loss.

Accounting valuations and judgements include:

Impairment of property and equipment and intangible assets

As of each reporting day, the NBU's management reviews tangible and intangible assets for impairment taking into account the analysis of certain events or circumstances that evidence on impairment.

	Buildings and structures	Vehicles	Machinery and equipment	Tools, fixtures, and fittings	Other fixed assets	Uncompleted capital investments	Intangible assets	Total
(in UAH millions)								
Initial cost as of 1 January 2021	4,419	163	4,971	98	239	62	492	10,444
Depreciation and amortization as of 1 January 2021	(2,248)	(144)	(3,142)	(92)	(203)	(9)	(416)	(6,254)
Carrying amount as of 1 January 2021	2,171	19	1,829	6	36	53	76	4,190
Additions	117	–	307	3	22	140	56	645
Transfers to other categories, including:	2	1	39	(1)	(12)	(27)	(2)	–
<i>initial cost</i>	2	1	39	(1)	(12)	(27)	(2)	–
Disposals, including:	(86)	–	–	–	–	(7)	–	(93)
<i>initial cost</i>	(234)	(4)	(33)	(1)	(2)	(7)	(7)	(288)
<i>depreciation and amortization</i>	148	4	33	1	2	–	7	195
Impairment	–	–	–	–	–	–	(2)	(2)
Depreciation and amortization charges in the current reporting period	(88)	(3)	(266)	(2)	(12)	–	(26)	(397)
Initial cost as of 31 December 2021	4,304	160	5,284	99	247	168	539	10,801
Depreciation and amortization as of 31 December 2021	(2,188)	(143)	(3,375)	(93)	(213)	(9)	(437)	(6,458)
Carrying amount as of 31 December 2021	2,116	17	1,909	6	34	159	102	4,343
Additions	–	5	116	1	22	41	14	199
Transfers to other categories, including:	1	–	27	(1)	(12)	(14)	(1)	–
<i>initial cost</i>	1	–	27	(1)	(12)	(14)	(1)	–
Disposals, including:	–	(1)	–	–	(1)	–	–	(2)
<i>initial cost</i>	–	(8)	(42)	(1)	(4)	–	(11)	(66)
<i>depreciation and amortization</i>	–	7	42	1	3	–	11	64
Depreciation and amortization charges in the current reporting period	(86)	(3)	(287)	(2)	(14)	–	(31)	(423)
Initial cost as of 31 December 2022	4,305	157	5,385	98	253	195	541	10,934
Depreciation and amortization as of 31 December 2022	(2,274)	(139)	(3,620)	(94)	(224)	(9)	(457)	(6,817)
Carrying amount as of 31 December 2022	2,031	18	1,765	4	29	186	84	4,117

As of 31 December 2022, initial cost of fully depreciated property and equipment that were still in operation amounted to UAH 2,369 million (as of 31 December 2021: UAH 2,068 million).

As of 31 December 2022, no signs of impairment were detected based on the results of impairment test (as of 31 December 2021, impairment costs were UAH 2 million).

Disposal of fixed assets and intangible assets of subsidiaries has been adjusted by the amount of depreciation and amortization charges calculated in accordance with the NBU's accounting policies.

In 2021, pursuant to the regulatory acts of the Cabinet of Ministers of Ukraine, free-of-charge transfer of items of state property rights from the NBU's area of responsibility to the area of responsibility of other bodies authorized to manage state property took place. The result of the transfer of those assets amounted to UAH 85 million and is recognized in equity as a transaction with the founder.

Capital Commitments

As of 31 December 2022, the NBU had capital commitments with respect to the acquisition, construction, and improvement of property and equipment and intangible assets totaling UAH 209 million (UAH 215 million as of 31 December 2021).

31. Other Nonfinancial Assets

Accounting Policy

Investment and other Precious METALS

Investment metals are the reserves of non-monetary gold, silver, platinum, and palladium kept in the State Treasury of Ukraine. investment metals are reported by weight in Troy ounces and their value in hryvnias according to accounting price of investment metals.

	31 December 2022 (in hryvnias)	31 December 2021 (in hryvnias)
1 Troy ounce of gold	66,075.8	49,115.22
1 Troy ounce of silver	871.97	624.01
1 Troy ounce of platinum	37,284.98	26,331.65
1 Troy ounce of palladium	64,776.16	54,171.23

Unrealized revaluations of investment metals due to change of accounting price of investment metals are included into other comprehensive income in the consolidated statement of profit or loss and other comprehensive income recognized in the period in which they occurred. Realized revaluations of investment metals are included into the retained earnings.

Investment metals deposited in foreign banks for which the interest income is accrued, are included into the *Funds and deposits in foreign currency and investment metals* (Note 6). Revaluations of investment metals deposited in foreign banks due to change of accounting price of investment metals are included into other comprehensive income in the consolidated statement of profit or loss and other comprehensive income recognized in the period in which they occurred.

Investment metals include gold ingots that do not meet the established standards, scrap gold and other metals, and are accounted at cost in Stocks of tangible assets.

Investment and precious metals are included into *Other assets* in the consolidated statement of financial position.

Noncurrent Assets Held for Sale

The NBU recognizes its noncurrent assets as held for sale when the carrying amount of asset is recovered rather through sale than current use.

To recognize noncurrent assets as held for sale, assets should be ready for their immediate sale, and such a sale should be highly probable.

The noncurrent assets recognized as held for sale are recognized at whichever is lower: carrying amount or fair values less cost to sell. If carrying amount of items as of the date of recognition as held for sale exceeds their fair value less cost to sell, then loss on valuation of such items is recognized.

The accounting price of investment metals under which the investment metals are reported in consolidated financial statements, was as follows:

Investment Property

Investment property items include:

- the land a future designation of which is undetermined
- a building not occupied by the NBU and designed for renting out under one or several leases
- a building owned by the NBU or managed under lease agreement and rented out under one or several lease agreements
- immovable property under construction or improvement for future use as investment property.

The NBU carries its investment property at cost. Investment property items are depreciated using the straight-line method.

The NBU recognizes its investment property using the following criteria:

- immovable property is transferred under leases
- immovable property is removed from the list of property used by the NBU according to the NBU's resolution on making decision to rent out the immovable property
- economic benefits are received, which are related to such investment property
- it is probable to estimate reliably the cost of immovable property.

In the event one item of investment property is held to receive rentals and the other part is held for use in operations, then such items of investment property are recognized separately if they can be disposed of separately.

Expenditures on current maintenance of investment property are recognized as expenses when they arise. Expenditures on improvement of investment property items that lead to increase in initially expected benefits from their use, increase the initial cost of those items.

Investment property that begins to be held for sale is classified as assets held for sale.

Investment property items are derecognized in the event changes occur in the mode of their functional use.

	2022	2021
		(UAH millions)
Other nonfinancial assets		
Investment metals	2,984	2,216
Current tangible assets	1,446	1,748
Precious metals and stones	882	388
Commemorative and investment coins, souvenirs and other products	233	420
Investments in associated company	35	34
Advance payments	175	81
Investment property	44	45
Noncurrent tangible assets held for sale	4	4
Other	14	15
Impairment from other nonfinancial assets	(16)	(4)
Impairment of investments	(5)	–
Total other nonfinancial assets	5,796	4,947

32. Other Nonfinancial Liabilities

Accounting Policy

Provisions for Probable Contingencies

The NBU's provisions for probable contingencies include provisioning for legal or constructive obligations (as a result of past events), particularly under lawsuits the settlement of which with high level of probability (an adverse scenario being more probable than a positive one) to cause an outflow of resources embodying economic benefits and the amount (losses) under which can be reliably measured. Provisions charges are recognized within financial results of the consolidated income statement and other comprehensive income in the period in which they arise.

Judgement

Provisions under Lawsuits Filed against the NBU

The NBU's management analyzes lawsuits, for which it acts as defendant, in order to identify a high probability of possible losses to occur, as a result of which the NBU shall make payments in favor of the other party, the plaintiff. The NBU determines the probability of possible losses as high mainly when the court of second instance rules unfavorably against the NBU.

	2022	2021
		(UAH millions)
Other nonfinancial liabilities		
Accounts payable	106	17
Provisions for probable contingencies	95	223
Unearned revenue	1	1
Total other nonfinancial liabilities	202	241

Contingent Liabilities

Legal Proceedings

From time to time and in the normal course of business, certain lawsuits are filed against the NBU. As of 31 December 2022 and 2021, there were lawsuits for which the NBU estimates the probability of having to pay damages as low, but the NBU believes that disclosure in respect of such lawsuits of financial claims may harm it in disputes with other parties on the subject matter of the lawsuit. For such lawsuits, there are contingent liabilities, no provisions for probable contingencies were recognised.

For lawsuits against the NBU that, the NBU estimated, had a high likelihood of resulting in losses, the NBU made a respective provision of UAH 94.7 million as of 31 December 2022 (UAH 223.7 million as of 31 December 2021). Over 2022, provision for contingent liabilities in the amount of UAH 129.0 million was liquidated as a result of a court decision in favor of the NBU, which is final and not subject to appeal. 2021 saw no changes in provisions for probable contingencies.

Section V.II. Other Income and Expenses (except for Financial Results by Financial Instruments)

Accounting Policy

Recognition of Income and Expenses

Other income and expenses are recognized on accrual basis depending on stage of certain transaction completion that is assessed as ratio of provided (received) services to total services as established under agreement.

For income recognition a five-step analysis model is used:

- agreement identification
- identification of certain liabilities within the concluded agreement
- determination of transaction price
- distribution of transaction price between liabilities
- recognition of income when or as the liability is fulfilled.

The expenses are recognized as expenses of a certain period simultaneously with recognition of the income for which they were incurred. The expenses which cannot be related to income of a certain period, are recognized as expenses of the reporting period during which they were incurred.

Costs related to the Production of Banknotes, Coins, Souvenirs, and other Products

The NBU carries out the production of banknotes and coins of the Ukrainian domestic currency. Costs for production of banknotes and coins (except for commemorative coins produced from precious metals and investment coins) are recorded in the NBU's expenses accounts as the finished products are transferred by the Banknote Printing and Minting Works to the NBU's Central Vault. Costs for production of

banknotes and coins include depreciation of production machinery, labor costs, other production costs.

Value of commemorative coins produced from precious metals and investment coins less their face value, is recognized as asset in the NBU's consolidated statement of financial position in Other assets and is written off as expenses as the coins are sold.

Personnel Costs

Labor costs, payment of a single contribution for mandatory state social insurance, contributions to the NBU Corporate Nonstate Pension Fund, and costs on personnel training and skill enhancement, are recognized in the period in which they were incurred by the NBU.

Costs for annual (principal, additional, and social) leaves not used by the NBU employees for the past work years and transferred to next years, and other future employee benefits are recognized as liabilities on employee benefits.

The NBU is the founder of the Corporate Nonstate Pension Fund which is the fund with fixed contributions. The NBU pays contributions to this fund on a contractual basis, and after funds transfer, the NBU has no liabilities regarding these payments. The contributions to the NBU Corporate Nonstate Pension Fund are recognized in Personnel costs when the liabilities on funds transfer arise. After the NBU employee's retirement all payments are performed by the NBU Corporate Nonstate Pension Fund.

Taxes except for payment of distributable profit paid by the NBU, are included into Administrative and other expenses.

33. Other Income

	2022	2021
	(UAH millions)	
Income from sale of investment and commemorative coins, souvenir and other products	473	686
Fines, penalties, forfeit received/returned	293	18
Income from real estate sales	157	18
Income from license registration and issue	2	4
Operating income from the IMF	–	486
Income from sale of property and equipment, and intangible assets	–	5
NBU's holding in income of associated company	3	4
Other	69	60
Total other income	997	1,281

34. Staff Costs

	2022	2021
	(UAH millions)	
Payroll of staff	2,668	2,068
Single contribution for mandatory state social security and contributions to nonstate pension funds	557	465
Financial assistance and other social benefits	11	10
Other	20	20
Total staff costs	3,256	2,563

Other staff costs include costs for training and development, expenditures for voluntary medical insurance of employees, etc.

35. Administrative and other Expenses

	2022	2021
	(UAH millions)	
Banknote Printing and Minting Works' expenses not included in production cost	557	408
Depreciation and amortization	254	221
Utilities and household expenses	226	156
Expenses for maintenance of noncurrent tangible and intangible assets	163	168
Business trips	92	14
Telecommunication services and maintenance	40	29
Transport costs for transporting cash	36	–
Contributions to the NBU's Labor Union	33	10
Payments to NBU Council members	23	20
Cost of sewage facility services	22	19
Taxes, duties, and charges	16	27
Expenses on software maintenance	10	6
Financial assistance and other social benefits to pensioners of the NBU	9	10
Consulting and legal services	7	6
Audit expenses	5	5
Other operational expenses related to cash processing	3	4
Damaged products cost	3	–
Problem assets expenses	3	82
Repayments to banks of the earlier paid fines	2	4
Excess of the carrying value over the value of sales of valuables and precious metals	–	25
Loss on disposal of property, plant and equipment, and intangible assets	–	7
Expenses on maintaining and selling collateral	–	1
Other	17	22
Total administrative and other expenses	1,521	1,244

Depreciation and amortization charges for 2022 exclude depreciation worth UAH 169 million (UAH 177 million in 2021) for property and equipment used in the production of banknote paper, banknotes, coins, and other products. This portion of depreciation and amortization charges is included in costs related to the production of banknotes, coins, and other products.

Other expenses include the negative result from the recount of raw materials, expenses for communication services and postage, subscription to periodicals, expenses for advertising and marketing, etc.

Section VI. Other Notes

36. Related Party Transactions

Related party transactions. Judgement

The NBU carries out transactions with related parties, mainly with the Ukrainian government, banks and organizations controlled by the state. In accordance with IFRS 9, financial instruments are initially recognized at fair value. If no active market exists for specific market interest rates, the NBU applies professional judgement. A basis for the judgement is pricing for similar types of transactions with nonrelated parties and analysis of the effective interest rate, as specified in Note 21.

Terms and Conditions of Related Party Transactions

For the purposes of these consolidated financial statements, parties are considered to be related if the parties are under common control, or if one party has the ability to control the other party or can exercise significant influence over the other party in making financial or operational decisions, as defined by IAS 24 *Related Party Disclosures*. In considering each possible related party relationship, attention is paid to the substance of the relationship, not merely the legal form. The related parties of the NBU include the Ukrainian government, state-controlled entities, key management personnel, etc.

In the normal course of its operations, the NBU enters into transactions with related parties. The year-end balances on these transactions are presented in the table below:

	Note	2022			2021		
		Government and state-controlled entities	Associated companies	Other related parties	Government and state-controlled entities	Associated companies	Other related parties
(UAH millions)							
Funds and deposits in foreign currency and investment metals		69	–	–	–	–	–
Domestic securities	9	757,040	–	–	323,943	–	–
Loans to banks and other borrowers		22,468	–	–	37,277	–	–
Loss allowances for loans to banks and other borrowers		(3,006)	–	–	(3,664)	–	–
Domestic public debt		1,444	–	–	1,541	–	–
Other assets		52	30	–	35	34	–
Accounts of banks		32,512	–	–	25,206	–	–
Accounts of government and other institutions	13	52,009	4	8	54,432	3	7
Accounts of the Deposit Guarantee Fund	13	947	–	–	675	–	–
Liabilities to transfer distributable profit to the State Budget of Ukraine	29	71,868	–	–	18,786	–	–
Certificates of deposit issued by the NBU		145,683	–	–	67,724	–	–
Other liabilities		3,500	–	–	595	–	–

Other related party transactions include the account balances of the Corporate Nonstate Pension Fund.

The terms and conditions of the transactions above were as follows:

Long-term loans to state-owned banks (included in the loans to banks and other borrowers in the table above) as of 31 December 2022 bore an interest rate of 25.00% (9.00% as of 31 December 2021).

As of 31 December 2022, the NBU had commitments for granting loans to the Deposit Guarantee Fund under an open revolving credit line totaling UAH 3,000 million (as of 31 December 2021, the NBU had no commitments for granting those loans) (Note 10).

Domestic-currency balances held by state-owned banks in correspondent accounts with the NBU (included in accounts

of banks in the table above) earned no interest as of 31 December 2022 and 31 December 2021 (Note 12).

Balances of other foreign-currency demand deposits of banks (included in accounts of banks in the table above) as of 31 December 2022 bore an interest rate of 4.25% (transactions were absent as of 31 December 2021) (Note 12).

Accounts of government and other institutions did not bear any interest as of 31 December 2022 and 31 December 2021 (Note 13).

Accounts of the Deposit Guarantee Fund bore an interest rate of 4.49% as of 31 December 2022 (4.80% as of 31 December 2021) (Note 13).

The terms of transactions with domestic public debt and domestic securities are disclosed in the respective notes.

Income and expense items for transactions with related parties were as follows:

	2022			2021		
	Government and state-controlled entities	Associated companies	Other related parties	Government and state-controlled entities	Associated companies	Other related parties
	(UAH millions)					
Interest income	96,968	–	–	39,058	–	–
Interest expenses	(11,216)	–	–	(3,870)	–	–
Fee and commission income	185	–	–	199	–	–
Other income and results	(2,867)	3	–	(81)	4	–
Staff costs and remuneration of NBU Council members	–	–	(63)	–	–	(52)
Other expenses	(152)	–	(66)	(128)	–	(52)
Gains from the reversal of impairment on interest-bearing financial assets	685	–	–	428	–	–
Losses from impairment of other assets	–	(5)	–	–	–	–

Other income and results include gains or losses on related party transactions with financial instruments at fair value through profit or loss.

In accordance with the Law of Ukraine *On the National Bank of Ukraine*, the NBU provides services to the State Treasury of Ukraine on a free-of-charge basis.

In 2022, the short-term benefits (salary and social security tax) of key management personnel were UAH 63.2 million, including remuneration of members of the NBU Council of UAH 23.4 million [in 2021, the short-term benefits of key management personnel were UAH 51.9 million, including remuneration to members of the NBU Council of UAH 20.0 million]. As of 31 December 2022 and 31 December 2021, there were no outstanding loans to key management personnel.

Short-term benefits to the Chairperson and members of the NBU Council:

	2022, UAH millions	Length of service in 2022, in months	2021, UAH millions	Length of service in 2021, in months
Bohdan Danylyshyn	3.6	12	2.7	12
Anatolii Barsukov	0.3	1	–	–
Ihor Veremii	1.9	6.3	–	–
Vasyl Horbal	3.6	12	2.7	12
Mykola Kalenskyi	3.6	12	2.7	12
Viktor Koziuk	3.6	12	2.7	12
Oleksandr Petryk	1.4	4.7	2.7	12
Vasyl Furman	3.3	11.2	2.7	12
Vitaliy Shapran	–	–	1.1	7
Olena Scherbakova	2.1	7.2	2.7	12
Total	23.4		20.0	

Short-term benefits to NBU Governor and Board Members:

	2022, UAH millions	Length of service in 2022, in months	2021, UAH millions	Length of service in 2021, in months
Andriy Pyshnyy	1.6	2.8	–	–
Kyrylo Shevchenko	5.9	9.2	5.9	12
Kateryna Rozhkova	6.3	12	5.2	12
Yuriy Heletiy	6.3	12	5.2	12
Yaroslav Matuzka	6.1	12	5.2	12
Sergiy Nikolaychuk	6.1	12	2.6	6
Dmytro Oliinyk	1.2	2.2	–	–
Dmytro Sologub	–	–	2.3	6
Oleksii Shaban	6.3	12	5.5	12
Total	39.8		31.9	

37. Current and Noncurrent Assets and Liabilities

The table below shows the classification of assets and liabilities by periods of their expected recovery or maturity into current (up to one year) and noncurrent (more than one year):

Notes	2022			2021			
	current	noncurrent	total	current	noncurrent	total	
(UAH millions)							
Assets							
Funds and deposits in foreign currency and investment metals	6	241,504	–	241,504	181,279	–	181,279
Foreign securities	7	694,882	624	695,506	644,167	121	644,288
SDR holdings	8.1	62,174	–	62,174	510	–	510
Monetary gold		–	52,272	52,272	–	38,800	38,800
Domestic securities	9	66,452	690,588	757,040	21,077	302,866	323,943
Loans to banks and other borrowers	10	4,891	35,890	40,781	11,440	88,421	99,861
Domestic public debt		111	1,333	1,444	110	1,431	1,541
IMF quota contributions	8.2	–	97,908	97,908	–	76,807	76,807
Property and equipment and intangible assets	30	–	4,117	4,117	–	4,343	4,343
Other assets	11, 31	2,808	3,074	5,882	3,192	2,333	5,525
Total assets		1,072,822	885,806	1,958,628	861,775	515,122	1,376,897
Liabilities							
Banknotes and coins in circulation		715,330	–	715,330	627,604	215	627,819
Accounts of banks	12	86,870	–	86,870	57,136	–	57,136
Accounts of government and other institutions	13	53,024	–	53,024	55,133	–	55,133
Liabilities to transfer distributable profit to the State Budget of Ukraine	29	71,868	–	71,868	18,786	–	18,786
Certificates of deposit issued by the NBU	14	457,464	–	457,464	212,926	–	212,926
Borrowings received		–	–	–	2,728	–	2,728
Liabilities to the IMF, apart from IMF quota contributions	8.3	64,060	77,219	141,279	49,842	106,728	156,570
Liabilities to the IMF with respect to quota contributions	8.3	97,897	–	97,897	76,798	–	76,798
Other liabilities	15, 32	3,391	3,304	6,695	1,012	1,068	2,080
Total liabilities		1,549,904	80,523	1,630,427	1,101,965	108,011	1,209,976

38. Events Subsequent the Reporting Date

Support from international partners remains stable and strong in 2023. In particular, the EU approved financing under the macrofinancial assistance program in the amount of EUR 18 billion for 2023. In total, the G7 countries decided to increase their financial support of Ukraine's budget and economy to USD 39 billion in 2023. In addition, the Netherlands approved an assistance package in the amount of USD 2.5 billion, primarily aiming at urgent recovery and reconstruction of infrastructure and at military support of Ukraine in 2023. The government of Norway approved a long-term program to support Ukraine to the total amount of around USD 7.5 billion to be disbursed in tranches over 2023–2027. This year, the financing provided by Norway will be allocated for supporting Ukraine's army and for humanitarian aid to civilians.

Financing from international partners will be used to cover budget needs and support level of international reserves. As of the 4 April 2023, Ukraine received nearly USD 13.7 billion in total from international partners. This includes more than USD 10 billion of loans, in particular from the EU, IMF, Canada, and the UK, and nearly USD 3.7 billion of grants, of which USD 3.5 billion provided by the United States (grants are recognized as revenues of the State Budget).

A fixed exchange rate remains the nominal anchor for safeguarding macrofinancial stability. The NBU is taking monetary measures to maintain exchange rate stability. This helps to stabilize expectations and decrease the risk of rising inflation. The banking system's liquidity has been growing. At the same time, a phased increase in mandatory reserve level led to the redistribution of funds from certificates of deposit (average daily balances fell from more than UAH 400 billion in December–January to UAH 354 billion in March 2023) to banks' correspondent accounts (up from UAH 94 billion to UAH 185 billion, respectively).

On 20 January 2023, international rating agency Fitch Ratings affirmed Ukraine's Long-Term Foreign-Currency Issuer Default Rating at CC. At the same time, on 10 February 2023, Moody's downgraded Ukraine's long-term ratings in foreign and domestic currencies and foreign currency senior unsecured debt ratings to Ca, from Caa3, changing the outlook from negative to stable.

Throughout the period from 1 January 2023 to the date these consolidated financial statements were signed, redemptions of domestic government debt securities totaled UAH 12.4 billion (UAH 7.6 billion by face value and UAH 4.8 billion of coupon payments).

In February–April 2023, up to the date of signing of these consolidated financial statements, liabilities worth SDR 480 million (UAH 23,507 million at the official rate as of the transaction date, or UAH 18,888 million at the annual exchange rate of the IMF) were repaid to the IMF in accordance with the repayment schedules.

In March 2023, SDR 1,305 million or UAH 64,235 million sent by Canada in favor of the Government of Ukraine were transferred from the IMF-administered account to the SDR holding account at the official UAH/SDR exchange rate as of the transaction date.

On 31 March 2023, the Executive Board of the IMF approved a 48-month extended arrangement for Ukraine under the Extended Fund Facility (EFF) with an amount of SDR 11.6 billion. In March 2023, SDR 2,012 million or UAH 98,972 million were transferred from the IMF to the SDR holding account at the official UAH/SDR exchange rate as of the transaction date disbursed under the abovementioned arrangement in favor of the Government of Ukraine.

39. Introduction of New and Amended Standards and Interpretations of the Financial Statements

Amended IFRSs and interpretations effective and to be applied on or after 1 January 2022.

Amendments to IAS 37. Provisions, Contingent Liabilities and Contingent Assets – *Onerous Contracts – Cost of Fulfilling a Contract* (apply to annual reporting periods beginning on or after 1 January 2022).

Amendments to IFRS 3. Business Combinations related to amendments to Conceptual Framework for Financial Reporting (apply to annual reporting periods beginning on or after 1 January 2022)

Amendments to IAS 16. Property, Plant and Equipment – *Proceeds before Intended Use*. The amendments apply to annual reporting periods beginning on or after 1 January 2022.

Annual improvements to IFRS for the period of 2018–2020 (amendments to IFRS 1, IFRS 9, IFRS 16, and IAS 41).

Amended IFRS and interpretations had no significant effect on the NBU's financial results and financial position.

New and revised standards that have been issued but are not yet effective:

Amendments to IFRS 10. Consolidated Financial Statements and IAS 28. Investments in Associates and Joint Ventures – *Sale or distribution of assets between an investor and its associate or joint venture* (apply to annual reporting periods beginning on or after the date to be specified. Early application is permitted).

Amendments to IAS 1. Presentation of Financial Statements are intended to provide clarifications on disclosure of accounting policies in financial statements (apply to annual reporting periods beginning on or after 1 January 2023).

Amendments to IAS 8. Accounting Policies, Changes in Accounting Estimates and Errors are intended to explain the differences between changes in accounting estimates and changes in accounting policies. (Apply to annual reporting periods beginning on or after 1 January 2023.)

IFRS 17. Insurance Contracts is a new financial reporting standard for insurance contracts that determines recognition, measurement, presentation, and disclosure of information (applies to annual reporting periods beginning on or after 1 January 2023, although early application is permitted).

Amendments to IAS 12. Income Taxes – *Deferred Tax related to Assets and Liabilities arising from a Single Transaction*. (Apply to annual reporting periods beginning on or after 1 January 2023.)

Amendments to IAS 1. Presentation of Financial Statements – *Classification of Liabilities as Current or Non-current* are intended to provide a more specific approach to the classification of liabilities under IAS 1 based on the contractual terms in effect at the reporting date (apply to annual reporting periods beginning on or after 1 January 2024).

Amendments to IFRS 16. Leases – *Lease Liability in Sale-and-Leaseback Transaction* are intended to clarify the requirements applied by the seller lessee to assess the lease liability arising in the leaseback transaction (apply to annual reporting periods beginning on or after 1 January 2024).

The NBU did not apply the abovementioned new and revised standards before the effective date. The NBU's management anticipates that the application of these standards and interpretations is not going to have a significant effect on the NBU's financial results and financial position.

7 April 2023
Kyiv, Ukraine