



National Bank
of Ukraine

Consolidated Financial Statements and Consolidated Management Report

for the Year Ended
31 December 2019





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of Ukraine

Consolidated Management Report

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Part 1. Nature of Operations

1.1. General Information about the National Bank of Ukraine (main types of activities, subsidiaries, and the purpose of its operations)

The National Bank of Ukraine (the 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.

The central bank's main statutory function is safeguarding the stability of the Ukrainian unit of money. 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 2019 and 2018, the NBU's structure comprised the Head Office and the Banknote Printing and Minting Works, the central bank's standalone unit. These units operate 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 (the Settlement Center).

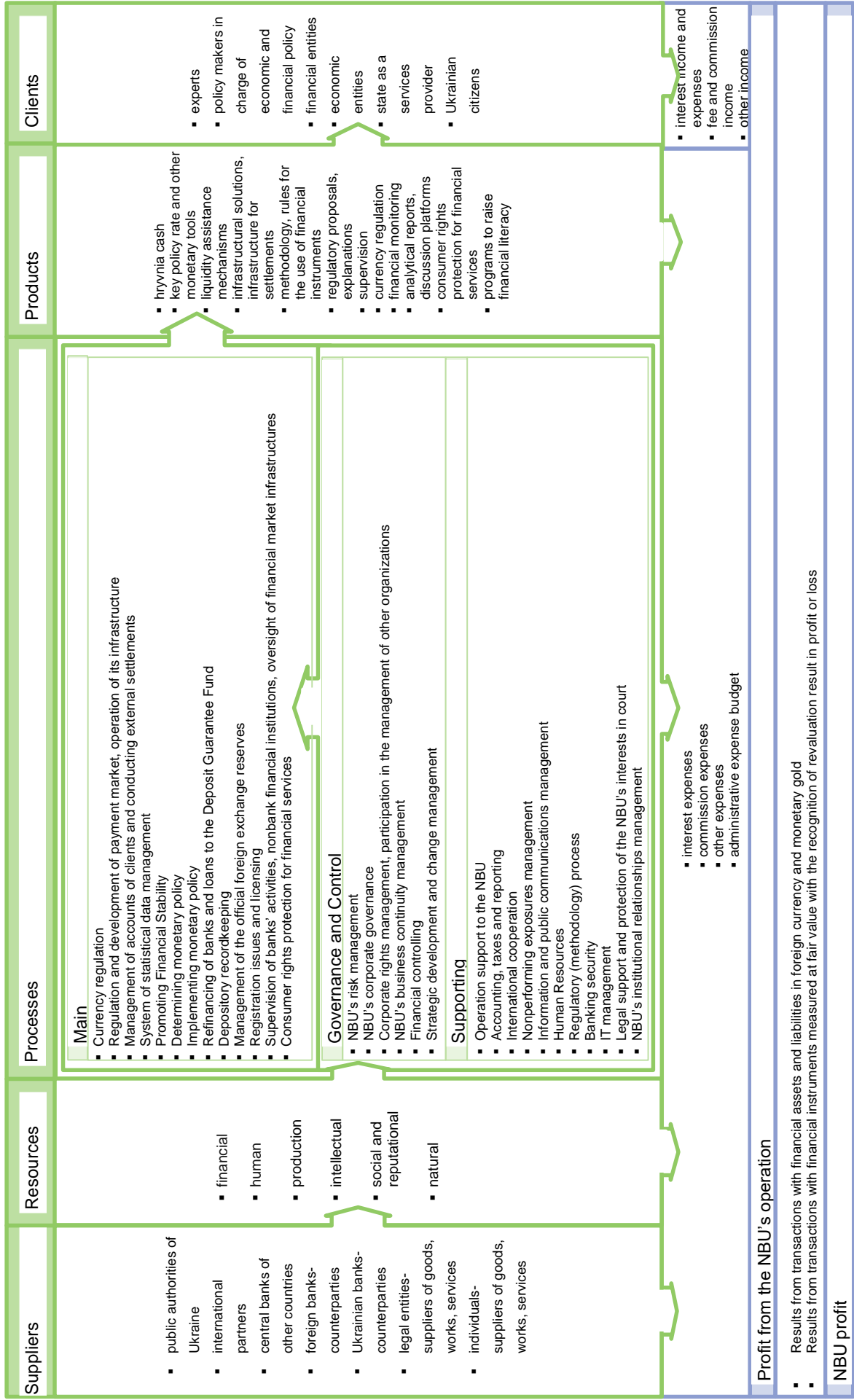
The Settlement Center is the only institution that has a mandate to provide cash settlements of securities and other financial instrument agreements entered into on the stock

exchange or in over-the-counter agreements, where the delivery versus payment principle is used. The Settlement Center opens and maintains cash accounts for stock market participants. The Settlement Center is also responsible for paying securities-related income and the face value of redeemed securities to their holders, as well as for making payments related to other corporate operations, including those related to securities that have been placed and are transferred outside Ukraine.

As of 31 December 2019, the NBU's investments in the associated company were represented by the Public Joint-Stock Company National Depository of Ukraine (hereinafter - National Depository of Ukraine) (As of 31 December 2018, the NBU had investments in the German Ukrainian Fund and the National Depository of Ukraine).

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 2019 (hereinafter - Consolidated Financial Statements).

Figure 1. Model of NBU activities



1.2. NBU Management

1.2.1. NBU Council

Under Ukraine's Constitution, the NBU Council's main tasks are to develop Monetary Policy Guidelines and oversee the implementation of monetary policy. In addition, Ukraine's Law *On the National Bank of Ukraine* gives the council the mandate to approve the central bank's budget of administrative expenses for the next year, and to make decisions regarding the use of its profit for distribution to augment the central bank's authorized capital and to make provisions that are used to finance investment made in order to support the central bank's operations. The council also has the right to take a decision to increase the regulator's authorized capital; to approve its financial statements and reports on the central bank's administrative expense budget and the distribution of profits for distribution; to approve NBU Board decisions on the central bank's participation in international financial institutions; to oversee the NBU's internal control system; and to perform other functions within its powers, as set forth in applicable Ukrainian laws.

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 who have been appointed by the Verkhovna Rada of Ukraine:

Viktor Koziuk
Olena Shcherbakova
Vitalii Shapran – appointed on 12 November 2019
Vira Rychakivska

Sitting council members who have been appointed by the president of Ukraine:

Bohdan Danylyshyn (was elected head of the council on 14 November 2019)
Vasyl Furman
Mykola Kalenskyi
Oleksandr Petryk

Yakiv Smolii, NBU Governor, is a **council member** by virtue of his position

Working bodies of the NBU Council

The **audit committee** is an advisory body of the NBU Council, which was established in accordance with the law and which takes managerial decisions on the basis of the collegiality principle. The main purpose of the committee is to assess the reliability and effectiveness of the NBU's internal controls and the completeness and credibility of its annual financial statements; to monitor the central bank's expenses

and the performance of its administrative expenses budget; to supervise the operation of the internal audit function; to manage capital; and to address other financial issues that are in the council's mandate.

The **Monetary Policy and Financial Stability Committee** of the NBU Council develops Monetary Policy Guidelines and oversees their implementation.

The **Committee on Regulation, Remuneration, and Personnel** is an advisory body of the NBU Council that is responsible for:

- developing decisions and relevant materials for the appointment and dismissal of the NBU Deputy Governor and Head of the Internal Audit Department
- approving the methodology for determining the salary of the NBU Governor and NBU Deputy Governors and the remuneration of members of the NBU Council.

The Expert Advisory Board of the NBU Council is another advisory body. The main task of the board is to provide expert advice to NBU Council members, in particular in relation to assessing the impact from monetary policy parameters on Ukraine's social and economic development, identifying risks and threats to the country's economic growth, and providing recommendations for removing them.

The **Public Panel** of the NBU Council was liquidated by the NBU Council's decision dated 23 July 2019.

1.2.2. NBU Board

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

The NBU Board consists of six members: the NBU Governor, the First Deputy Governor, and four Deputy Governors. The NBU Governor is appointed by the Verkhovna Rada of Ukraine 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.

Composition of the NBU Board:

Yakiv Smolii, Governor of the NBU.

Kateryna Rozhkova, First Deputy Governor of the NBU. Rozhkova is responsible for prudential supervision.

Roman Borysenko, Deputy Governor of the NBU. Areas under his management include finance, human resources,

and the management of property and procurement for the NBU.

Dmytro Sologub, Deputy Governor of the NBU. Dmytro Sologub oversees monetary policy, macroprudential policy to ensure financial stability, economic analysis, the collection and analysis of statistics and reporting, and research.

Sergii Kholod, Deputy Governor of the NBU. Areas under his management include operational activity, payments, and cash circulation control.

Oleg Churiy, Deputy Governor of the NBU. Oleg Churiy oversees open market operations, FX regulation, and the NBU Depository.

More detailed information about the NBU Council and the NBU Board is available on the NBU's official website at <https://bank.gov.ua/about>

1.3. Organizational structure. Organizational changes at the NBU in 2019

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

The following changes occurred in the NBU's structure in 2019:

- The central bank established the Office for Protection of Consumer Rights in Financial Services. The purpose of management is to safeguard the rights of consumers of financial services, including by developing and streamlining appropriate methodological frameworks, supervising compliance by banks, other financial institutions, and entities that are not financial institutions but that have the right to provide certain financial services in line with the laws governing the protection of rights of consumers of financial services and advertising laws, and by considering relevant appeals.
- The NBU created the Analytics and SupTech Department. The purpose of this change was to optimize the analysis of the banking system and the implementation of supervisory technologies in the structure of the central bank.

- The NBU reorganized its Strategy and Reforming Department into the Strategy and Development Department. This was done in an effort to focus on new tasks, achieve synergies, consolidate the functions of strategic planning, development of financial sector strategies, and the NBU's development as an institution, and to create a business analysis function.
- The Risk Management Department was reorganized into the Financial and Operational Risk Office. This transformation is driven by the need to improve risk management and to separate risk control functions (the "second line of defense") from other operating activities.

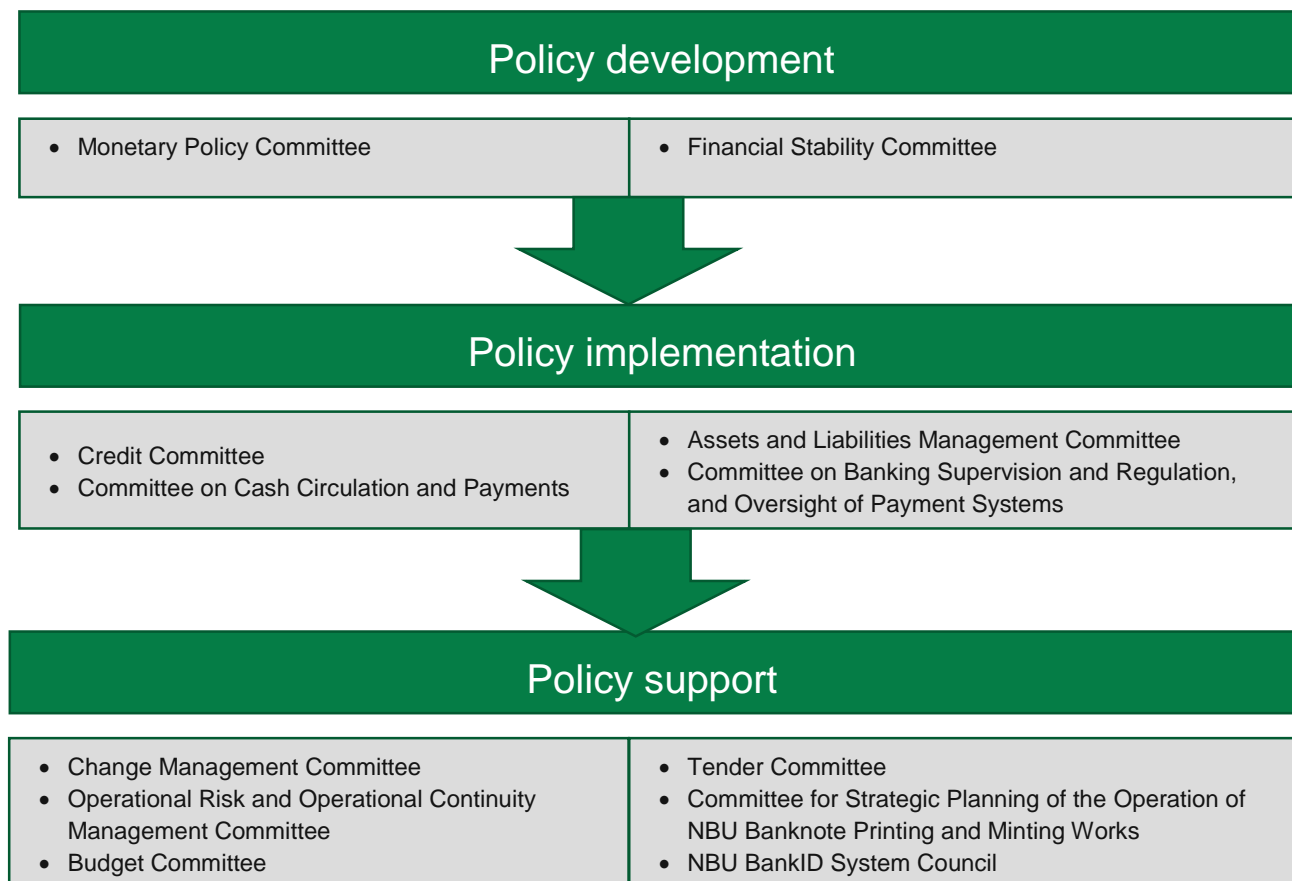
In 2019, the NBU removed from its structure the following elements:

- a group of NBU representatives in Ukraine's regions – in order to optimize the structure of the central bank and to complete the centralization of processes
- the Related Parties Monitoring Office – in order to redistribute functions between NBU units. This office's functions were transferred to the Financial Institutions Supervision Department.

1.4. Structure and composition of corporate governance bodies (NBU committees, accountability, interrelations)

At this time, the NBU Board operates eleven special committees and the BankID System Council. The structure of the committees covers all key activities of the NBU that require collective decisions. The committees fall into three main groups, as shown in Figure 2.

Figure 2. Structure and composition of corporate governance bodies



Mandate of NBU Committees

Monetary Policy Committee. A consultative 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:

- to formulate the principles of and to implement monetary policy
- to identify the goals and benchmarks of monetary policy
- to use monetary policy instruments.

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

- identification of possible systemic risks that threaten to undermine financial stability, and development of proposals to mitigate their negative impact
- development of recommendations on the use of macroprudential policy instruments, their alignment with monetary and microprudential policy actions, and monitoring the results of their implementation.

Credit Committee. A collective consultative and advisory body that pursues the following main objectives:

- formulation and submission of recommendations to the NBU Board on granting loans to the banks for liquidity support
- creation and use of provisions to cover financial risks
- work to recover overdue debt from the banks declared insolvent on loans granted by the NBU
- identification of methodology to assess and manage the credit risk of the NBU's transactions.

Assets and Liabilities Management Committee. A collective body of the NBU that is 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:

- to formulate and implement a policy for effective asset and liability management, and a policy to manage financial risks pertaining to international reserves, and market risks of the NBU
- to draw up and implement the NBU's investment strategy for transactions to place international reserves

- to determine open market actions.

Committee on Banking Regulation and Supervision and Oversight of Payment Systems. A collective body of the NBU to which the NBU Board has delegated some of its banking regulation and supervision powers, currency supervision powers, government regulation and financial monitoring powers, and payment systems oversight powers. The main objectives of the committee are:

- to ensure that the Ukrainian banking system is stable and reliable, and to safeguard the interests of depositors and other bank creditors
- to resolve major issues of supervision of financial institutions
- to identify trends in the banking system's development
- to apply corrective measures for breach of banking and currency laws, financial monitoring laws, payment system and money transfer laws, and NBU regulations
- to register and licence the banks, to accredit bank branches and representation offices of foreign banks in Ukraine, and to register payment systems.

Committee on Cash Circulation and Payments. A collective consultative and advisory body of the NBU Board whose primary objective is to take a systemic approach to the determination of policies, rules, and regulation of cash circulation issues, and the synchronization of the specifics of the cash and cashless functions. The committee consider issues and makes recommendations on:

- strategic development of cash circulation
- management of cash circulation and cash payments
- management of the production of Ukrainian banknotes, coins, commemorative and bullion coins, and souvenir products
- strategic development of cashless payments, oversight of payment infrastructure, operation of payment systems and fund transfers, issues related to the implementation of innovative payment instruments.

Change Management Committee. A collective advisory body of the NBU Board that conducts the centralized management of the NBU's projects to channel its changes towards building a more modern, institutionally capable central bank and financial sector, including the banking system of Ukraine. The committee pursues the following main objectives:

- centralized management of NBU projects and consideration of materials and proposals to initiate and implement changes in the NBU

- approval of strategic programs and plans for the development of the central bank and the financial sector.

Budget Committee. A collective consultative and advisory body whose main objectives are:

- to facilitate the development and implementation of NBU policies that make the management of the central bank's financial resources more effective
- to ensure that budgeting is implemented and integrated into strategic planning
- to facilitate the implementation of the cost management process at the NBU.

Operational Risk and Operational Continuity Management Committee. The committee is a standing collective advisory body established to support and optimize the system of operational risk management and to implement and develop the culture of operational risk management at the NBU. The main objectives of the committee are:

- to identify operation risk management policies, operational continuity policies, and internal control policies of the NBU
- to conduct the general monitoring and control of operational risks at the NBU
- to identify operational risk insurance policies and outsourcing policies.

Tender Committee. A collective body of the NBU that is responsible for the organization and conduct of

procurement. The committee selects and conducts procurement procedures and ensures that all participants face equal conditions, and that winners are identified as a result of a fair and unbiased selection process.

Committee for Strategic Planning of the Operation of the NBU Banknote Printing and Minting Works. The committee is a collective advisory body of the NBU Board established for the strategic planning of the activities of the NBU Banknote Printing and Minting Works to ensure that it operates in a manner that promotes quality-oriented and effective changes.

The **BankID System Council**, created in 2019, is a collective body tasked with making decisions on issues of development, support, and facilitation of the NBU's BankID System's operation (hereinafter – the System). The council's primary objectives are:

- to identify legislative, organizational, and technological conditions for the System's building, operation, and development, and to ensure that the System operates in these conditions
- to ensure that the settlement bank and the system's subscribers operate and interact in a coordinated fashion.

The professionalism of the NBU's committees helps ensure that the NBU's activities are transparent, strengthens the effectiveness of the NBU Board, and distributes the workload among the Board and the committees.

1.5. Process management

Process management and the NBU's policy for developing its management system

The NBU applies a systemic approach to process management. This approach aims to improve the NBU's operations and to enhance the quality and effectiveness of its processes.

Every year, the NBU Board develops a comprehensive vision of its process management for the next year through assessing its level of process management maturity.

In order to identify all of its processes, the NBU created a process register. This register, which categorizes processes according to three levels, is based on a hierarchical model, in which higher level processes are broken down into lower level ones:

- first level processes are the central bank's area of activity

- second level processes determine the internal content of the central bank's areas or types of activities, as outlined in first level processes, and are grouped using the criterion of common goals and methods for creating value for internal or external clients
- third level processes comprise a limited set of interconnected operations performed by one or more process participants to achieve a specific result.

As of 31 December 2019, the NBU had 30 first level processes, 196 second level processes, and 873 third level ones.

The NBU changed its process register in 2019, among other things, by adding new processes to it after its mandate was expanded to include the protection of consumers of financial services.

The NBU applies a quantity measurement approach to assess the level of its process implementation. The system

of process indicators is built on the principles of measurability, reliability, transparency, and clearness. The NBU relies on key performance indicators (KPIs) and service level agreements (SLAs) between owners and clients/participants/providers to assess, monitor and oversee its processes.

All changes to processes have the aim of streamlining these processes and making them more efficient. In 2019, the NBU completed 55 initiatives out of the 85 it had planned to implement. The reasons for this were the extension of deadlines for completing initiatives and the cancellation of those initiatives that had lost their relevance. Some of 109 initiatives completed in 2018 became building blocks for new projects. In 2020 and the following years, the central bank plans to implement 64 initiatives that aim to boost the effectiveness of its operations. The main focus is on the automation and robotization of key functions and processes.

Project Management

The NBU's Project Office is improving and streamlining its project management methodology with a view to enhancing the effectiveness of project implementation. This concerns both the NBU's internal transformation projects and financial sector development projects.

In 2019, the NBU revised its approaches to planning, monitoring and overseeing projects and their results. Among other things, the central bank

- implemented the stage-gate technique, in which a project is divided into distinct stages. The results of each stage are approved by the NBU's Change Management Committee.
- introduced resource planning for project stages, which allows for a clearer and more transparent assignment of participants to specific periods of project implementation
- put in place a control panel – a tool used to monitor the use of project products once the project has been completed and given to the ordering customer to use.

In addition, the NBU deployed a methodology for managing a project program – a tool used to effectively coordinate several projects and tasks that aim to achieve a common large-scale goal.

The central bank established a steering committee consisting of the main participants in the project program in order to manage the program more effectively. This made it possible to respond more quickly to problems and unresolved issues related to the implementation of the program, while also making it easier for project participants to interact with each other.

The NBU is also constantly involved in efforts to increase the level of knowledge of its project managers. In 2019, it organized group training in project management methodology and made plans for opening a school for project managers. Among other things, the school will hold extensive training courses in some important project management areas for staff from the central bank's core units.

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

The economy of Ukraine grew steadily in 2019: real GDP grew by 3.2% yoy, which was almost the level of 2018 (3.4% as of year-end 2018) (ukrstat.gov.ua). The important economic growth drivers were a pickup in private consumption on the back of higher wages and pensions, improved consumer sentiment, and rapid growth in investment. This was reflected in growth in trade, transportation, and construction, and in a number of services sectors. Another record harvest of grain and oilseeds made a significant contribution to the growth in GDP and exports. However, the performance of industrial production was weak as of the end of the year, due to the unfavorable external price environment, a decrease in price competitiveness driven by the stronger real effective exchange rate, and warm weather. Economic growth in 2019 spurred labor demand, which led to a decline in unemployment and an increase in the employment rate.

The current account deficit narrowed to 0.9% of GDP in 2019. An important factor behind the decrease in the deficit was the compensation received by Naftogaz of Ukraine from PJSC Gazprom under a ruling of the Stockholm Arbitration

Court. However, apart from the received compensation, the current account deficit shrank to 2.7% of GDP due to the decreased trade deficit in goods, steady growth in services exports, and smaller amounts of repatriated dividends. Thanks to capital inflows into the public and real sectors, the gross international reserves rose to the highest level since the end of 2012, reaching USD 25.3 billion as of 31 December 2019.

Inflationary pressures subsided in 2019: consumer inflation declined to a six-year low of 4.1%, versus 9.8% in 2018 (ukrstat.gov.ua). The NBU achieved its medium-term inflation target of 5% ± 1 pp, which it declared in 2015. That was driven by lower underlying inflationary pressures reflected in slower core inflation (3.9% yoy). The fall in inflation to its target in 2019 was mainly the result of the NBU's consistent monetary policy, which aims to deliver price stability, and the prudent fiscal policy.

The key factor behind the rapid disinflation was the appreciation of the hryvnia fueled by a surplus of foreign currency that existed on the market throughout most of last

year. The increase in foreign currency supply was caused by exporters selling large amounts of their foreign currency revenues and foreign investors showing lively interest in hryvnia-denominated government bonds. With a lasting period of macroeconomic stability and attractive yields, nonresidents' portfolio of hryvnia-denominated domestic government debt securities rose by USD 4.3 billion in 2019. On the other hand, higher productivity – especially in agriculture, which led to another record harvest of grain and oil crops – boosted export proceeds. As prices for exported goods declined and import prices fell even lower, terms of trade improved also contributing to the growth in foreign currency supply in Ukraine.

Apart from the FX factor, the decline in inflation was also driven by an improvement in inflation expectations, lower fuel prices, and weaker pressure from food supply and administered prices. However, consumer demand and rapid wage growth continued to put pressure on prices, reflected in a moderate slowdown in the growth of services prices.

As of year-end 2019, the consolidated budget ran a deficit of UAH 84.3 billion. The GDP deficit remained virtually unchanged from a year ago and was lower than the IMF criterion. Coupled with the effect of the hryvnia's strengthening, this made public and publicly guaranteed debt

decline to almost 50% of GDP. The currency composition of public debt also improved.

In 2019, the banking system continued to have a substantial liquidity surplus (as seen in balances of banks' correspondent accounts and holdings of NBU certificates of deposit), which increased notably in Q4. Certificates of deposit grew by UAH 90.1 billion, to UAH 151.9 billion as of the end of 2019. Balances of banks' correspondent accounts increased by UAH 16.7 billion, to UAH 52.4 billion.

In 2019, the main source of the banking system's liquidity came from purchases of foreign currency the NBU carried out when the supply of foreign currency exceeded demand. As of the end of the year, the NBU was a net buyer of foreign currency, purchasing a total of USD 7.9 billion. Liquidity was mainly absorbed in 2019 by the government's transactions and an increase in cash in circulation, which peaked, as is usual, in December, due to budgets catching up on a considerable backlog of expenditure financing at the end of the year.

As of 31 December 2019, Fitch and Standard & Poor's upgraded Ukraine's sovereign rating to B, and Moody's affirmed the Caa1 rating for Ukraine (as of 31 December 2018, Ukraine's sovereign rating was Caa1 according to Moody's and B- according to Standard & Poor's and Fitch)

Part 2. Goals and Strategies

2.1. Strategic Goals of the National Bank of Ukraine

Approved and made public in the spring of 2018, the NBU's medium-term strategy is the first document to outline the central bank's goals for the coming years. The NBU's strategy is the only instrument that systemizes the ways to achieve the central bank's vision and mission, providing all of the NBU's customers with a clear and understandable view of its further policies.

The NBU's mission is to deliver price and financial stability in order to promote sustainable economic growth in Ukraine.

The NBU's vision presents the NBU as a modern, open, and independent central bank, which enjoys public trust and is integrated into the European community of national central banks.

As at the end of 2019, the NBU reached the final stage of the first strategic cycle based on the 2018–2020 Strategy and, in particular, the following strategic goals:

- low and stable inflation
- stable, transparent, and effective banking system
- resumption of lending
- effective regulation of the financial sector
- free flow of capital
- financial inclusion
- modern, open, independent, and effective central bank.

2.2. Strategic Development Plans that Take into Account Existing Opportunities and Threats, and the NBU's Internal Resources and Values

In 2020, the NBU will work on upgrading the strategic planning process, enhancing the function of strategic analysis and monitoring of achieving the strategic goals to develop an integrated strategic vision of the regulator's development until 2025. This will include tasks for the financial sector development to implement the Strategy of Ukrainian Financial Sector Development until 2025, vision of the functions development in line with the updated needs of participants and consumers of the financial ecosystem and taking into account global trends and changes in the external and internal contexts.

The updated approach to development and implementation of the strategy along with the focus on customers needs will enable the following:

- to synchronize planning of the financial sector's strategy and the NBU's strategy

- to synchronize strategic planning and financial planning (cost estimate process)
- to attract a wide range of staff to the strategic planning process through combination of top-down and bottom-up approaches
- to introduce a new toolkit for operational planning, which will help to build an end-to-end system of goal setting and cascading of strategic goals into tasks for units
- to synchronize and systemize the strategic planning processes and the strategy implementation through projects and processes.

The NBU's strategic goals and their detailed description for 2019 and 2020 are provided in the table below.

Strategic goals of the National Bank of Ukraine	Goals (expected effects) for 2019	Goals (expected effects) for 2020	Goals (expected effects) until 2020
1. Low and stable inflation	<ul style="list-style-type: none"> ▪ Decreased inflation down to 5% in the mid-term creating basis for improving investment attractiveness and sustainable economic growth in Ukraine ▪ Approximated inflation expectations of economic agents to the NBU inflation targets and resolved ambiguity on future inflation required for lowering loan rates ▪ Accomplished operational objective of the monetary policy, i.e. maintain hryvnia interbank rates close to the key policy rate of the NBU 	<ul style="list-style-type: none"> ▪ Macroeconomic stability has been achieved ▪ The NBU's monetary policy has become even more transparent for the central bank's clients. The monetary policy transmission mechanism has improved, allowing the inflation expectations to approach the inflation target value ▪ In-depth analytics and process automation facilitate informed decision-making 	<ul style="list-style-type: none"> ▪ Low and predictable inflation that does not create obstacles to making long-term investment or savings decisions ▪ Low real and nominal interest rates
2. Stable, transparent, and effective banking system	<ul style="list-style-type: none"> ▪ The banking system is resilient to macroeconomic shocks and systemic risks ▪ Liquidity ratios of the banking system comply with the Basel III standards and CRD IV/CRR; the share of high-quality liquid assets in the banking system is sufficient for complying with LCR at the level of 100% ▪ More transparent prudential requirements to banks, improved supervisory processes and instruments harmonized with the best practices of the European Central Bank and the European Banking Authority ▪ Improved approaches to establishing the risk management system in banks enhance the quality of loan portfolios of banks and increase profitability of the banking system ▪ Corporate governance in banks, including state-owned banks, adheres to the international standards and the best practices ▪ Introduction of requirements to collective suitability of the supervisory board and the management board, updated requirements to the business reputation and the individual suitability of bank managers ▪ Higher quality of information disclosure by banks ▪ Reduction of the de-risking effect (refusal of foreign financial institutions to continue correspondent relationships with Ukrainian banks) 	<ul style="list-style-type: none"> ▪ The regulatory framework of the banking sector has been aligned with European standards ▪ Supervisory tools of the central bank have been implemented, allowing for greater stability and crisis resilience of banks ▪ State-owned banks now operate more efficiently 	<ul style="list-style-type: none"> ▪ Liquidity and capital requirements are in line with best international practices and EU directives ▪ Effective supervision over financial institutions and uninterrupted supervisory review and evaluation processes (SREP) have been established in all banks ▪ Banks perform a proper risk assessment and take it into account in their operations ▪ A mechanism for protecting information in banks and counteracting cyber attacks has been put in place
3. Resumption of lending	<ul style="list-style-type: none"> ▪ Gradual reduction of the nonperforming loan (NPL) portfolio (including, due to development of the secondary market of nonperforming exposures) ▪ Increase of loan portfolio in banks is equal or above the nominal GDP growth rates ▪ Increased share of long-term corporate and retail loans ▪ Lower credit risks of banks 	<ul style="list-style-type: none"> ▪ Lending has become more accessible, with new tools being created and launched ▪ The quality of borrower vetting has been improved, which can further prevent the accumulation of NPLs ▪ A secondary market for NPLs has been launched 	<ul style="list-style-type: none"> ▪ Lower loan rates ▪ Lending is increasing at a pace sufficient to deliver economic growth, but not posing threats to financial stability ▪ Resumption of mortgage lending ▪ The percentage of hryvnia loans is rising ▪ High quality of new loans ▪ Transparent and predictable lending conditions

Strategic goals of the National Bank of Ukraine	Goals (expected effects) for 2019	Goals (expected effects) for 2020	Goals (expected effects) until 2020
4. Effective regulation of the financial sector	<ul style="list-style-type: none"> ▪ Expanded and diversified capital markets in Ukraine ▪ Advanced accessibility for economic agents to financial resources ▪ Simplified requirements for nonresidents to enter the securities market, including domestic government debt securities ▪ Higher quality of regulation of the nonbank financial market ▪ Building up trust to banks and other players in the financial services market 	<ul style="list-style-type: none"> ▪ The transfer of the NFSC's functions to the NBU has been successfully completed. Moving the functions from one regulator to another was mostly unnoticeable for market participants and ensured smooth and uninterrupted operation of the nonbank financial institutions ▪ High-priority draft laws and NBU regulations governing the nonbank segment of the financial market have been developed. They will gradually align the standards for regulation and supervision of this market segment to those applied to the banking sector. As a result, consumers of financial services will be more protected and this will form prerequisites for developing the market of nonbank financial institutions through higher volumes and penetration level of financial services in the financial system of Ukraine ▪ The NBF market has been analyzed and assessed ▪ Research for estimating the level of public confidence in nonbank financial institutions has been conducted 	<ul style="list-style-type: none"> ▪ An effective model for financial sector regulation is established ▪ The nonbank financial services market operates in accordance with the best standards and effectively develops ▪ People have confidence in nonbank financial institutions ▪ Access to the Ukrainian financial market has been eased for local and international investors
5. Free flow of capital	<ul style="list-style-type: none"> ▪ Expanded options for economic agents for executing FX transactions ▪ Advanced integration of Ukraine into international capital markets ▪ Increased foreign investments in the Ukrainian economy ▪ Improved financial and fiscal transparency of businesses and households 	<ul style="list-style-type: none"> ▪ BEPS principles have been implemented in Ukraine, and a full currency liberalization has thus been conducted 	<ul style="list-style-type: none"> ▪ Anti-crisis (temporary) FX restrictions have been cancelled in a way that does not threaten financial stability, ▪ foreign direct and portfolio investment and external goods turnover are rising ▪ Licenses for investing abroad have been cancelled ▪ The OECD's base erosion and profit shifting (BEPS) guidelines have been implemented ▪ Access to the capital markets has been simplified for investors
6. Financial inclusion	<ul style="list-style-type: none"> ▪ Enhanced protection of rights and interests of financial services consumers ▪ Expanded financial opportunities for economic agents and their access to financial services/infrastructure ▪ Development of remote banking and financial products ▪ Using account numbers under the IBAN standard for settlements in Ukraine and for cross-border settlements ▪ Speeding up of settlements ▪ Improved financial literacy of the general public ▪ More workflow and communication with market players in electronic format ▪ Improved performance and competitiveness of the Ukrainian banking system ▪ Development of innovative solutions/services in the financial services markets 	<ul style="list-style-type: none"> ▪ The NBU's electronic payment system has become more up-to-date and capable of performing fast payments ▪ Measures have been taken for increasing the financial literacy ▪ Access to financial services has been expanded 	<ul style="list-style-type: none"> ▪ Speeding up the development of mobile payments and alternative payment solutions on the basis of innovative mobile payment technology ▪ The key elements of ISO 20022 and ISO 13616 (IBAN) have been implemented ▪ The use of cash is declining steadily ▪ The use of banking products is increasing, and funds are returning to the banking system ▪ Remote customer identification using digital signatures and BankIDs has been put into place ▪ Electronic documentation and information sharing with market players using digital and electronic signatures have been established

Strategic goals of the National Bank of Ukraine	Goals (expected effects) for 2019	Goals (expected effects) for 2020	Goals (expected effects) until 2020
7. Modern, open, independent, and effective central bank	<ul style="list-style-type: none"> ▪ Improved trust of stakeholders in the NBU as an open, independent, competent and effective regulator ▪ Improved cooperation of the NBU with the professional market players ▪ Developed analytical and research capabilities of the NBU and enhanced role as an expertise hub in Ukraine and abroad ▪ Better information communication to the NBU's customers ▪ Improved quality of drawing-up and approval of decisions at the NBU ▪ Up-to-date information infrastructure and automation of internal processes ▪ Improved efficiency for allocating resources and reducing administrative expenses 	<ul style="list-style-type: none"> ▪ The NBU Strategy until 2025 has been developed and approved as the main document stipulating the central bank's plans for the medium term ▪ The NBU's decisions and policies are transparent, and the central bank customers have more opportunities to learn about them and use this information to make financial decisions 	<ol style="list-style-type: none"> 1. Processes. Putting in place an effective decision-making system for reaching the goals by: <ul style="list-style-type: none"> ▪ Developing analytical and research capabilities ▪ Providing information to the public and markets on a regular basis and in a comprehensible manner, which is a key tool of constructive influence ▪ Ensuring the development and implementation of regulatory decisions are transparent and effective ▪ Putting in place a system to deliver appropriate internal control and minimize risks 2. Resources. Promoting the adaptability of the central bank's internal resources to its strategic goals by: <ul style="list-style-type: none"> ▪ Developing new leadership focusing on individuals and team-building ▪ Establishing modern information infrastructure and delivering a high level of process automation ▪ Developing a culture of using public funds prudently and effectively

The full version of *Strategy of the National Bank of Ukraine. 2020 Action Plan* is available on the NBU's official website at:
<https://bank.gov.ua/files/XzzqfERNTUPaPg> <https://bank.gov.ua/news/all/strategiya-natsionalnogo-banku-ukrayini-programa-diy-2020>
https://bank.gov.ua/admin_uploads/article/Strategy_NBU_Programa_dij_2019.pdf?v=4

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 in line with its mandate:

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

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.

The NBU employs such types of financial resources as debt and equity, namely paid-in capital and earned capital.

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

- loans received from foreign banks and organizations
- funds received from the IMF, including liabilities for 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 losses reflected in the consolidated statement of comprehensive income.

The paid-in capital refers to the authorized capital of UAH 100 million that is owned by the state. A part of the NBU's distributable profit and, if necessary, 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 at the expense a portion of profits earned during the year
- revaluation provisions 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 provisions are created from a portion of profits earned in the current year. Revaluation provisions are made at the expense of accumulated gains from financial instruments revaluation carried out during the year. These

provisions are reflected in the NBU's consolidated statement of comprehensive income.

For more details on the management of NBU capital, see Note 20 of 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 the state budget and the NBU's equity as set forth in the law. Therefore, forecasting distributable profit is important for assessing future financial position and the amount of equity and for medium-term budget planning.

The NBU makes distributable profit forecasts. These forecasts include projections of the NBU's financial position (assets, liabilities, equity) and incomes and expenses, which allows forecasting distributable profit and its distribution. The forecasts can cover the following periods:

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

The macroeconomic forecast approved by the NBU Board as part of the monetary policy decision-making process is the basis for the forecast of distributable profit. The macroeconomic forecast contains information about the NBU's projections of monetary base, international reserves and transactions with the reserves, the hryvnia's exchange rate, the key policy rate, and the Consumer Price Index. In addition, the forecast of open market transactions serves to provide inputs for the distributable profit forecast, including such parameters as yields on foreign currency instruments, projected amounts of debt liabilities to the IMF, projected incomes and expenses from commissions and other items (including administrative

expenses), projected repayments of past due debt on bank loans and releasing provisions for such loans, and so on.

All inputs are integrated into the financial forecast model, which processes the inputs. Also, a number of indicators are calculated in line with the algorithm set in the model. Expert assumptions are an important element of forecasting, as they allow forecasting future indicators under conditions of uncertainty. Scenario modelling may be used in addition in order to build different scenarios depending on the variation of inputs and expert assumptions.

3.1.2. Planning and Controlling Administrative Expenses

The NBU drafts its administrative budget for the 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
- provisions for assets and other deductions
- investment costs (in creating and developing the NBU's facilities and equipment; in associated and other companies).

Financial resources are planned to meet the needs of the NBU and the NBU Council for the year ahead and thus enable the NBU to fulfill its tasks and attain the 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 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 the 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.
- The Accounting Chamber of Ukraine performs annual monitoring of the implementation of the NBU's

administrative budget and its liabilities to transfer funds to the state budget of Ukraine. The Accounting Chamber sends the audit results to the Verkhovna Rada, the Cabinet of Ministers, and the President of Ukraine.

Reports on the NBU's planned and actual expenses for the reporting period are submitted on a monthly basis to the Budget Committee and on a quarterly basis to the NBU Board and the NBU Council.

The approval and implementation of the NBU's administrative budget is controlled by the internal audit system. The procurement procedure is public and competitive.

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

The NBU uses a cost management system, which 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 (excluding expenses on provisioning for impairment of financial assets, providing security for potential liabilities, and other costs that are not subject to distribution) among three cost allocation targets: NBU structural units, level 2 processes, and the NBU's functions.

Cost allocation results are reflected in quarterly reports that contain information (data as of a certain date and historical data) about costs of structural units, level 2 processes, and the NBU's functions. These reports are used to assess the efficiency of NBU units and level 2 processes as well as to find ways to optimize costs and make decisions on cost management and the NBU's activities.

The NBU has established and maintains the corporate culture of resource saving by its units. In particular, the staff incentive system envisages a dependence of bonuses paid to heads of units on cost saving results.

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.

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, etc.).

Human resources do not appear in the NBU's consolidated statement of financial position, as this type of resources does not meet the recognition criteria – the NBU has no control. However, the consolidated statement of comprehensive income reflects expenses on these resources: staff costs and other costs, provisions, and other expenses.

HR Policy

In 2019, the NBU continued to implement projects and reach goals within the framework of its HR strategy for 2018–2020. The strategy covers the key directions and main interactions of HR management, which primarily concern search, selection, appraisal, training and development, retention, and remuneration of the staff. The NBU worked to create a flexible incentive system. In particular, the central bank started a transition to Total Rewards principles in 2019. According to these principles, the employer takes care not only of financial remuneration, but also of the overall satisfaction of its employees' needs. As the NBU shaped its employer brand, it carried out research, created a value proposition, and defined channels and formats for its employer brand promotion. The central bank thus shifted focus of interacting with different target groups. In 2019, the NBU improved its staff rotation program and revised its conditions. This tool

allows staffers to broaden their experience, better understand processes in other units, become more independent, prevent professional burnout, and open promotion opportunities.

Remuneration Policy

Remuneration (pay) of NBU employees is set out in regulations on remuneration (pay) approved by the NBU Board.

The employee remuneration policy of the NBU:

a) intends to create conditions and incentives for employees to show high-quality performance and put maximum effort into achieving the NBU's strategic goals and fulfilling the NBU's main tasks and functions as set out in the Law of Ukraine *On the National Bank of Ukraine*

b) defines the main principles for determining the remuneration of NBU employees, including such principles as fairness, transparency, competitiveness, and flexibility

c) estimates the statistical remuneration rate on the labor market, which the NBU uses as a reference; remuneration at the NBU must not be lower than wages in the third quartile of the overall labor market (including in the banking, financial, and IT sectors)

d) is based on a positions grading system

e) includes the following remuneration components:

- base component, which is the base pay in the form of the official salary; salaries are set within the position grade range, which is reviewed at least once a year
- variable component, which is the extra salary in the form of raises, bonuses, and premiums
- other remunerations, namely financial aid for medical treatment of employees and their family members, retirement benefits, and redundancy payments.

3.3. Production resources

The NBU's production resources include manmade (rather than natural) physical assets that the central bank uses in the performance of its functions and services.

The NBU's production resources include:

- property, and equipment (buildings, structures, vehicles, machinery, equipment, tools, appliances, gear, capital investments in property and equipment, etc.)
- investment property
- inventories of tangible assets
- other 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 Comprehensive Income.

Management of state-owned real assets

In accordance with 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.

To efficiently manage its real assets portfolio, the NBU disposes of noncore assets, takes a functionality-based approach to property disposal, and always uses effective methods of asset management.

In 2019, the NBU adopted a Real Assets Management Strategy for 2019–2025, which identifies the main conceptual areas of the optimization and effective use of the NBU's real assets portfolio.

In 2019, the NBU rented out the real assets under its operating control to the following entities: National Anticorruption Bureau, Banking University, the Regional Office of the Deposit Guarantee Fund of Ukraine for the Kharkiv, Donetsk, and Luhansk oblasts (this tenant underwent a reorganization), the Second Administrative Court of Appeal, the Lviv Oblast Office of the Antimonopoly Committee of Ukraine, Oschadbank JSC, and others.

As part of its State-Owned Real Assets Management Strategy, the NBU transferred 18 administrative building complexes and 13 garages/noncore building complexes to the authorities empowered to manage them. These real assets were then disposed of through sale or privatization, allowing the NBU to save on their maintenance costs.

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, sites, 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

As of 1 January 2019, the NBU had under management 443 of its own real assets, including 81 land plots and 362 buildings and engineering structures.

Collateral management policy

The NBU issues loans backed by securities, real assets, property rights under bank loan agreements, deposits, 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 30 of the NBU Consolidated Financial Statements.

Under pledge agreements, collateral is managed and stored by the borrower until the creditor fails to meet their commitments under the loan agreement and the bank decides to recover the collateral to collect the debt.

Nonperforming loans issued to banks were repaid out of proceeds from the sale of collateral, as well as through appropriation of collateral by the NBU.

In accordance with the Law of Ukraine *On the National Bank of Ukraine*, the NBU acquires any rights and assets, subject to their disposal as soon as possible, in order to recover the debts it is owed. The central bank does not use these rights and assets for business purposes.

The NBU manages 36 purchased land plots measuring a total 112.5 hectares in area, and 7 acquired real assets measuring a total 44,723.70 square meters.

Section 4 describes how the NBU acquires assets of this type, and how it disposes of them to recover loan debt.

Statement of Comprehensive Income mainly as administrative and other expenses.

Software developed by the central bank itself, the NBU's 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 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 Comprehensive Income.

For more information on the development of research at the NBU, the modernization of reporting systems, the development of open data, IT, information security, and bank cyber security, see Section 5.

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 employees and the rules of conduct, including anti-corruption ones
- relationships with stakeholders
- 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 incurs expenses for their development and maintenance. Therefore, such expenses are recorded mainly as administrative and other expenses in the consolidated statements of comprehensive income.

Code of conduct

The NBU Code of Conduct (hereinafter – the Code) was approved in 2016 to strengthen the NBU's institutional capacity.

The Code's provisions apply not only to employees but also to suppliers, consultants, trainees, and other persons cooperating with the NBU.

The Code together with the NBU values are the fundamental pillars of the NBU corporate culture, necessary to fulfill the mission and achieve the vision of the NBU.

The Code regulates the rules of conduct regarding:

- daily working relationships between employees
- compliance with the Constitution of Ukraine, Ukrainian laws and NBU regulations and administrative acts
- protection and preservation of NBU assets
- confidentiality of information
- environmental protection and efficiency of use of natural resources
- compliance with the legislation and rules while employees are abroad
- prioritization of public and state interests
- responsibility for the employees' fulfillment of the tasks and goals
- interaction with public sector authorities, banks, and other financial institutions
- decision making, communication standards, interaction with the media
- behavior and interaction with other social network users, dissemination of information and its distortion

- conflict of interest, political activity, activities outside the NBU, combating corruption, and rules for accepting gifts, etc.

Anti-corruption policy

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

In 2019, the corruption prevention was carried out in accordance with the requirements of the anti-corruption legislation and the NBU's Anti-Corruption Program for 2018–2019, 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:

- application of the collegiality principle when making important decisions
- regulation of processes of NBU units' operation
- control over compliance of NBU employees with anti-corruption restrictions, requirements regarding prevention and resolution of conflict of interest, other requirements of anti-corruption legislation
- periodic assessment of corruption risks inherent in the NBU's activities and implementation of measures to eliminate (minimize) the identified corruption risks
- verification of the details of applicants for positions of NBU officials
- control over timely submission of declarations by NBU officials as the persons authorized to perform functions of the state or local authorities
- command investigations and inspections and implementation of measures of prosecution of persons guilty of corruption or corruption-related offences
- building awareness of the anti-corruption legislation among NBU employees
- implementation of other measures provided for by the anti-corruption law.

Labor Safety

The NBU's main principle is to prioritize its employees' lives and health in the course of attaining production and economic results.

The basic principles of labor safety at the NBU are as follows:

- creating and maintaining safe labor conditions that cause no harm; giving priority to the life and health of employees in the course of their work
- labor protection in line with the state labor protection policy
- uninterrupted and effective functioning of the labor protection management system, and realization of the

staff's constitutional right to protect their lives and health in the course of their work

- raising the level of industrial safety by implementing advanced technologies and equipment, along with scientific and technical breakthroughs, mechanization and automation of production, while complying with ergonomic requirements
- organizing and exercising control over labor conditions to meet the requirements of state regulations on labor protection.

The NBU puts in constant effort to create safe working conditions. In particular, working conditions at typical workplaces were subjected to laboratory testing in 2019. On the basis of such tests, the NBU takes measures for assessing typical individual workplaces and approving benefits and compensations at those workplaces, where exposure to hazardous and harmful factors exceed the permissible levels.

Responsibility for using/maintaining high-risk equipment has been introduced.

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 (introductory and on-the-job) for NBU head office employees
- 58 labor safety instructions
- safe working methods and cooperation with employees as regards labor safety
- provision of the NBU employees with collective and individual protection equipment, special work clothes and footwear.

NBU Corporate Non-State Pension Fund (hereinafter – the CNPF)

More detailed information about the NBU's relationships with the CNPF is provided in Note 1 to the consolidated financial statements for the year ended 31 December 2019.

The CNPF's purpose is to attract highly qualified specialists to the NBU, reduce labor turnover, and create decent support for the participants after their retirement. 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.

Voluntary health insurance system

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

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

Primary Labor Union Organization of the NBU (hereinafter - the Labor Union)

The NBU Labor Union is involved in the following social initiatives:

- employees' health care
- measures to prevent accidents. Collective agreement has been signed for 2018-2023
- cooperation with the NBU administration as to mitigation of adverse effects of dismissals.

The Labor Union focused its activities on the following areas during 2019:

1. Promoting a healthy lifestyle
 - partial reimbursement of admittance to health resorts for the Labor Union members and their children (16 years and under)
 - partial reimbursement of sports club (Sport Life club, in particular) membership for the Labor Union members and special prices for close relatives
 - support of the NBU teams in football, table tennis, marathon running, and volleyball
 - organizing volleyball competitions among the NBU units.
2. Reviewing information on planned dismissals of employees
 - reviewing petitions, filed by the NBU administration, for dismissal of the Labor Union members
 - consulting in collaboration with the NBU administration on preventing dismissals, minimizing their number, and mitigating their adverse effects
 - developing measures to minimize the negative impact of dismissals on Labor Union members.

For information on indicators of the Labor Union activities, see Section 4.

NBU Brand:

The NBU brand epitomizes the features and attributes that characterize its perception by target groups or individuals.

The NBU approved a new Unified System of Graphic and Visual Elements (brand book) at the end of 2018, and since early 2019, the regulator has been positioning its brand.

The mythical griffins, which had symbolized power, authority and pride for 26 years, have been replaced with a modern logo that represents the openness of the NBU's actions, professionalism, growth, and sound decisions.

The NBU's identity, philosophy, and positioning vector were completely replaced in 2019. The NBU's transformation and modifications are visualized in line with its Vision, Mission, Values, and Strategy. Values are the

basis of corporate culture and they are actively embedded in projects and processes.

The new identity reflects the changes that have already become meaningful.

Customer-centric approach was adopted as a basis for the brand philosophy. All activities of the ecosystem participants are aimed at increasing value for a financial service consumer. The NBU creates the conditions for the activities of different customer groups to meet the citizens' needs.

3.6. Natural resources

Natural resources include renewable and non-renewable natural resources and processes that enable provision of services. These are namely air, water, land, minerals, forests, and ecosystem biodiversity and health.

Natural resources are not key in the NBU's activities. However, the NBU pays taxes and compulsory payments

The NBU successfully completed the rebranding project in 2019 and has a strong modern brand today. Nowadays, Ukraine sees the NBU as a leader of reforms, the architect of the future financial sector, and a modern independent state institution operating for the well-being of citizens and the state. And the world community perceives the NBU as a modern central bank integrated into the European community, which brings financial expertise and innovation to the world markets.

for their use, such as land charge, charges for the use of radio frequency, for air and water emissions, and transport tax, etc. The NBU implements environmental protection policy. The NBU recognizes expenses related to paying taxes and environmental protection activities mainly as administrative and other expenses in the consolidated statements of comprehensive income.

3.7. NBU and Its Stakeholders

NBU and Its Stakeholders

The NBU's medium-term strategy sets out six client groups of participants in the financial ecosystem according to their role therein. The regulator builds up the relationship with all the client groups, namely with:

- experts
- policy makers in charge of economic and financial policy
- financial sector entities
- business entities
- state as services provider
- Ukrainian citizens.

The NBU interacts with them on the principles of partnership and transparency. The central bank is interested in engaging effectively with all customer groups, since it is a prerequisite for the effective fulfillment of the central bank's mandate and a way of providing preconditions for sustainable long-term economic growth.

The second annual meeting between the NBU and its stakeholders became one of the NBU's systemically important events. The event was held in early January 2019 and brought together about 250 guests: diplomats, government officials, bankers, business representatives, experts, and the media.

The annual meeting demonstrated the central bank's transparency and became one of the indispensable instruments for further development of the NBU's institutional relations. Such direct interaction allows for:

- efficient dialogue and feedback
- information on the central bank's policy from the primary source
- realistic business and public expectations for the year
- rapid surveys on customer expectations.

The central bank has adopted the practice of publicly presenting its action plan for the year at such meetings, which, in addition to a specific list of plans with deadlines, also contains a report on the performance for the previous year.

Cooperation With Experts

The NBU systematically and proactively interacts with experts, mainly with media representatives. In particular, the NBU publicly presented its Communications Strategy (hereinafter - the Strategy) at the beginning of 2019.

The central bank's Strategy is focused on a proactive dialogue with customers and partners without intermediaries through:

- multichannel communications
- use of audio and visual content
- raising financial literacy
- launching the communication platform *Expert Platform for Sharing Knowledge in Economics and Finance*.

The NBU hopes to increase trust in the regulator through the implementation of the Strategy by creating a major brand of the institution.

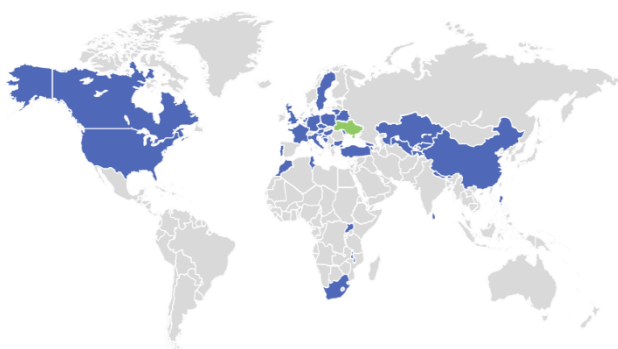
Cooperation with International Partners

In 2019, the NBU actively cooperated with foreign central banks. In particular, the NBU Advisory Council held two meetings with the National Bank of the Republic of Belarus. Also, the NBU governor discussed ways to further promote bilateral cooperation during his visit to the Bank of Canada.

In addition, in 2019, the NBU signed the memorandum of understanding on banking supervision with the Central Bank of Montenegro and the memorandum of understanding to exchange experience in HR management, communications, transformation, monetary policy, and currency regulation with the Central Bank of Tunisia.

Cooperation with International Partners as Regards Strategic Development and Planning

Partner Countries Exchanging Experience with the NBU



The NBU continued to successfully share its experience. Throughout the year, the NBU hosted 28 respective events (seven of which were major conferences), attended by the representatives of financial institutions from 40 countries (including the central banks of the Republic of Turkey, Poland, Tunisia, Moldova, Lithuania, and Belarus).

In order to implement reforms throughout the year, the NBU experts studied the international experience of world's top financial institutions – leaders in monetary policy, financial stability, and banking supervision, communications and financial literacy, digital financial services and payment systems, statistics, strategic planning, the introduction of state-of-the-art technologies (FinTech), accounting, and the implementation of international reporting standards. The NBU also joined the Bilateral Assistance and Capacity Building Program for Central Banks, funded by the Swiss State Secretariat for Economic Affairs. Cooperation with the U.S. Agency for International Development continued as to the implementation of the Financial Sector Transformation and the Credit for Agriculture Producers technical assistance projects.

In what is by now a tradition, the NBU represented Ukraine in the management bodies of international financial institutions and participated in various sector-specific task forces: the Annual and Spring Meetings of the International

Monetary Fund (IMF) and World Bank Group, the Annual Meetings of the European Bank for Reconstruction and Development (EBRD), the Black Sea Trade and Development Bank (BSTDB), and the Bank for International Settlements (BIS).

Throughout 2019, the NBU continued to actively cooperate with the IMF within the current Stand-By Program, approved on 5 December 2018. Specifically, all the measures envisaged by the Program were implemented. In September 2019, consultations took place under Article IV of the IMF's Articles of Agreement and negotiations were launched on a new loan program under an Extended Fund Facility (EFF).

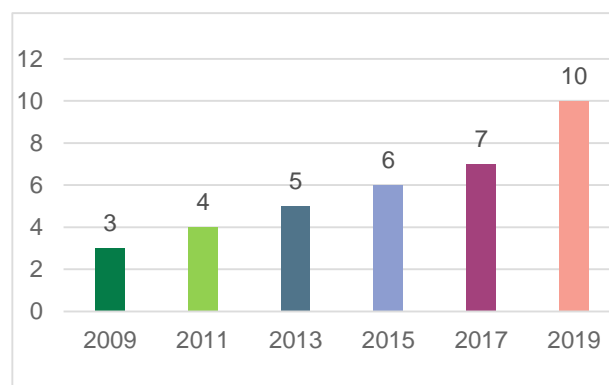
Furthermore, the NBU participated in finalizing and implementing the USD 750 million project with the World Bank, *Economic Growth and Fiscally Sustainable Services Policy Based Guarantee for Ukraine*. As a result, in Q1 2019, the Ministry of Finance of Ukraine used this guarantee to attract USD 100 million in loans in order to finance the general fund of the State Budget.

The NBU also successfully implemented the measures required for Ukraine to receive the second tranche under the fourth EU Macro-Financial Assistance program, the resources of which are aimed at improving the country's balance of payments, supporting the budget, and replenishing international reserves.

During 2019, the NBU significantly increased its representation in international organizations. It became the member of:

- the Euro Area Business Cycle Network (EABCN), a platform for knowledge-sharing and research within the organization's working field
- International Financial Consumer Protection Organization (FinCoNet), the purpose of which is to promote sound and effective standards for supervision and to exchange best practices in consumer protection among regulators.

Figure 3. The number of international organizations of which the NBU is a member



Also noticeable in 2019 was the NBU's role in cooperation with international rating agencies. In particular, the NBU organized a series of meetings and video conferences with representatives of Standard & Poor's, Moody's, and Fitch Ratings. The NBU participated in the conference, organized by Fitch Ratings in Kyiv.

Throughout the year, the NBU took measures to implement the World Trade Organization (WTO) Trade Facilitation Agreement and participated in negotiations within the WTO initiative on e-commerce and domestic regulation of services. In addition, the NBU was involved in reviews of WTO member states' trade policies, the consideration of WTO candidate countries' applications, free trade agreement with other countries, and the implementation of the Action Plan for deepening cooperation between the OECD and the Ukrainian government for 2019-2020.

In 2019, the NBU continued its efforts to implement the EU-Ukraine Association Agreement. Particular attention was focused on improving banking regulation and supervision, liberalizing capital flows, updating the operational framework for payment systems, and further safeguarding consumer rights line with international and European standards.

In order to effectively implement the E.U.-Ukraine Association Agreement and strengthen Ukraine's financial sector, the NBU also took part in the implementation of the E.U. technical assistance programs and projects, in which the NBU:

- successfully completed cooperation with the E.U. Project: *Technical Assistance in the Ukrainian Financial Sector's Priority Areas* (EU-FINSTAR)
- enhanced interaction with the E.U. project, *Strengthening the Regulation and Supervision of the Non-Bank Financial Market* (EU-FINREG)
- participated in the incubator program of the E.U. Association Lab within the GIZ Project, Advisory Fund for EU Association of Ukraine
- prepared a new E.U. Twinning project, *Strengthening the Institutional and Regulatory Capacity of the National Bank of Ukraine to Implement the E.U.-Ukraine Association Agreement*, the implementation of which is planned for 2020
- conducted a training session jointly with the Italian Carabinieri Currency Anti-Counterfeiting Command, under the Pericles program of the European Commission, concerning the detection and combatting of counterfeiting money for the NBU and the National Police of Ukraine.

Cooperation with Government Authorities

The NBU continued its intensive cooperation with the Verkhovna Rada of Ukraine by taking part in discussions related to financial draft laws at the meetings of parliamentary committees. Such cooperation resulted in

the adoption of the following laws, which are important for financial sector reform:

- Law of Ukraine No.79-IX *On Amendments to Certain Laws of Ukraine On the Consolidation of Functions of the State Regulation of the Financial Services Markets* dated 12 September 2019
- Law of Ukraine No.122-IX *On Amendments to Certain Laws of Ukraine On the Protection of Consumer Rights in Financial Services* dated 20 September 2019
- Law of Ukraine No.361-IX *On Preventing and Combating the Legalization (Laundering) of Proceeds from Crime and the Financing of Terrorism and the Proliferation of Weapons of Mass Destruction* dated 6 December 2019.

In addition, in early 2020, in compliance with the law, NBU Governor Yakiv Smolii presented a report on the regulator's performance for the previous year at the Verkhovna Rada's plenary session. This way the central bank demonstrated transparency as the institution's value and accountability to society.

The Memorandum of Cooperation, signed by the NBU and the Cabinet of Ministers, became the first document to regulate cooperation and coordination between the institutions. This was done with the aim of achieving sustainable economic growth and price stability. It is through achieving these goals, that the NBU and the Cabinet of Ministers expect to reduce the interest rates, boost the lending, and promote the economic growth.

To this end, according to the Memorandum, Ukrainian government has undertaken to support the goals and principles of the regulator's monetary policy on the basis of inflation targeting, which will provide for a consistently low inflation rate of 5% +/- 1% in the coming years. The central bank completely maintains its institutional independence.

De facto, the NBU and Ukrainian government cooperate regularly through weekly "coffee-break" meetings. This allows for a closer interaction and a better coordination of work.

Through the work of the Financial Stability Council, the NBU also collaborated closely with the Ministry of Finance and financial regulators. Since 2015, this body has been ensuring timely identification and minimization of risks threatening Ukraine's banking and financial stability. The Financial Stability Council also facilitates coordination of the regulator's efforts with regard to the financial sector reform. The Council gathered three times throughout the year.

In 2019, a specialized Financial Development Committee was established under the Financial Stability Council. The Committee is intended to monitor the implementation of

the new Strategy of Ukrainian Financial Sector Development until 2025.

The NBU also worked with other government bodies during discussions in the area of economic development. To that end, NBU Governor Yakiv Smolii regularly participated in the work of the National Investment Board and the National Security and Defense Council.

On 28 May 2019, the NBU, the National Securities and Stock Market Commission (NSSMC), the National Commission for State Regulation in the Financial Services Market (NCFS), the Deposit Guarantee Fund (DGF), and the Ministry of Finance of Ukraine (MoF) signed the **Memorandum of Understanding and Cooperation on the Preparation and Implementation of the Strategy of Ukrainian Financial Sector Development until 2025**.

According to the interagency Memorandum, signed in May 2019, and in order to implement the Strategy of Financial Sector Development until 2025, a steering committee is planned to be established with heads of the signatory institutions serving on it.

To this end, the Financial Stability Council resolved at its meeting to establish a Financial Development Working Group (Committee) under the Financial Stability Council.

Main tasks of the Working Group:

- identifying directions and priorities for the implementation of the Strategy of Ukrainian Financial Sector Development until 2025
- facilitating the coordinated implementation of the measures stipulated in the Strategy of Ukrainian Financial Sector Development until 2025; monitoring the effectiveness of their implementation
- consideration of proposed action plans for financial sector development.

Cooperation with Business Community (financial sector representatives and business entities)

Cooperation between the NBU and business community representatives took the form of over 100 various events organized by business throughout 2019. These were events in the following formats:

- speeches at annual meetings of business associations
- participation in the activities of business associations' committees
- high level business meetings in the form of business breakfasts
- bilateral meetings with individual business representatives.

As a result, the NBU received the 2019 Business Choice Award of the American Chamber of Commerce in Ukraine

for an on-going dialog with business community. The American Chamber of Commerce gives this award on an annual basis to organizations, projects, and individuals that have significantly contributed to the development of a favorable business and social environment in Ukraine or have been promoting Ukraine internationally.

Cooperation With Citizens

As to cooperation with citizens, the central bank's efforts were aimed at timely provision of the plain language information about the central bank's policy, as well as improvement of financial literacy among Ukrainian citizens.

In particular, as part of improving financial literacy, more than 700 financial awareness events took place in 2019 for different target audiences and of various scale. The major ones include:

- regional NBU educational project *Economic Express*, held in 2019 in nine cities – Zhytomyr, Lviv, Vinnytsia, Dnipro, Odesa, Ternopil, Chernivtsi, Kharkiv, and Kherson. The project brought together nearly 5,500 participants. At the *Economic Express*, young people trained to make confident and weighed financial decisions, business representatives learned about the regulator's latest decisions firsthand, and students and professors at Ukrainian universities gained the most up-to-date economic knowledge from central bank experts and partner organizations
- the second international forum, entitled *Financial Inclusion Forum. Leaving No One Behind*, was held in June 2019. It gathered over 300 representatives of government authorities, banks, payment systems, businesses, experts, and educators from 12 countries to discuss effective practices for enhancing financial inclusion as a common way for the state and businesses to speed up economic growth. At the event, the NBU also presented its vision of the joint Strategy for Financial Literacy for the financial market and all stakeholders
- the First All-Ukrainian Student Competition *Monetary Policy: NBU University Challenge*. In the final round, student teams presented their monetary policy recommendations to the jury, which played the role of the NBU Board
- The NBU Money Museum has received a record number of visitors in recent years – over 7,700 people. The museum team has developed eight new excursions, quests, lectures, and workshops for visitors of all ages.

In addition, the NBU has launched a new website that is closely integrated with internal information systems to be transparent and provide information on banking system performance indicators (interactive charts, open data, guides, and registers). This way, the central bank explains in a plain language the principles of the regulator's functioning and its policy.

3.8. Main Risks

The NBU's Risk Profile

The NBU's risk profile is comprised of financial and non-financial risks.

Financial risks constitute 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 ("financial risks related to NBU policies"). These risks arise from financial instruments – the recognition of which as balance sheet or off-balance sheet instruments is 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 paragraph 15 of Article 7 of this law. This group includes, in particular, financial risks that arise from the NBU's use of standard liquidity management instruments, FX purchase and sale swaps, FX interventions, emergency liquidity support for banks, and the repurchase of government bonds.
- financial risks arising from Ukraine's international (foreign exchange) reserves
- financial risks arising from the management of the pension assets of the NBU Corporate Non-State Pension Fund
- other financial risks.

Each group of financial risks comprises several risk types, which correspond to the factors behind these risks. In particular, the NBU distinguishes between liquidity, credit and market risks.

Nonfinancial risks are those of the NBU's risks that arise in connection with nonfinancial factors.

The NBU's nonfinancial risks are broken down into:

- operational risk, which is defined as the possibility of incurring direct or indirect losses as a result of inappropriate or failed processes, incorrect actions taken by NBU employees, the incorrect operation of internal systems, or as a result of external events
- compliance risk, which is defined as the possibility of sanctions being imposed on the NBU, or the NBU incurring financial or reputational losses, due to the failure of the NBU or its staff to comply with Ukrainian laws, NBU regulations and executive orders, including the code of conduct and the rules for preventing and resolving conflicts of interest
- strategic risk, which is defined as the possibility that the NBU will fail to achieve its strategic goals or perform its functions effectively, 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 these risks could have on its reputation, but does not classify reputational risk as a separate risk.

The NBU's executive orders on risk management set out policies for managing different risk types, tolerance to these risks, and the central bank's risk appetite. NBU units operate within the limits the central bank has set for its risk appetite.

There were no significant changes in the NBU's risk profile in 2019.

Risk Management

The NBU Board ensures that the NBU's risk management processes and system correspond to the central bank's functions, specific features, and the role it plays as a central bank and the sole central government body that formulates monetary policy.

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

This system is based on comprehensive risk management, which is a systematic and continuous process. This process, which is conducted by the NBU Board and NBU employees, starts with the development of the central bank's strategy, and encompasses all of its activities.

Risk management is a continuous process, which is part of the NBU's management at all organizational levels. It is also part of its corporate culture and day-to-day activities. This process aims to identify events that could adversely affect the NBU's activities and to manage risks that could arise from such events within the limits set for the central bank's risk appetite, so as to ensure that the central bank is able to perform its functions and achieve its goals.

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

- the internal environment and risk management culture
- the risk management context
- identifying events that could adversely affect the NBU's activities
- measuring risks
- taking measures in response to risks (addressing risks)
- controlling risks
- notifying about, communicating and reporting risks
- monitoring and reviewing the operation of the risk management system.

The NBU's **financial risk management policies** cover all of its assets and liabilities, both balance and off-balance sheet ones.

The NBU's **operational risk management policies** apply to all of its processes and projects.

The operational risk management process has the following stages:

- preventing operational risks
- identifying operational risks
- assessing (measuring) and analyzing operational risks
- monitoring and reporting operational risks
- developing measures to manage operational risks
- taking measures to manage operational risks
- evaluating the results achieved through taking such measures, and overseeing the measures that were developed to manage operational risk.

The NBU conducts regular training events in order to improve its operational risk management culture, and to enhance NBU managers' and employees' knowledge of these risks.

Internal Controls

In implementing the comprehensive program for NBU development until 2020, and as part of the "Internal Control Implementation" project, the NBU has introduced a uniform and structured approach to, and requirements for, internal controls. This was done to ensure the 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 central bank's internal controls.

Internal controls and risk management are interrelated and complementary systems. These systems have goals that agree with one another, and are based on the **three lines of defense policy**.

NBU units are the **first line of defense**. They own all of the risks that fall under their mandate, and are responsible for identifying, measuring, managing and reporting such risks.

The Office for Financial and Operational Risks is the **second line of defense**. This office is responsible for:

- providing methodological, coordinative and organizational support for the central bank's financial risk management processes
- overseeing, monitoring, and conducting an independent analysis of risks at the level of the central bank's second line of defense
- assessing the NBU's risk profile on an annual basis and reporting the central bank's risks to the NBU Board and other collegial bodies of the central bank.

The Internal Audit Department is the **third line of defense**.

Business Continuity Management

With a view to managing its business continuity, the NBU:

- sets up and tests backup workstations as part of implementing its general business continuity plan and its plan for restoring IT resources after failures
- conducts an annual analysis of the impact of adverse factors on its processes and the operational continuity of its units
- reviews its plans for ensuring its operational continuity
- every year organizes training for those of its key employees who ensure the functioning of its critical processes and IT resources, as well as its engineering infrastructure systems.

Information about the stages of financial risk management processes, measures the central bank takes in response to financial risks, and a detailed assessment of these risks is set out in Notes 28 to 33 to the NBU's consolidated financial statements.

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 Laws of Ukraine *On the National Bank of Ukraine* and *On Accounting and Financial Reporting in Ukraine*.

As of the end of 2019, the NBU's balance-sheet total increased by 1%, to UAH 1,061 billion.

In 2019, the central bank continued to execute its functions, forming the corresponding profile of its assets, liabilities, and equity.

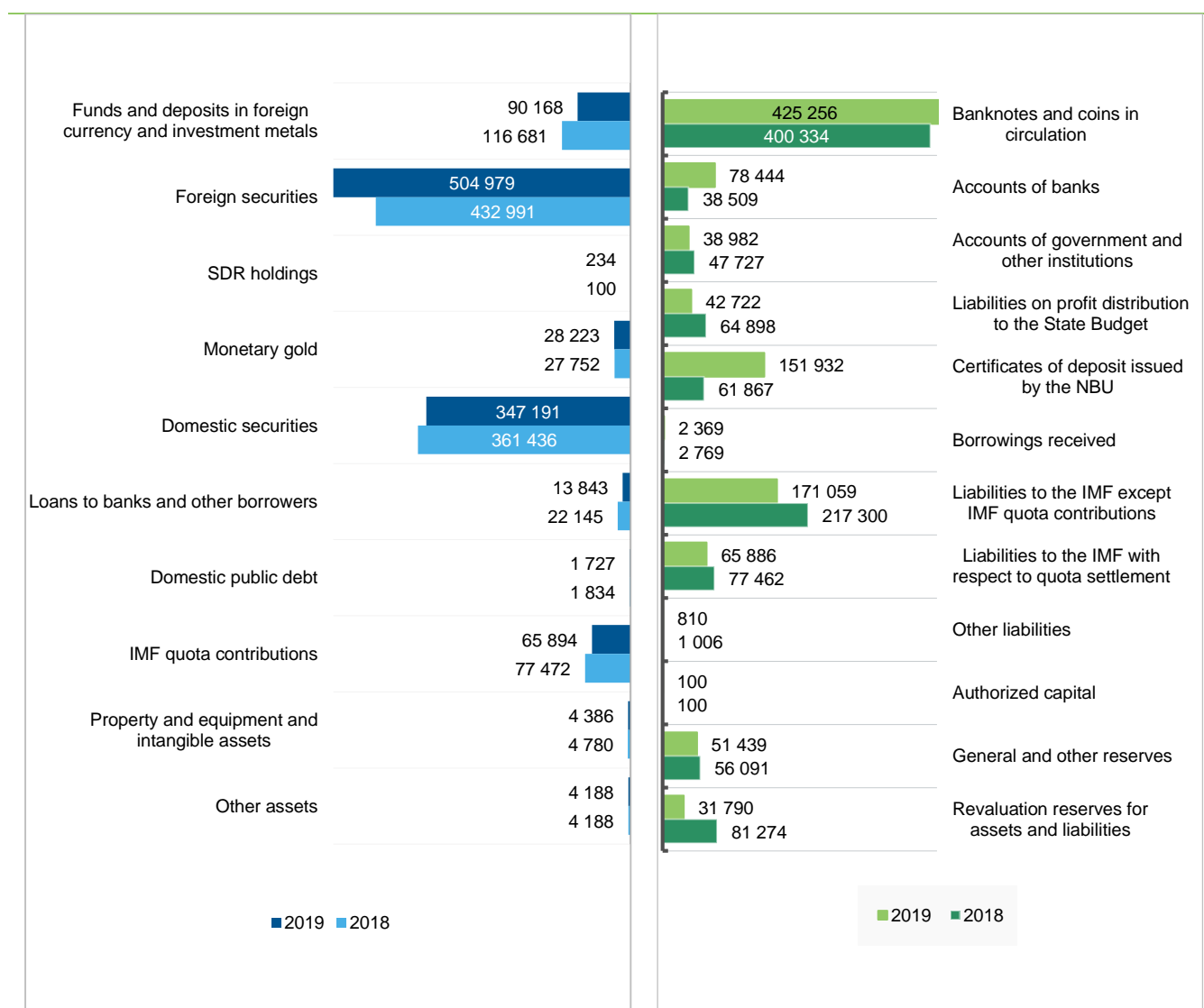
The NBU's assets mainly consist of:

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

The NBU's liabilities mainly include:

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

Figure 1. NBU's assets and liabilities in 2018–2019, UAH million



The following changes occurred in the NBU's assets and liabilities in 2019.

International reserves increased as a result of the central bank's policy of accumulating reserves.

Overall, international reserves rose by 21.5%, to USD 25.3 billion as of year-end 2019, up from USD 20.8 billion at the end of 2018. In 2019, positive balance of NBU interventions along with the increased value of financial instruments (as a result of changes in the market value and in the hryvnia exchange rate against foreign currencies) caused the international reserves to grow.

The portfolio of foreign securities increased by 16.6% and at the same time FX funds and deposits declined by 23% on the account of redistribution of FX funds between financial instruments for management of international reserves.

The NBU liabilities to the IMF reduced by 19.6% mainly on the account of repayment of loans issued by the IMF.

The NBU's hryvnia assets are mainly comprised of domestic securities, the value of which decreased by UAH 14.2 billion or 3.9% in 2019, to UAH 347 billion. This, together with the rise in assets that form international reserves, reduced the percentage of domestic securities in the NBU's balance-sheet total to 32.7% in 2019, down from 34.4% in 2018. Of the domestic securities, 99.7% 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 shrank by 37.5%, mostly due to a decrease in outstanding debts. The gross book value of loans (outstanding debts) dropped by almost UAH 11 billion, to UAH 52 billion. The amount of expected credit losses (loan loss provisions) also declined, by UAH 3.0 billion. The loan repayment trend continues to banks remaining on the market after the banking system cleanup. Almost 99.8% of debts outstanding as of the end of 2019 consisted of the problem debts of banks that were being wound up.

Separate from its liabilities to the IMF, the NBU's liabilities changed as follows:

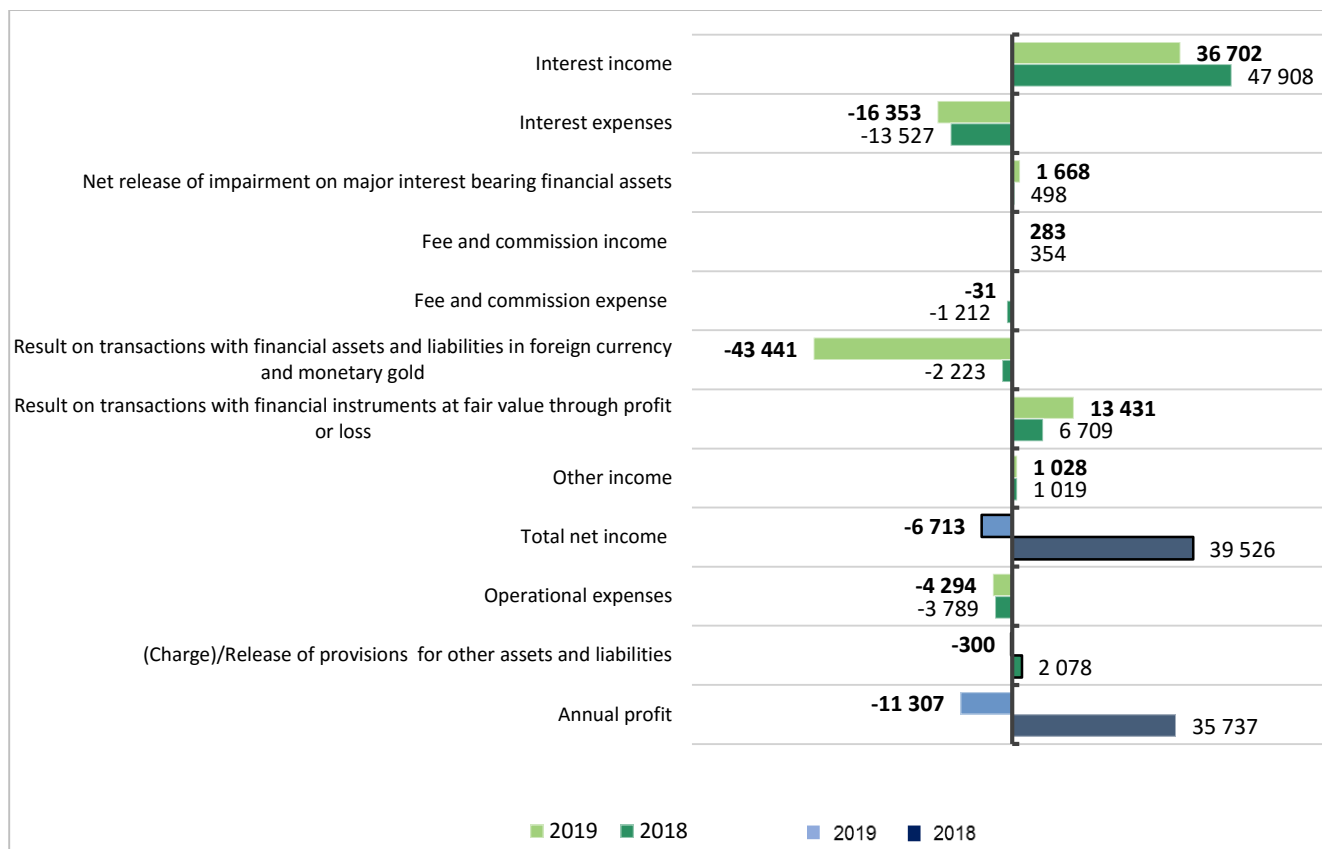
- banknotes and coins in circulation grew by 6%
- increase in accounts of banks doubled
- certificate of deposit issued by the NBU increased by 2.5 times
- Liabilities to transfer profits to the state budget decreased by 34%
- Funds due to state institutions and other institutions declined by 18%.

Financial Results

Factors that influence the NBU's profits the most are interest income and exchange differences, which result from the revaluation of assets and liabilities that arise from changes in the official exchange rate.

Interest income, mainly from domestic securities and loans to banks, declined compared to 2018 and reached UAH 36.7 billion, accompanied by a decrease in the corresponding asset items.

Figure 2. NBU profit or loss in 2018–2019, UAH million



In 2019, interest expenses increased by 21%, to UAH 16.4 billion, which was mostly due to:

- higher expenses on NBU certificates of deposit associated with the volume increase as weighted average interest rates reduced to 12.73% in 2019 from 17.03% in 2018
- an increase in expenses on interest-bearing liabilities to the IMF.

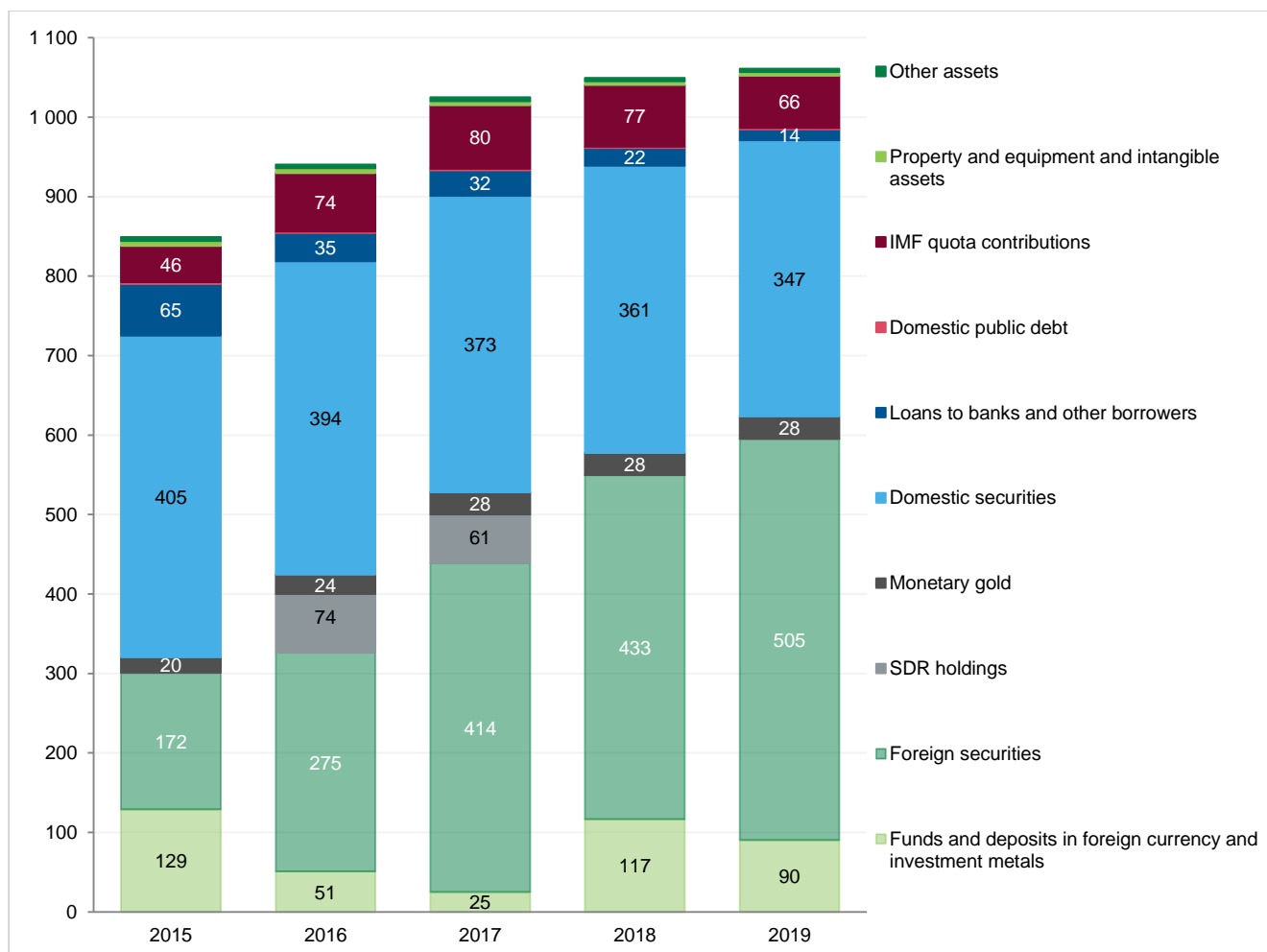
In 2019, the NBU continued to release impairment provisions for loans issued to banks. Overall, expenses decreased by UAH 1,668 million (UAH 498 million in 2018) (positive result) on the account of reversal of the impairment of main financial assets.

Net interest income (including the released impairment provisions) totaled UAH 22 billion in 2019, which was 37% lower than in 2018.

After the switch to a floating exchange rate regime, exchange rate fluctuations have exerted a significant influence on the NBU's performance. In particular, in 2019, the exchange difference was negative at UAH 43.4 billion (while the total annual loss was UAH 11.3 billion). This was driven by the major strengthening of hryvnia against foreign currencies.

NBU administrative and expenses increased by 13.4% from UAH 3,780 million (in 2018) to UAH 4,287 million (in 2019). In 2019, provisions was raised for court complaints amounting to UAH 119 million. (In 2018 provisions for court complaints were dissolved.)

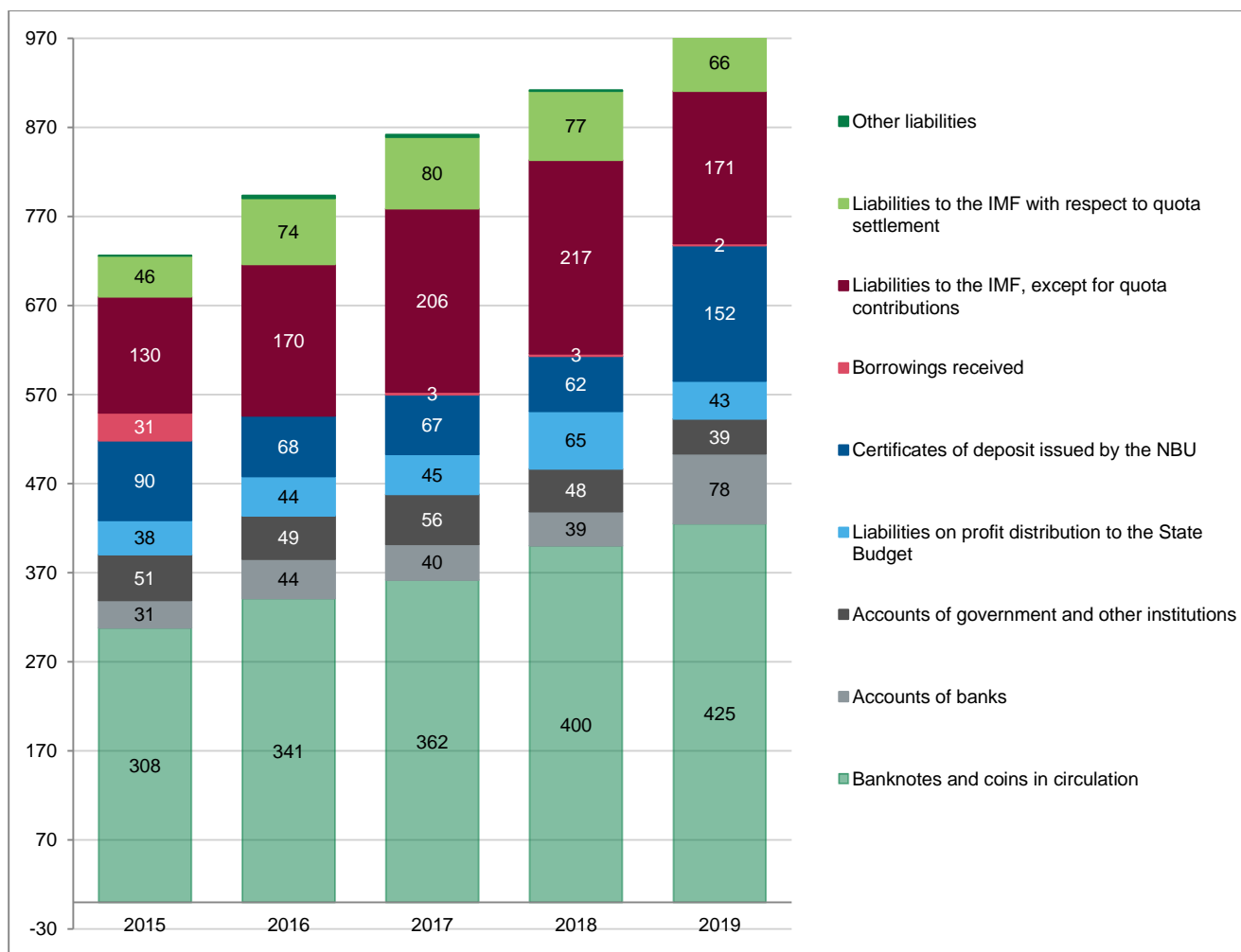
Figure 3. NBU assets in 2015–2019, UAH billion



Over the past five years, the main changes in the NBU's asset structure came from increases in foreign securities and other components international reserves, a decrease in the portfolio of loans issued to banks, and a decline in

the domestic securities portfolio, which contains mostly government bonds.

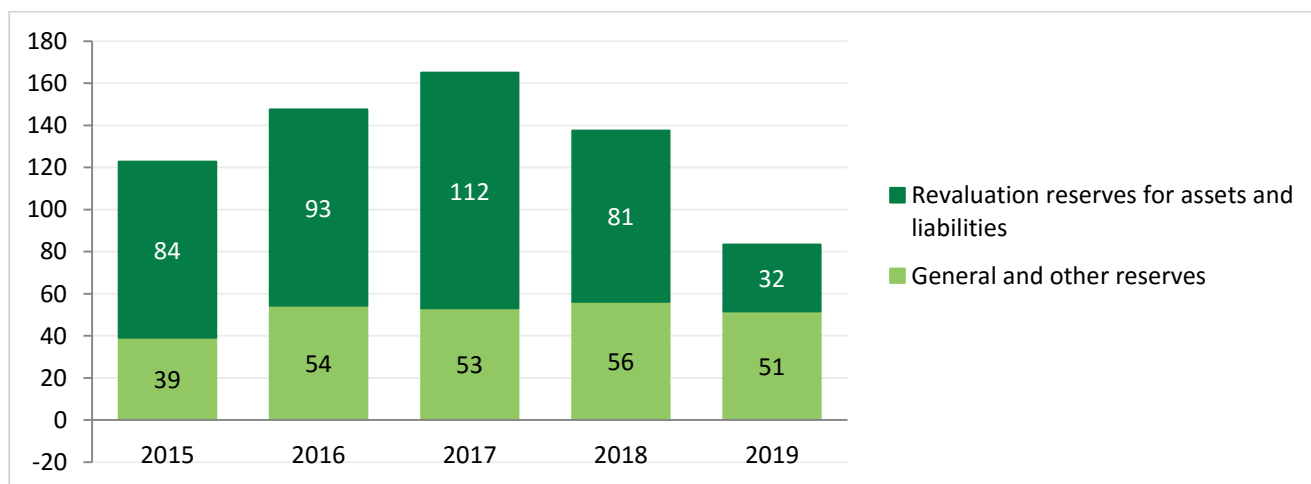
Figure 4. NBU liabilities in 2015–2019, UAH billion



The NBU’s liabilities were diversified, with banknotes and coins in circulation traditionally being the main type of liabilities, which is common for any central bank acting as the issuer of national currency.

In 2019, of liabilities to the IMF decreased. A large portion of the NBU’s liabilities consists of NBU certificates of deposit and liabilities to transfer part of the central bank’s profit to the State Budget of Ukraine.

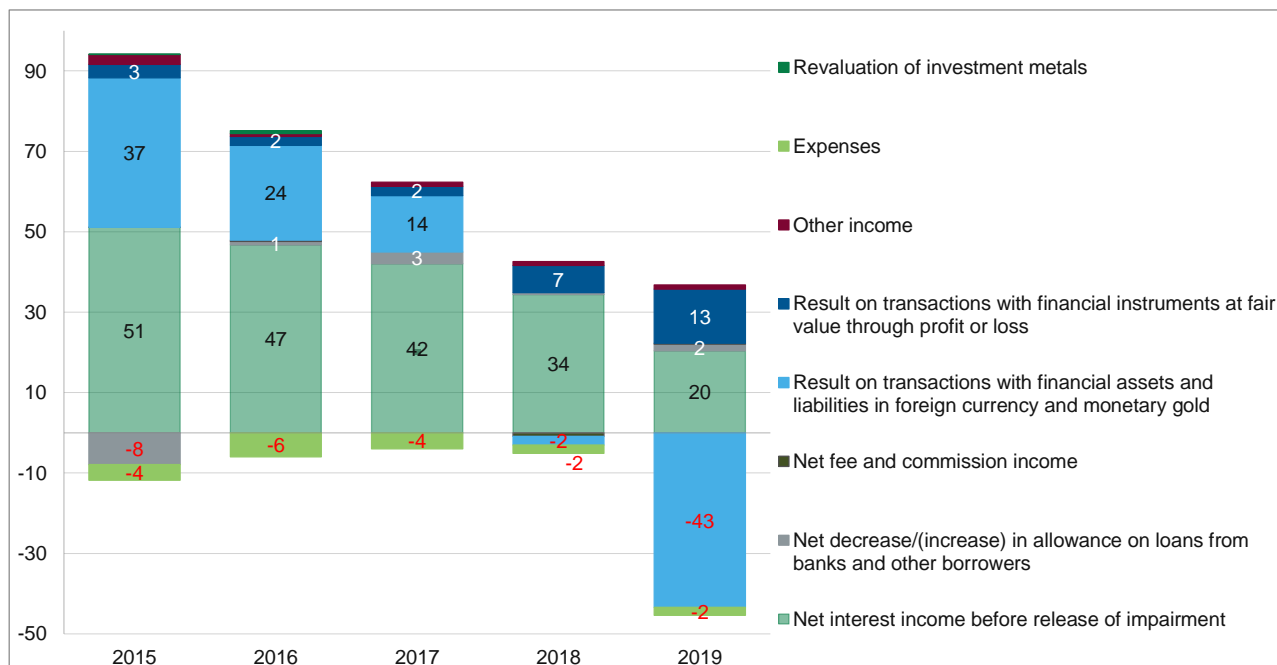
Figure 5. NBU equity in 2015–2019, UAH billion



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

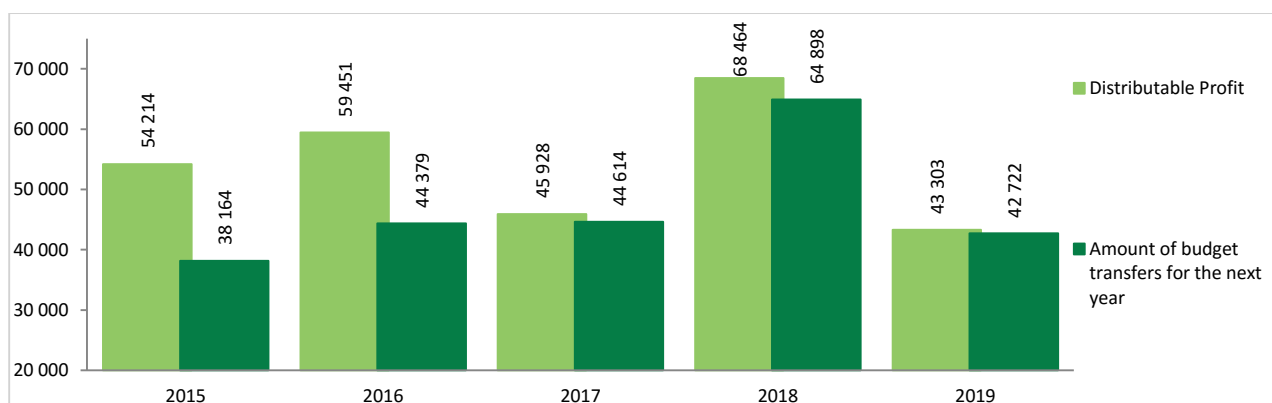
NBU's assets and liabilities, including due to exchange rate fluctuations, and a part of the profits retained by the NBU as reserves, as required by law.

Figure 6. NBU income and expenses in 2015–2019, UAH billion



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 due to the floating exchange rate regime and a large share of FX items being on the NBU's balance sheet. As the

hryvnia exchange rate stabilized, changes in the exchange rate in the second consecutive year negatively effects NBU financial result, however it is balanced by revaluation reserves accumulated in the equity.

Figure 7. Transfers by the NBU to the State Budget of Ukraine in 2015–2019, UAH million**Payments to the State Budget of Ukraine**

In 2019, the NBU transferred UAH 64.9 billion to the State Budget of Ukraine. As of 31 December 2019, the central bank recognized its obligation to pay UAH 42.7 billion of its profit to the state budget.

The NBU's remaining distributable profit of UAH 0.6 billion will be set aside to create general reserves of

the NBU, once the central bank's annual financial statements are approved by the NBU Council.

Read more about the changes in accounting policy in note 2 of 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 19.

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 below table provides data on key items in the administrative budget for 2019 and planned data for 2020.

NBU's administrative expenses (including expenses of the Settlement Center) for 2019–2020

	Plan for 2019 (revised)	Actual performance in 2019	Percentage of plan performance in 2019	Plan for 2020
	(UAH million)			
Staff costs	1,826	1,769	97%	2,099
Administrative and other expenses	1,253	563	45%	1,102
Depreciation and amortization	248	207	83%	226
Total administrative expenses	3,327	2,539	76%	3,427
Provisions for assets and other deductions	(536)	(1,365)	255%	(758)
Investment costs for creating and developing facilities and equipment required for the NBU's operation	525	254	48%	567

The data presented show that the NBU is complying with its planned administrative expenses and is managing to save resources. This is in line with the NBU's goal of using public resources efficiently and effectively, as stipulated in its seventh strategic goal to be a modern, open, independent, and effective central bank.

According to the results for 2019, administrative expenses were lower than planned by 24% on average. Moreover, the amount of released provisions was larger than planned. This was mainly due to releasing provisions for loans issued to banks, debt repayments, and the NBU obtaining the ownership of collaterals.

Also, a large part of the funds intended for developing facilities and equipment of the NBU remained undrawn.

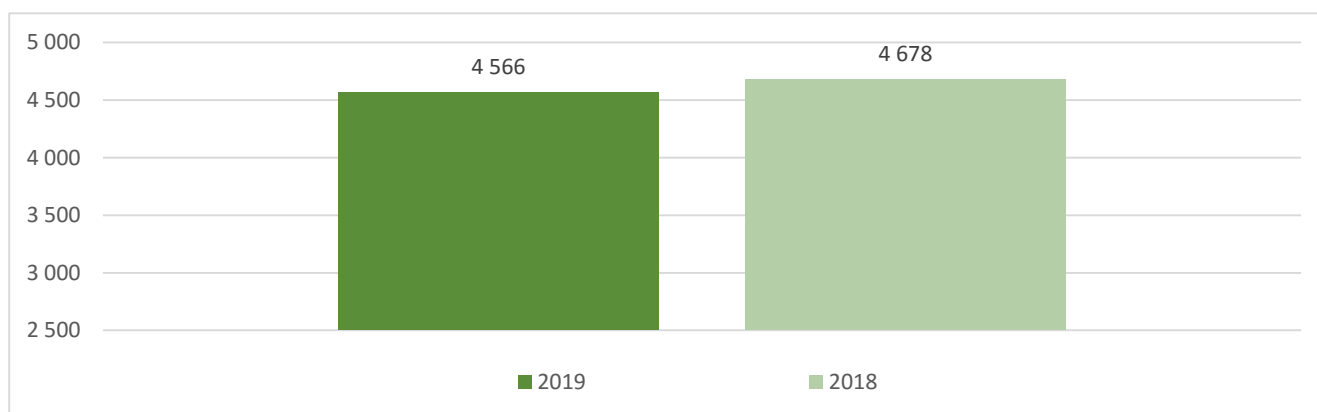
Cost management regulations of the NBU define the procedure to revise expenses planned in the administrative budget, particularly investment costs. The procedure allows proposing changes (in line with guidelines and principles of cost planning) to the approved planned expenses in the NBU's administrative budget.

Pursuant to this procedure, in 2019, NBU units responsible, among other, for planning investment costs proposed to reduce the approved planned expenses, taking into account the actual utilization of funds and timelines and implementation stages of some projects. The NBU Council approved the changes to the NBU's administrative budget.

4.2.2. Human Resources

As of 31 December 2019, the staff number at the NBU decreased by 2.4% compared with the previous year and was 4,566 FTEs (staff at work), down from 4,678 FTEs as of 31 December 2018.

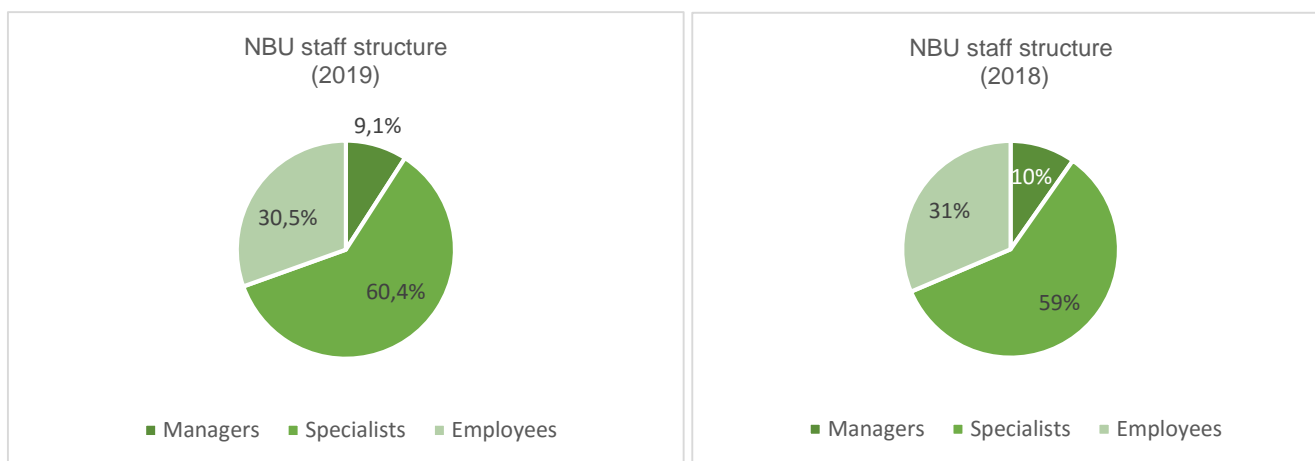
Figure 4. NBU staff number, persons (FTEs)



As of 31 December 2019, the average age of an NBU employee was 44 years, and the average employee tenure for the NBU was 12 years (unchanged over the last 3 years). The gender distribution of NBU employees was as follows:

53.5% women and 46.5% men worked at the NBU head office, 33.4% women and 66.6% men at the Banknote Printing and Minting Works, and 47.9% women and 52.1% men at the Settlement Center.

NBU staff structure by categories as of 31 December 2018 and 31 December 2019 was as follows:



For information on salary expenditures of the NBU in 2019 refer to Note 26 of the NBU's consolidated financial statements.

In 2019, the average base pay (or the base component of remuneration) was UAH 26,866 at the NBU head office and UAH 14,754 at the Banknote Printing and Minting Works.

The average salary including additional payments (salary supplements, bonuses, extra pay, etc.) was UAH 36,451 at the NBU head office and UAH 19,807 at the Banknote Printing and Minting Works.

In 2019, the NBU spent UAH 5.9 million on personnel training, of which UAH 2.4 million was spent on training abroad (UAH 5.4 and UAH 2.3 million in 2018 respectively).

In 2019, the NBU held 622 training events to develop professional and personal skills of its employees. The events were attended by 6,630 people.

In particular, 400 events were dedicated to raising professional qualification, of which 119 took place abroad

(attended by 136 participants). Most of the training was held in the following countries: Austria (32), the United States (20), Germany (14), France (14), and Poland (12).

In order to support active development of its corporate culture, the NBU provided a prompt and flexible response to the needs of the target audience. In particular, it changed the format of competence and interpersonal skills training. In 2019, along with three corporate competencies (proactivity, cooperation, and performance) and two managerial competencies (responsible leadership and effective management), the NBU launched training in seven functional competencies in a new (mixed) format. This included master classes (offline) on such topics as responsibility, effective communications, emotional intelligence, analytical and systems thinking, customer orientation, stress resilience, and adaptability. At the same time, the remote training system allowed employees to learn more about these topics by studying additional materials in electronic form.

4.2.3. Production resources

State property management

As of 31 December 2019, the NBU managed and had listed in the Unified Register of State Property 409 of its own real assets, including 75 land plots and 334 buildings and engineering structures (measuring 455,764.1 sq. m in area).

As of late 2019, the NBU completed 89.15% of its Real Assets Management Strategy. In 2019, the central bank reduced its real assets portfolio by 34 buildings and structures and 6 land plots, saving more than UAH 10 million.

To minimize the costs of maintaining real assets that are not used by the NBU to perform the basic functions defined by the Law of Ukraine *On the National Bank of Ukraine* and to achieve the goals set by the central bank's Real Assets

Management Strategy, the NBU should reduce its real assets to 400,000 sq. m by disposing of another 21 complexes of buildings and structures.

Collateral management policy

In 2019, the NBU received UAH 3.6 billion in repayment of debt on refinancing loans of insolvent banks, up UAH 960 million from 2018.

Most of the proceeds – UAH 1.73 billion – came from the disposal of the property rights pledged by insolvent banks under loan agreements. Another UAH 297.8 million came from the disposal of real assets.

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

- taking ownership of a total UAH 1.14 billion in bonds and real assets
- selling, through enforcement proceedings, UAH 177.90 million in real assets pledged as security by property surety providers of insolvent banks
- receiving UAH 89.01 million in repayment of debt under loan agreements pledged to the NBU
- receiving a total UAH 171.96 million from other sources.

	2019			2018		
	Through DGF	Through third parties	Total	Through DGF	Through third parties	Total
Repayments from sale of pledged property:						
real assets	298	181	479	676	6	682
securities and investment metals	–	–	–	435	–	435
property rights under pledged loans	1,727	–	1,727	1,392	–	1,392
Total repayments from sale of collateral	2,025	181	2,206	2,503	6	2,509
Repayments through NBU acquisition of title to:						
real assets	–	218	218	–	85	85
securities	–	924	924	–	–	–
from other sources	89	168	257	–	–	–
Total	2,114	1,491	3,605	2,503	91	2,594

The NBU filed a total 116 lawsuits seeking to recover the assets of property surety providers and financial surety providers in repayment of debt under loan agreements of insolvent banks.

All court rulings involving financial surety providers and property surety providers that had taken effect as of the end of 2019 were in favor of the NBU and are being enforced. Court rulings in 60 cases had not taken effect as of the end of the year, including 10 cases concerned with the bankruptcy of property surety providers.

4.2.4. Intellectual Resources

Modernization of the Reporting System and Development of Open Data

In 2019, the NBU continued the started in 2018 improvement of reports submitted to the NBU by reporting entities. The NBU initiated the monthly calculation and publishing of financial resilience indicators as part of the development of financial sector statistics. It introduced the collection and disclosure of loan indicators that are based on counterparties' relatedness to business groups, the maturity of a financial instrument, and the type of interest rate pegging in contracts.

The NBU started publishing statistical data on loans to big, medium, small, and micro enterprises with reference to their

affiliation with certain business groups in line with European standards of statistical data dissemination.

The NBU also continued to modernize external sector statistics bringing them in line with international and European standards. As part of the action plan designed to improve foreign direct investment statistics that the NBU is implementing jointly with Ukraine's State Statistics Service, in October 2019, the NBU participated in the IMF's coordinated direct investments survey (CDIS) for the first time.

Additionally, the NBU expanded the list of public information, in particular, it started the quarterly publication of data on cost of external borrowings and geographical debts on unsecured loans, and launched the publication of monthly balance of payments data.

The NBU completed a project to introduce XBRL-based FINREP/COREP standards in relation to banks compiling their financial reports using the FINREP standard and laid the groundwork for accumulating data on regulatory reporting under the COREP standard. In 2019, the NBU approved the Rules for compiling and publishing consolidated financial reporting of banks in line with FINREP XBRL Taxonomy. The Rules were developed with the aim to introduce international practices in information disclosure based on the FINREP standard. More specifically, under the COREP standard, banks started to submit reports about their calculations of

liquidity coverage ratios (LCR). The NBU put in place daily and monthly statistical reporting files to control LCR forecasts and to make sure LCR forecasts are adhered to.

The NBU continued to hold regular meetings with companies top managers in order to maintain effective bilateral communications with the business sector, to inform these managers of its activities, and to discuss relevant issues. In 2019, there were two meetings in the presentation and discussion format: the first one took place in April in Lviv, the second one – in October in Kyiv.

In July 2019, the NBU launched a monthly business outlook survey. The survey results provide a highly accurate reflection of the current economic development and can be effectively used for its forecasting based on the latest trends. To that end, the NBU developed a methodology framework based on the best world practices of conducting similar surveys and developing said type of index, and conducted a pilot survey. All survey results are available as presentations and tables on the NBU's official website.

Additionally, in 2019, the NBU started to develop a mobile application as an innovative instrument to conduct said type of surveys. Its flexible architecture will enable its use for solving other problems of information exchange with the NBU's customers as well as later expanding its potential to conduct other types of surveys.

In 2019, the NBU completed the first stage of the project *Big Data at the NBU* which resulted in the creation and introduction of a system for automated collection of information on food prices from the internet and calculation of relevant price indices on a daily basis. In the future, the project is expected to produce a system to analyze text information through artificial intelligence for automatic assessment of the media environment.

Research Development in 2019

In 2019, the NBU was actively involved in research in the following areas:

- monetary policy
- financial stability
- macroeconomic modeling and forecasting.

During 2019, the NBU staff worked on nearly 20 key research projects. The research subjects included the key central banking topics such as disinflation in a small open economy, macroprudential policy, and others.

During the year, the NBU's researchers presented their research results at many prestigious conferences and seminars organized by renowned universities and central banks, in particular, at Bank of Canada, Narodowy Bank Polski, Sveriges Riksbank, Oesterreichische Nationalbank, Národná banka Slovenska, Bucharest University of Economic Studies, and Humboldt University of Berlin, as well as at conferences *European Economic Association - Econometric Society European Meetings* (Manchester, UK),

10th RCEA Macro-Money-Finance Conference, Computing in Economics and Finance (Ottawa, Canada).

In 2019, the NBU also worked closely with the technical assistance project *Canada-IMF: NBU Institutional Capacity Building*. The parties reached an agreement to support research initiatives, conferences, and seminars as well as to expand the invited researchers program. The program enabled a continued cooperation on joint projects in 2020 with scholars from University of Birmingham, Lehigh University, the City University of New York (CUNY), and University of Mannheim.

In 2019, the NBU developed and launched a new website for its journal *Visnyk of the National Bank of Ukraine* (<https://journal.bank.gov.ua/>), indexed by the following scientific databases and search resources: [Index Copernicus](#), [RePeC](#), [Google Scholar](#), [SciLit](#), [Lens](#), [Dimensions](#), [DOAJ](#).

During 2019, the NBU organized 12 research seminars, the conference for young researchers *Banking Sector and Monetary Policy: Future Prospects* and the all-Ukrainian student competition *Monetary Policy: NBU University Challenge*. However, the most significant research event of the year was the annual international research conference *Central Bank Communications: From Mystery to Transparency*. The conference materials were published in a [special edition](#) of one of the leading journals in economics *Journal of Monetary Economics*.

IT Development

In 2019, all Ukrainian banks have fully completed the transition to the international bank account standard IBAN for easy identification of bank accounts and interaccount settlements. The IBAN standard has been used in the SEP since of 5 August 2019. For advancing financial inclusion, a mobile app was developed for converting old bank details into the international bank account standard.

In 2019, the groundwork was laid for shifting the SEP to 23-hour operation, including:

- the SEP Rules of Operation were prepared for 23/7 operation (approved in 2020)
- SEP software for 23/7 operation was developed
- software and hardware environment was engineered to build a technical foundation of continuous SEP 23/7 operation (the productive SEP was transferred to this environment in Q1 2020).

At present, the SEP is ready to shift to 23/7 operation, but this was postponed until cessation of measures on preventing the spread of COVID-19 infection.

The *Credit Transfer* instrument description was drafted and posted on the NBU website.

In 2019, the SEP was used to transfer 383.8 million payments amounting to UAH 32.5 trillion exceeding by 7% and 28%

respective indicators of SEP load in 2018. The daily average payments made up 1.535 million, the maximum daily payments were 2.33 million, an all-time high for the SEP. The average ratio of daily cash circulation was 154%, the maximum – 450%.

New generation of the remote automated workstation ARM-INF v.3.0 was introduced for sharing information in secured form between banks, the NBU, and state agencies based on state-of-the-art IBM WebSphere MQ and new generation elements of NBU cryptography-based security systems.

The national system of electronic remote identification of individuals (hereinafter referred to the “NBU **BankID System**”) operates since 1 December 2016 in line with the Regulation regarding NBU **BankID** system.

As of 17 January 2020, the system included 11 Ukrainian banks connected to the system as identifying subscribers and 19 institutions connected to the system as subscribed service providers.

The option for opening bank accounts remotely using the NBU BankID System was implemented. A program module NBU BankID System Statistics was designed. A Regulation regarding the NBU BankID System Council was approved.

The NBU BankID System Council decided on service tariffs between the NBU BankID System subscribers and approved Temporary Rules of Procedure for Cooperation between Units for Establishing System Connection.

The NBU Credit Register was set up in 2018 in line with effective Ukrainian law to analyze financial system conditions and ensure financial stability, as well as data support for banks' assessment of credit risks.

Since the software of the NBU Credit Register has launched operation, information from banks on over 3.43 million loan agreements was processed that were executed by about 2.82 million individuals and 620,000 legal entities. In 2019, the Register software – developed for bank queries in the Credit Register on borrowers and related parties – successfully processed over 585,000 queries, as of the beginning of 2020 – about 170,000 queries.

To ensure operational continuity of critical information systems of the NBU and the Ukrainian banking system the NBU regionally distributed corporate cloud was set up.

The **system for submitting financial statements by financial institutions** underwent major changes. Instead of collecting information in proprietary format by e-mail, the NBU has introduced submission of financial statements in open XML format without printed confirmation in line with the international practice. Open channels were set up for transmitting highly secured data: Financial statements are submitted through the NBU website or special API and the authorized person affixes the mandatory digital signature. Statistical reporting indicators and guides were arranged in a

convenient and uniform register publicly released on the NBU website and in API.

The Open Data concept was introduced meaning the NBU website data are open for use and distribution without any limitations and are interoperable (classified and worded so that anyone can use it for research, to combine with other data and use as input data for analytics). Expedient delivery of information to interested parties in electronic formats builds up trust in the banking and financial system in general, insures a clear understanding of economic development and the structure economic and financial systems and better analysis and forecast due to advancing modern technologies, including visualization. In the end of 2019, 26 data sets were open in machine-readable format through API on the NBU official website.

For improvement purposes, the NBU SAP system was transferred to a new generation platform to computerize business processes, SAP S/4HANA. This is one of the best platforms with in-memory computing and user-friendly interface SAP FIORI. SAP S/4HANA enables new business models, including for appraisal of employees, personnel administration, and salary accounting. Also, last year, active measures were taken as part of the Implementing Functions for Procurement and Contractual Work in NBU SAP project.

In 2019, the NBU developed new software built on cutting-edge computerization devices, including:

- web-portal for automation systems of monetary policy instruments
- NBU Depository system for servicing Ukrainian government bonds and municipal bonds
- CredLine-3 system for bank refinancing
- Securities Fair Value system
- automated system for delivering and processing information on interbank contracts and NBU contracts with international trading information systems as BLOOMBERG and Refinitiv (REUTERS)
- FX Exchange Rates system for setting a reference and official hryvnia exchange rates against foreign currencies based on public data on sites of foreign central banks
- Bank-Info module of the Electronic Form of the State Register of Banks system for recording information delivered as electronic messages.

Today, the NBU is devising a range of functional strategies setting out measures for developing IT, including:

- implementing the international standard ISO 20022 in cashless payments in Ukraine followed by establishing a new generation of SEP (SEP-4)
- robotic automation of individual NBU processes
- establishing and commissioning of the main and the backup data processing centers for NBU operational continuity on the new quality level using cutting-edge technologies
- further development of external and internal NBU websites etc.

Information Security and Cyber Defense in Banks

In 2019, the second stage of setting up the NBU Center for Cyber Defense was completed. During the second stage the Computer Security Incident Response Team in the Ukrainian banking system (CSIRT-NBU) of the NBU Center for Cyber Defense has introduced up-to-date instruments for monitoring, detecting, analyzing and examining the samples of malware, improved mechanisms for sharing information on cyberattacks and cyber incidents.

In 2019, the CSIRT-NBU has examined 3,000 samples of malware, informed the Ukrainian banks on detected cybersecurity incidents and reported attempted cyberattacks. Furthermore, the CSIRT-NBU has devised cyber threat indicators and prepared recommendations on countermeasures.

The NBU Center for Cyber Defense has continued cooperation with the National Coordination Center for Cybersecurity under the National Security and Defense Council of Ukraine, the CERT-UA, the Situational Centre for Cybersecurity in Ukraine of the Security Service of Ukraine and has signed respective Memorandums of understanding and cooperation, and has connected to the MISP-UA.

The NBU has made yet another step towards paperless technologies in the Ukrainian banking system and improved conditions for applying electronic signature and electronic seal. Respective provisions are set out in the revised Regulation regarding the application electronic signature in the Ukrainian banking system.

For the purpose of the Law of Ukraine On Electronic Trust Services, the NBU approved the Resolution On Approval of Requirements to Certified Electronic Trust Service Providers Included to the Trust List upon the Submission of the Certification Authority. This enables improvement of quality, user-friendliness and expediency of customer banking, and insures compliance of electronic trust services with the European and global standards. At present, the Certification Authority is ready to put electronic trust service providers on the Trust List in line with the Law of Ukraine On Electronic Trust Services and provide qualified electronic trust services for generating, verifying, and confirming the qualified electronic signature or seal applying state or international electronic signature algorithms (DSTU-4145, ECDSA, RSA).

To continue efforts intended for the payment market participants to improve expediency of document agreement, including for streamlining operation conditions and procedure with regards to information, the NBU has drafted a range of recommendations and defined typical comments posted on NBU official website.

In September 2019, requirements to additional information security measures came into effect to be complied with by

banks. Introducing these requirements by the Ukrainian banks in full along compliance control by NBU specialists favors stability of the Ukrainian banking system and strengthens banks' capacity to withstand present-day cyber threats.

New Website

On 1 August 2019, the NBU launched the official new website and the main communication channel of the central bank. The new website is located on the www.bank.gov.ua replacing the old one created in the early 2000s.

The NBU's priority is to improve access for customers to the exhaustive information required for reasoned decision-making. The state-of-the-art, bilingual and responsive interface of the new website performs this function, since the new platform was developed considering requests of customers and stakeholders. The new website is an efficient instrument for building trust, improving effectiveness of policies, and reducing uncertainty in the economy according to the Communications Strategy.

The new website of the NBU is a state-of-the-art, innovative and user-oriented source of huge volumes of data. A simple structure, user-friendly navigation, new design trends, and responsiveness make the website useful for vast audience: journalists, experts, economists and financial analyst, but mainly the general public.

Availability of key indicators and widely-used materials is at the core of new NBU website. The website offers the option of site search for specialized information and publications required for in-depth analysis. All information is divided by themes, such as, monetary policy, financial stability, supervision, payments and settlements, financial markets, and hryvnia. Instead of long texts with complicated terminology, now the website will contain exhaustive explanations on the central bank operation, as well as answers to the frequently asked questions. Also, disseminated statistics will be consolidated in the Statistics section.

More attention is paid to visual presentation of information, in particular the website presents interactive diagrams with indicators and over-the-time trends. The new website is responsive to all devices and features a special version for people with visual impairments

4.2.5. Social and reputational resources

Labor Safety

In order to create and maintain safe working conditions, the NBU implemented a number of labor safety measures in 2019.

NBU's expenses related to labor safety in 2018 and 2019:

	2019	2018
	(in UAH million)	
Labor safety measures	104	40
Work clothes, footwear	26	308
Mandatory and periodic medical examination	317	301
Compulsory traffic accident insurance	7	9
Purchase of medical kits	104	56

A number of labor safety trainings were held in 2019:

	Number of events	Number of attendees
Civil protection	11	25
Labor safety	17	107
Fire safety (remote training)	3	247
Remote training in labor safety (internal)	–	561
Total	31	940

Activities of the Corporate Nonstate Pension Fund

As of 31 December 2019, 12,583 persons are members of the Fund, including 3,601 persons receiving pension benefits for a predetermined period. The carrying value of the Fund's assets amounted to UAH 1,490 million as of 31 December 2019. The founder's contribution to the Fund amounted to UAH 42 million in 2019.

Voluntary health insurance

The number of insured persons amounted to 3,077 employees in 2019.

Expenses for voluntary health insurance totaled UAH 7.21 million in 2019.

NBU's total expenses for financial assistance and other compensation expenses amounted to UAH 24.47 million in 2019.

Activities of the Primary Labor Union Organization of the NBU

The NBU Labor Union held the following activities in 2019.

	Number
Summer rest and recreation (including abroad) by union members with families, number of Labor Union members	559
Trips with families within Ukraine, number of NBU employees	461
Weekend tours abroad for employees with families, number of NBU employees	391
Stay in children summer camps, number of children of NBU employees	236
Fitness club membership, number of NBU employees	156
Cultural events and entertainment for NBU staff	4
Gift certificates for Labor Union members, number of certificates	1500
Number of employees who joined the Labor Union in 2019	236

Financial Literacy

The NBU received mandate for advancing financial literacy of Ukrainians in September 2019. The Law of Ukraine *On the National Bank of Ukraine* was respectively amended.

In June 2019, the NBU presented a vision of a national strategy on financial literacy. The strategy is intended to unify, coordinate and combine the efforts of state agencies, businesses and society for improving financial literacy at the national level.

Five key priority decisions of the strategy:

- to change financial culture: tax, loan, investment, pension, etc
- to make Ukrainians financially aware
- to focus on youngsters 10 to 24 years old. These are the agents of change who will educate their friends, parents, and grandparents on financial expertise and skills

- to develop a single communication platform that will unite all stakeholders and events, and become recognizable and help build up trust
- to create an educational-information center at the NBU that will combine a visitor center, the Money Museum, a youth enlightenment center, and a teacher competency center.

The NBU continues its efforts to improve Ukrainian citizens' financial literacy. Over 700 financial awareness events took place in 2019 for different target audiences and of various scale.

4.2.6. Natural resources

The NBU and its employees put in efforts to preserve the environment.

In particular, the NBU has arranged for the collection and disposal of recyclables. Also, the regulator has introduced a pilot project on collection of plastic PET bottles on its premises.

	2019		2018	
	Weight, kg	Amount, UAH thousand	Weight, kg	Amount, UAH thousand
Waste for recycling	47,178	90.3	63,725	113.2
PET containers (plastic bottles)	590	3.5	–	–
Mixed polyethylene waste (unsorted)	13,380	19.7	–	–
Total		113.5		113.2

The NBU has become a part of the international practice of reducing the negative impact on the environment as regards raising corporate social responsibility. The concept involves the gradual replacement of the existing car fleet with more fuel-efficient cars in order to reduce the level of carbon dioxide (CO₂) emissions into the atmosphere and optimize costs. To that end, the NBU has begun using three electric cars Hyundai IONIQ Electric since the beginning of 2019. The latter provide zero emissions into the atmosphere, have powerful dynamics, and meet modern requirements.

Throughout 2019, the NBU's car fleet underwent optimization. In particular, cars with higher fuel consumption were withdrawn from use, while more economical ones, with less carbon dioxide emissions into the atmosphere, were put to use. This step reduced the consumption of fuel, oil, and lubricants by 32%: from almost 300 thousand liters in 2018 to 202 thousand liters in 2019.

The NBU arranges water supplies and sewerage under contracts with specialized organizations; quarterly and monthly monitoring of waste water quality; and taking 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 NBU cut down water consumption by all its facilities from 137.1 thousand cubic meters in 2018 to 117.9 thousand cubic meters in 2019 by reducing water intake from natural water bodies (Desenka River) at industrial sites. Activities aimed at reducing energy consumption in the NBU administrative buildings continued throughout 2019 and include the following:

- partial replacement of dated lighting appliances and fittings with modern energy-saving LED panels and LED lamps, which lowered required disposal of mercury-containing lamps, being the waste of the first class of danger
- installation of a modern and more energy efficient equipment during the repairs and technical re-equipment of the engineering infrastructure systems, which made it possible to save more energy
- preparation of an energy audit of the NBU buildings in order to develop further energy-saving measures aimed at improving the efficiency of use of fuel and energy resources and improving working conditions at the institution.

Expenses related to environmental protection are presented in the following table:

	2019	2018
	(in UAH thousands)	
Upkeep and maintenance of dust and gas scrubbing equipment and ventilation systems	2,779.9	3,226.0
Upkeep and maintenance of sewer systems	1,569.9	862.5
Monitoring the concentration of pollutants in waste waters	6.7	24.6
Wastewater treatment (including prevention and treatment of surface water discharges)	1,576.6	887.1
Total expenses related to environmental protection by sources of funding	4,336.5	4,113.1

Part 5. Development Prospects

The NBU's main achievement in 2019 was getting inflation into the target range. Consumer inflation slowed to 4.1% in 2019 from 9.8% in 2018. Thus, based on the last year results, the NBU achieved the midterm inflation target of 5% \pm 1 pp, which was set in 2015. At the same time, the Ukrainian economy saw its highest growth over last eight years. Real income of Ukrainians increased substantially on the back of low inflation.

Due to the macroeconomic stabilization, investors' interest in hryvnia financial instruments increased while the Ukrainian economy's productivity grew considerably. In addition, Ukraine got increased inflows of foreign currency, while the regulator bought almost USD 8 billion from the market as of the year-end, which was five times the previous year's level, and the international reserves exceeded the six-year maximum.

The banking sector was profit-making for the second time in six years. Moreover, its profits were record-

breaking. It became possible due to banks' resumption of lending, mainly the retail lending in hryvnia.

The NBU also had its mandate extended: the Ukrainian parliament adopted respective laws enabling the central bank to protect consumer rights in financial services, increase financial literacy, as well as regulate and supervise a large number of nonbank financial institutions.

Ukraine started 2020 with good news from the IMF: a three-year extended fund facility program was agreed upon at the technical level. The future program is aimed at supporting reforms in Ukraine. This is a clear signal for investors and partners of Ukraine about the actual implementation of the much needed structural reforms in the country.

Additionally, the NBU for the first time received an international recognition by winning the prestigious international Central Banking Transparency Award.

Main accomplishments in meeting the strategic goals in 2019

NBU's strategic goals	Main accomplishments in 2019
1. Low and stable inflation	<ul style="list-style-type: none"> ▪ The NBU achieved its midterm inflation target of 5% \pm 1 pp, which was set in 2015. It was particularly attributed to the central bank's consistent monetary policy. ▪ Due to the steady slowdown in inflation, the NBU managed to lower the key policy rate from 18% to 13.5% over the year, which contributed to economic growth. ▪ The NBU introduced the key policy rate forecast aiming to increase transparency and predictability of the monetary policy.
2. Stable, transparent, and effective banking system	<ul style="list-style-type: none"> ▪ The banking system was stable, transparent and generated record profits. No banks were removed from the market due to insolvency over the year. Banks' profits in 11 months of 2019 totaled UAH 59 billion, which is three times the previous year's level. In particular, 70 out of 75 banks in the market were profitable. ▪ Stress tests were conducted in 29 Ukraine's largest banks. Under current macroeconomic conditions, the banking sector was sufficiently resilient. However, some large banks needed to improve their resilience in order to be prepared to a major crisis. ▪ Banks were assessed under SREP based on unified approaches used in the EU pursuant to CRD IV and CRR II.
3. Resumption of lending	<ul style="list-style-type: none"> ▪ Banks continued to increase their lending to households. In November 2019, the hryvnia retail loan portfolio rose by 24.7% to UAH 168 billion. Additionally, appropriate conditions formed for business lending to revive. ▪ The prolongation of the Financial Restructuring Law for three years extended opportunities for corporate debt restructuring. This included the possibility of conducting a joint restructuring procedure for several debtors that are related parties (i.e., are under common control), but that have different (not the same) creditors. ▪ Conditions for obtaining loans by small and medium enterprises (SME) were facilitated by raising the limit for SME loan portfolio assessment from UAH 2 million to UAH 5 million. Thus, banks will apply a portfolio approach to loans as long as such loans are repaid in a timely manner. Banks will assign the minimum credit risk to such loans. The facilitated approach to credit risk assessment for sole proprietors will also simplify the formal credit administration procedures.
4. Effective regulation of the financial sector	<ul style="list-style-type: none"> ▪ Segregation of functions between the NBU and the National Securities and Stock Market Commission (known as the Split) was approved. Starting from July 2020, the NBU's mandate will include regulating insurance, leasing, and financial companies, credit unions, pawnshops, and credit bureaus, while the National Securities and Stock Market Commission will be charged with regulating private pension funds and construction financing funds.
5. Free movement of capital	<ul style="list-style-type: none"> ▪ The Law of Ukraine <i>On Currency and Currency Operations</i>, which gave the green light for currency liberalization, entered into force. ▪ A simple, clear, and transparent new legal framework on currency regulation was developed. Seven main currency regulations were introduced to replace 56 regulations. ▪ The NBU eased or canceled about 40 FX restrictions for businesses, banks, foreign investors, and households thanks to favorable macroeconomic conditions. ▪ The international securities depository Clearstream and the NBU signed an agreement establishing a correspondent relationship. Thus, a securities account was opened at the NBU's depository, facilitating access of foreign investors to the Ukrainian securities market, namely to domestic government debt securities.
6. Financial inclusion	<ul style="list-style-type: none"> ▪ The NBU received a mandate for advancing financial literacy of Ukrainians. The parliament of Ukraine, by amending the Law of Ukraine <i>On the National Bank of Ukraine</i>, granted the NBU with the authority to take financial literacy action. ▪ The second Finclusion.UA forum was held, where the vision of Ukraine's Financial Literacy Strategy was presented to the public. The forum became a platform for debate about the accessibility of financial services in

	<p>Ukraine, for the exchange of ideas about cooperation between state authorities, businesses, and nongovernmental institutions, and for agreeing further steps towards creating a financially inclusive Ukrainian society.</p> <ul style="list-style-type: none"> ▪ With the adoption of the relevant law, the NBU received the powers to protect consumer rights in financial services. To handle this, a consumer rights protection unit was set up inside the regulator.
<p>7. Modern, open, and effective central bank</p>	<ul style="list-style-type: none"> ▪ The NBU has for the first time in its history won the prestigious international Transparency Award, which is sponsored by the Central Banking Journal, a publication that covers issues concerning the operation of central banks and financial regulators. The official award ceremony was held on 13 March 2019 in London, United Kingdom. ▪ Trust in the NBU started to improve gradually. According to Razumkov Center survey, in November 2019 the number of people who did not trust the central bank exceeded the number of those who trusted the NBU by 23.4%, whereas this figure was 47.4% in February 2019. ▪ A new NBU website was launched. The new website corresponds to the new corporate style of the central bank, has user-friendly navigation, responsive layout, and on-site search for convenient use. It is also integrated with internal information systems enabling transparent disclosure of the banking system performance indicators to the broad public (interactive charts, open data, guides, and registers).

Creating the NBU's Strategy 2025

The Strategy of Ukrainian Financial Sector Development until 2025 (Strategy 2025) was developed in 2019. Strategy 2025 was developed in line with the memorandum of understanding and cooperation concluded between the NBU, the National Securities and Stock Market Commission, the National Commission for the State Regulation of Financial Services Markets, the Deposit Guarantee Fund, and the Ministry of Finance of Ukraine with regard to drafting and implementing the Strategy of Ukrainian Financial Sector Development until 2025. The memorandum envisages joint development and implementation of the Strategy in order to reform and develop Ukraine's financial sector in line with international best practices and to continue implementing the EU-Ukraine Association Agreement.

The implementation of Strategy 2025 will create conditions for the sustainable growth of Ukraine's financial sector and its competitiveness in terms of integration into the global financial space and will:

- meet the needs of consumers for high-quality and accessible financial services
- reduce the cost of financial resources for the government and businesses and make the resources longer-term
- enhance the competitive edge of the Ukrainian economy as a whole.

Strategy 2025 covers five strategic directions of development: financial stability, macroeconomic development, financial inclusion, financial markets development, and innovation development.

The main strategic goals are given in the table below:

Strategic directions	Strategic goals
1. Financial stability	<ul style="list-style-type: none"> ▪ ensuring effective regulation of the financial sector and improvement of supervisory approaches ▪ ensuring transparency of the financial sector ▪ delivering financial sector's resilience to challenges (shocks) ▪ improving the quality of corporate governance and risk management in the financial sector
2. Macroeconomic development	<ul style="list-style-type: none"> ▪ ensuring sustainability of public finances ▪ supporting lending to the economy ▪ enhancing protection of the rights of creditors and investors ▪ creating conditions for raising long-term funding for the economy
3. Financial inclusion	<ul style="list-style-type: none"> ▪ enhancing the accessibility and level of financial services usage ▪ enhancing the protection of consumer rights in financial services ▪ improving the financial literacy of the general public
4. Financial market development	<ul style="list-style-type: none"> ▪ promoting nonbank financial services markets ▪ ensuring effective infrastructure of capital markets ▪ introducing liquid markets for financial instruments and mechanisms/instruments of mitigating the risks of financial transactions ▪ integrating Ukraine's financial market into the global financial space
5. Innovation development	<ul style="list-style-type: none"> ▪ developing the open architecture of the financial market and oversight ▪ developing the FinTech market, digital technologies, and regulator platforms ▪ developing SupTech&RegTech ▪ developing the digital economy

In 2020, the NBU plans to develop the Strategy of the National Bank of Ukraine based on the Strategy of Ukrainian Financial Sector Development until 2025 and take a comprehensive approach to developing the functional strategies.

The full version of the Strategy of Ukrainian Financial Sector Development until 2025 is available on the NBU's official website at <https://bank.gov.ua/news/all/strategiya-rozvitku-finansovogo-sektoru-ukrayini-do-2025-roku-7686>

Approved and signed on behalf of the NBU Board on 26 March 2020.

Governor



Yakiv SMOLII

Chief Accountant,
Director of Accounting Department



Bohdan LUKASEVYCH



National Bank
of Ukraine

Consolidated Financial Statements

for the Year Ended 31 December 2019



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Translation from Ukrainian original

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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

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 5 to 69 and comprise the consolidated statement of financial position as at 31 December 2019, and the consolidated statement of comprehensive income, consolidated statement of cash flows and consolidated statement of changes in equity for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, 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 2019 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 opinion

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' Code of Ethics for Professional Accountants (including International Independence Standards) (IESBA Code) together with 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 opinion.

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. These matters were 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 each 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 matters 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
Assessment of expected credit loss on debt securities at amortised cost	
<p>As at 31 December 2019, the domestic securities portfolio of the National Bank of Ukraine included debt securities at amortised cost with a total carrying value of UAH 346,204 million, which represented 33% of consolidated total assets (Note 8).</p> <p>Assessment of expected credit losses on debt securities at amortised cost involves the use of judgments by Management (as disclosed Note 2 and Note 3) as to the assessment of probability of default and loss given default under a range of weighted scenarios; as well as identification of significant increase in credit risk since initial recognition or/and impairment of such debt securities.</p> <p>Due to the significance of the balance of debt securities at amortised cost to the consolidated financial statements and judgmental nature of expected credit loss assessment, this matter was identified by us as a key audit matter.</p>	<p>Among other audit procedures included obtaining an understanding and performing analysis of judgements applied by Management in measurement of expected credit losses on debt securities at amortised cost.</p> <p>We assessed whether significant increase in credit risk or impairment in respect of such debt securities are present at the reporting date.</p> <p>We also independently assessed under a range of probability weighted scenarios, with the help of our valuation specialists, amounts of expected credit losses on debt securities at amortised cost and compared to the assessment of the National Bank of Ukraine.</p> <p>In addition, we analysed disclosures in respect of expected credit loss on debt securities at amortised cost included in the notes to the consolidated financial statements.</p>

Key audit matter	How our audit addressed the key audit matter
<p>Valuation of debt securities at fair value through profit or loss</p> <p>As at 31 December 2019, the foreign securities portfolio of the National Bank of Ukraine included debt securities with a total carrying value of UAH 504,858 million, which were measured at fair value through profit or loss and represented 48% of consolidated total assets (Note 6). These securities were classified under Level 1, 2 and 3 of the fair value hierarchy.</p> <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 35). 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 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:</p> <ul style="list-style-type: none"> (a) Obtaining understanding of the process of fair value assessments, key sources of inputs and assumptions used by the National Bank of Ukraine to value debt securities (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 (c) Valuing the debt securities of the National Bank of Ukraine independently, using our valuation specialists, based on publicly available market data and comparing their valuation to the valuation of the National Bank of Ukraine (d) Testing of key inputs (discount rates, cash flows) and recalculating fair value amounts for a sample Level 3 debt securities e) Analysing of disclosures in respect of debt securities at fair value through profit or loss included in the notes to the consolidated financial statements.

Other matter

The consolidated financial statements of the National Bank of Ukraine as at 31 December 2018 and for the year then ended were audited by another auditor who issued an auditor's report dated 16 April 2019 with unmodified opinion.

Other information included in the National Bank of Ukraine Management Report and National Bank of Ukraine Annual Report for 2019

Other information comprises the information included in the National Bank of Ukraine Management Report, but does not include the consolidated financial statements and our auditor's report thereon, which we obtained prior to the date of this auditor's report, and the National Bank of Ukraine Annual Report for 2019, which is expected to be made available to us after that date. Management is responsible for the other information.

Our opinion on the consolidated financial statements does not cover the other information and we do not and will 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. We have nothing to report in this regard.

Responsibilities of management and those charged with governance 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 either intends to liquidate the National Bank of Ukraine or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are 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.
- ▶ 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 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 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, related safeguards.

From the matters communicated with the Audit Committee of the National Bank of Ukraine 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.

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.

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 26 March 2020 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.

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

27 March 2020

Ernst & Young Audit Services LLC is included in the Register of auditors and audit firms, registration number: 3516.

Consolidated Statement of Financial Position as of 31 December 2019

	Notes	2019	2018
			(UAH million)
Assets			
Funds and deposits in foreign currency and investment metals	5	90,168	116,681
Foreign securities	6	504,979	432,991
SDR holdings	7	234	100
Monetary gold		28,223	27,752
Domestic securities	8	347,191	361,436
Loans to banks and other borrowers	9	13,843	22,145
Domestic public debt		1,727	1,834
IMF quota contributions	10	65,894	77,472
Property and equipment and intangible assets	11	4,386	4,780
Other assets	12	4,188	4,188
Total assets		1,060,833	1,049,379
Liabilities			
Banknotes and coins in circulation		425,256	400,334
Accounts of banks	13	78,444	38,509
Accounts of government and other institutions	14	38,982	47,727
Liabilities on profit distribution to the State Budget of Ukraine	19	42,722	64,898
Certificates of deposit issued by the NBU	15	151,932	61,867
Borrowings received	16	2,369	2,769
Liabilities to the IMF except IMF quota contributions	17	171,059	217,300
Liabilities to the IMF with respect to quota settlement	17	65,886	77,462
Other liabilities	18	810	1,006
Total liabilities		977,460	911,872
Equity			
Authorized capital	20	100	100
General and other reserves	20	51,439	56,091
Revaluation reserves for assets and liabilities	20	31,790	81,274
Total equity		83,329	137,465
Noncontrolling interest		44	42
Total capital		83,373	137,507
Total equity and liabilities		1,060,833	1,049,379

Approved and authorized for issue on behalf of the Board of the National Bank of Ukraine on 26 March 2020.

Governor

Yakiv SMOLII

Chief Accountant,
Director of Accounting Department



Bohdan LUKASEVYCH

Notes on pages 5 through 69 are an integral part of these consolidated financial statements.

Consolidated Statement of Comprehensive Income for 2019

	Notes	2019	2018
(UAH million)			
Interest income	22	36,702	47,908
Interest expenses	22	(16,353)	(13,527)
Net interest income before release of impairment		20,349	34,381
Net release of impairment on major interest bearing financial assets	5,8,9,12	1,668	498
Net interest income after release of impairment		22,017	34,879
Fee and commission income		283	354
Fee and commission expense		(31)	(1,212)
Net fee and commission income (expense)		252	(858)
Result on transactions with financial assets and liabilities in foreign currency and monetary gold	23	(43,441)	(2,223)
Result on transactions with financial instruments at fair value through profit or loss	24	13,431	6,709
Other income	25	1,028	1,019
Total net income		(6,713)	39,526
Staff costs	26	(1,769)	(1,459)
Costs related to production of banknotes, coins, souvenirs, and other products		(1,146)	(1,001)
Administrative and other expenses	27	(1,372)	(1,320)
(Charge)/ Release of provisions for contingent liabilities		(119)	2,082
Net increase in provisions for other assets	12	(181)	(4)
(Loss)/profit before income tax		(11,300)	37,824
Income tax expense of subsidiary		(7)	(9)
(Loss)/profit for the year		(11,307)	37,815
Other comprehensive income not to be reclassified subsequently to profit or loss:			
Revaluation of investment metals		143	(99)
Other comprehensive (expenses)/income for the year		143	(99)
Total comprehensive (expenses)/income for the year		(11,164)	37,716
(Loss)/profit for the year attributable to:			
National Bank of Ukraine		(11,309)	37,810
Noncontrolling interest		2	5
		(11,307)	37,815
Comprehensive (expenses)/income attributable to:			
National Bank of Ukraine		(11,166)	37,711
Noncontrolling interest		2	5
		(11,164)	37,716

Approved and authorized for issue on behalf of the Board of the National Bank of Ukraine on 26 March 2020.

Governor

Yakiv SMOLII

Chief Accountant,
Director of Accounting Department

Bohdan LUKASEVYCH

Director
Financial Controlling Department

Oleh STRYNZHA

Notes on pages 5 through 69 are an integral part of these consolidated financial statements.

Consolidated Statement of Cash Flows for 2019

	Notes	2019	2018*
(UAH million)			
Operating activities			
Interest received		40,007	44,406
Fees and commissions received		284	354
Other income		1,855	1,095
Interest paid		(16,020)	(17,345)
Fees and commissions paid		(46)	(1,222)
Other expenses		(4,862)	(3,474)
Taxes, duties, and charges paid		(403)	(320)
Transfers to the state budget of Ukraine	19	(64,898)	(44,614)
Decrease in loans to banks and other borrowers		10,335	11,897
Domestic public debt repaid		132	132
Increase/(decrease) in accounts of banks on demand		40,052	(1,506)
Increase/(decrease) in accounts of government and other institutions		26,702	(6,171)
(Increase)/decrease in other assets		(1,327)	1,144
(Decrease)/increase in other liabilities		(963)	345
Other cash flows		(908)	(678)
Net cash inflows/(outflows) from operating activities		29,940	(15,957)
Investing activities			
Decrease in term deposits placed		–	1,434
Net increase in foreign securities		(128,411)	(25,007)
Purchase of monetary gold		(128)	(29)
Repayment of domestic securities		11,024	13,422
Acquisition of property and equipment and intangible assets		(285)	(124)
Sale of property and equipment and intangible assets		79	2
Net cash outflows from investing activities		(117,721)	(10,302)
Financing activities			
Banknotes and coins in circulation	21	24,922	38,575
Proceeds from the loans of the IMF		–	38,309
Repayment of liabilities to the IMF	21	(15,438)	(19,989)
Term deposits (attracted)/repaid	21	(40)	9
Certificates of deposit issued by the NBU	21	90,022	(5,076)
Net cash inflows from financing activities		99,466	51,828
Effect of changes in exchange rates		(38,582)	6,433
Net change in cash and cash equivalents		(26,897)	32,002
Cash and cash equivalents at beginning of the reporting year		116,516	84,514
Cash and cash equivalents at the end of the reporting year	21	89,619	116,516

* Adjusted comparative information as of 31 December 2018 (Note 2).

Approved and authorized for issue on behalf of the Board of the National Bank of Ukraine on 26 March 2020.

Governor

Yakiv SMOLII

Chief Accountant,
Director of Accounting Department

Bohdan LUKASEVYCH

Notes on pages 5 through 69 are an integral part of these consolidated financial statements.

Consolidated Statement of Changes in Equity for 2019

	Notes	Statutory capital	General and other reserves	Revaluation reserve for assets and liabilities	Total equity	Noncontrolling interest	Total equity
(UAH million)							
Balance as of 1 January 2018 as restated		100	75,086	89,698	164,884	37	164,921
Total comprehensive income for 2018		-	37,810	(99)	37,711	5	37,716
Gain/(loss) on transfer of assets	11	-	(232)	-	(232)	-	(232)
Realized gain/(loss) on investment metals disposed	19	-	181	(181)	-	-	-
Realized gain/(loss) on revaluation of securities disposed and derivatives	19	-	530	(530)	-	-	-
Allocation of unrealized gain/(loss) on revaluation of securities to revaluation reserve	19	-	(1,617)	1,617	-	-	-
Allocation of unrealized gain/(loss) on operations with derivatives to revaluation reserve	19	-	(40)	40	-	-	-
Compensation of unrealized gain/(loss) on revaluation of financial assets and liabilities in foreign currency and monetary gold at the cost of revaluation reserve	19	-	9,271	(9,271)	-	-	-
Liability of the National Bank of Ukraine on profit distribution to the State Budget of Ukraine for 2018	19	-	(64,898)	-	(64,898)	-	(64,898)
Balance as of 31 December 2018		100	56,091	81,274	137,465	42	137,507
Total comprehensive income for 2019			(11,309)	143	(11,166)	2	(11,164)
Gain/(loss) on transfer of assets	11	-	(248)	-	(248)	-	(248)
Realized gain/(loss) on investment metals disposed	19	-	173	(173)	-	-	-
Realized gain/(loss) on revaluation of securities disposed and derivatives	19	-	1,057	(1,057)	-	-	-
Allocation of unrealized gain/(loss) on revaluation of securities to revaluation reserve	19	-	(4,677)	4,677	-	-	-
Compensation of unrealized gain/(loss) on revaluation of financial assets and liabilities in foreign currency and monetary gold at the cost of revaluation reserve	19	-	53,074	(53,074)	-	-	-
Liability of the National Bank of Ukraine on profit distribution to the State Budget of Ukraine for 2019	19	-	(42,722)	-	(42,722)	-	(42,722)
Balance as of 31 December 2019		100	51,439	31,790	83,329	44	83,373

Approved and authorized for issue on behalf of the Board of the National Bank of Ukraine on 26 March 2020.

Governor

 Yakiv SMOLII

Chief Accountant,
Director of Accounting Department

 Bohdan LUKASEVYCH

Notes on pages 5 through 69 are an integral part of these consolidated financial statements.

Notes to the Consolidated Financial Statements

1 Principal Activities

The National Bank of Ukraine (hereinafter – the NBU) is Ukraine's central bank. Its operations are governed by Ukraine's Constitution, the Law of Ukraine *On the National Bank of Ukraine*, as well as other Ukrainian laws. The central bank's main statutory function 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. 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 functions of the NBU, as a separate central body of public administration, determine its financial performance and the structure of its assets, liabilities, and capital.

Pursuant to the Law of Ukraine *On the National Bank of Ukraine*, the NBU performs the following key functions:

defines and implements monetary policy in line with the Monetary Policy Guidelines developed by the NBU Council

solely issues the domestic currency of Ukraine and organizes its circulation

ensures accumulating and safekeeping of the foreign exchange reserves and conducting transactions with reserves and investment metals

acts as the creditor of last resort for banks and makes the refinancing system available

performs banking regulation, as well as individual and consolidated supervision

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

performs currency regulation within the competence specified by a special law, establishes the procedure for transactions in foreign currency, carries out currency supervision over banks and other financial institutions licensed by the NBU to conduct currency transactions

arranges and carries out collection of funds and transportation of currency valuables; issues licenses to provide cash collection services to banks, suspends, updates and revokes them, as prescribed by the NBU

defines how Ukraine's banking system operates under a martial law or a state of emergency; ensures emergency preparedness of the NBU system

protects consumer rights in financial services, provided by banks and other financial institutions licensed to provide certain financial services, regulated and supervised by the NBU

organizes the work on and takes measures aimed at improving the financial literacy of the general public

exercises other functions in the area of money and finance within its statutory mandate, envisaged by the Law of Ukraine *On the National Bank of Ukraine*.

Pursuant to the Law of Ukraine *On the National Bank of Ukraine*, the NBU shall grant loans to banks to maintain their liquidity; purchase and sell securities, currency assets, precious metals on the open market; sell commemorative coins made of precious and nonprecious metals in domestic and foreign markets; carry out state debt servicing, related to the placement of state securities, their repayment and payments of the yield thereof; keep the accounts of the State Treasury Service of Ukraine, international organizations' accounts and effect other transactions required to ensure the exercise of its functions. The NBU also performs the function of the depository of state securities of Ukraine.

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

Under Ukraine's Constitution, the NBU Council's main tasks are to develop Monetary Policy Guidelines and oversee the implementation of monetary policy. In addition, Ukraine's Law *On the National Bank of Ukraine* gives the Council the mandate to approve the central bank's budget of administrative expenses for the next year, and to make decisions regarding the use of its profit for distribution to augment the central bank's authorized capital. The Council also has the right to take a decision to increase the regulator's statutory capital; to approve its financial statements and reports on the central bank's administrative expense budget and the distribution of profits for distribution; to approve NBU Board decisions on the central bank's participation in international financial institutions; and to perform other functions within its powers, as set forth in applicable Ukrainian laws. The NBU Council creates the Internal Audit Committee to assess the reliability and effectiveness of the NBU's internal controls, as well as the completeness and authenticity of the NBU's financial reporting.

As of 31 December 2019 and 2018, the NBU's structure comprised the Head Office and the Banknote Printing and Minting Works, the central bank'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 statutory capital of the Settlement Center was 83.55% as of 31 December 2019 (83.55% as of 31 December 2018).

As of 31 December 2019 and 2018, the statutory capital of the Settlement Center totaled UAH 206.7 million and comprised ordinary registered shares with a par value of UAH 1,000 each.

The Settlement Center is the only institution that has a mandate to settle the cash leg of securities and other financial instrument transactions entered into on the stock exchange or in over-the-counter agreements, where the delivery versus payment principle is used. The Settlement Center opens and maintains money accounts for stock market participants. In addition, it ensures the payment of returns on securities, the repayment of the face value when securities are redeemed, and that an issuer performs other corporate transactions, including those related to securities that have been placed and are circulating outside Ukraine.

The NBU is the founder of the Corporate Nonstate Pension Fund (hereinafter – the CNPF). The NBU administrates and stores assets of the CNPF.

The NBU has analyzed whether it has controls required for consolidation in accordance with IFRS 10 *Consolidated Financial Statements* in relation with the CNPF. The NBU is the CNPF's founder, however, it is neither exposed, nor has any rights, to variable returns from its operations. In line with IFRS 10, the NBU does not control the CNPF, and accordingly CNPF data was not consolidated for the purpose of these consolidated financial statements.

As of 31 December 2019, the NBU had investments in an associated company, the National Depository of Ukraine Public Joint Stock Company, an associate (as of 31 December 2018, the NBU's investments in associated companies were represented by the German Ukrainian Fund and the National Depository of Ukraine).

The NBU, the National Securities and Stock Market Commission and other stock market players are shareholders of the National Depository of Ukraine, PJSC (hereinafter– the National Depository). According to its charter, the National Depository conducts depository record-keeping, and maintains records of securities and issuers' corporate transactions on customers' securities accounts.

As of 31 December 2019, the NBU held 2,580 ordinary registered shares of the National Depository with a par value of UAH 10,000 each, with a total nominal value of UAH 25.8 million (in 2018 – 2,580 ordinary registered shares of the National Depository with a par value of UAH 10,000 each, with a total nominal value of UAH 25.8 million). As of 31 December 2019, the NBU's shareholding in the authorized capital of the National Depository was 25% (25% as of 31 December 2018).

The German-Ukrainian Fund (hereinafter – the GUF) was established by the Cabinet of Ministers of Ukraine – represented by the Ministry of Finance – the NBU, and Kreditanstalt für Wiederaufbau (KfW) (registered in Germany). The core activity of the GUF is to improve the competitiveness of Ukraine's small- and medium-sized enterprises by financing them through authorized Ukrainian banks using GUF funds. As of 31 December 2018, the NBU's shareholding in the authorized capital of the GUF was 31.25%.

In March 2019, as a result of KfW withdrawing as a shareholder, the holdings of the NBU and the Ministry of Finance of Ukraine in the GUF increased to 50% each.

In December 2019, the NBU transferred its share in the GUF's authorized capital to the Ministry of Finance of Ukraine, which resulted in termination of rights by the NBU to manage the GUF's important lines of business activities (Note 12). As of 31 December 2019, the NBU was not the GUF's shareholder, had no control over the GUF and derecognized that investment.

Approval of the Consolidated Financial Statements lies within the competence of the NBU Council.

2 Basis of Accounting Policies and Reporting Presentation

The Consolidated Financial Statements of the NBU have been prepared in accordance with the International Financial Reporting Standards (hereinafter – the 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* on the preparation of financial statements.

These consolidated financial statements have been prepared on the basis of the assumption that the NBU is a going concern and will continue to operate in the foreseeable future.

These consolidated financial statements have been prepared on a historical cost basis, except for financial assets at fair value through profit or loss and derivative instruments. The consolidated financial statements are presented in the domestic currency of Ukraine, Ukrainian hryvnia, which is the functional and presentation currency of the consolidated financial statements. The NBU Consolidated Financial Statements is prepared in UAH millions.

Basis of Consolidation

These Consolidated Financial Statements include the Financial Statements of the NBU and its subsidiary as of 31 December 2019.

A subsidiary is a company controlled by the NBU. Control is deemed to have place, provided all of the following conditions are met:

- authority over the investee
- rights to variable returns from the investee's operations and exposure to respective risks
- ability to use its power over the investee in order to affect the NBU's performance.

Consolidation of the subsidiary begins from the date the NBU actually assumes control over it (usually the acquisition date) and ceases when the NBU loses such control.

A change in ownership interest in the subsidiary, without losing control over the latter, is recorded as an equity transaction. The subsidiary's losses are attributable to noncontrolling interest, even if this results in the noncontrolling interest with a deficit balance.

If the NBU loses control over the subsidiary, it derecognizes the subsidiary's assets and liabilities (including the respective goodwill), the carrying value of the noncontrolling interest; recognizes the fair value of the consideration received, the fair value of the retained investment, and the result of the transaction, in profit or loss; reclassifies the NBU's share in components, previously recognized in other comprehensive income, to profit or loss. In the event of the disposal of the subsidiary by transferring control to the State, represented by the Cabinet of Ministers of Ukraine, or other public authorities and institutions, the result of such transaction is included in equity.

When consolidating the subsidiaries' financial statements, all intra-system balances, including income and expense on transactions between subsidiaries, are excluded. The NBU and its subsidiary use uniform accounting policies in preparing the consolidated financial statements. The financial statements of the subsidiary have been prepared for the same reporting period as the NBU's consolidated financial statements.

Investments in Associates

Associates are the entities over which the NBU has significant influence. Significant influence means the power to participate in the taking of financial and operating policy decisions of the investee, but it does not mean control or joint control over those policies.

Investments in associates are accounted for under the equity method, including recognized impairment, and classified as other assets. Subsequent changes in the carrying value reflect the post-acquisition changes in the NBU's share in net assets of an associate. The NBU's share in the post-acquisition profits or losses of associates and the amount of recognized impairment of the investment are recorded in the consolidated statement of comprehensive income as other income or expense. The NBU's share in other changes in the associates' equity that have occurred from the date of investments is recorded in the consolidated statements of comprehensive income and changes in equity. However, if the NBU's share in losses of an associate equals or exceeds its interest in the associate, the NBU does not recognize further losses, except where the NBU is obliged to make further payments to, or on behalf of, the associate. Under the equity method, investments in an associate are recorded until the last day of the month in which the investee fails to meet the criteria of an associate.

Key Measurement Terms

Financial assets and liabilities are initially carried at fair value or fair value taking into account the transaction costs and further accounted for at fair value or amortized cost, depending on their classification.

Fair value is the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction in the principal (or most advantageous) market at measurement date under current market conditions (i.e. an exit price) regardless of whether that price is directly observable or estimated using another valuation technique.

The market in which the NBU would normally enter into transactions to sell the asset or transfer the liability is presumed to be the principal market or, in absence of a principal market, the most advantageous market. The NBU should have access to the principal or the most advantageous market at the date of measurement. The NBU measures fair value of an asset or a liability using the assumptions that market participants would use when pricing

the asset or liability, assuming that market participants act in their economic best interest.

If there is a principal market for the asset or liability, the fair value represents the price in that market (regardless whether that price is directly observable, or it is estimated using another valuation technique), even if the price in a different market is potentially more advantageous at the measurement date.

Such valuation techniques as discounted cash flows and consideration of financial data of the investees are used to measure fair values of certain financial instruments for which external market pricing information is not available. Valuation techniques may require assumptions not supported by observable market data. Disclosures are made in these consolidated financial statements if changes in any such assumptions to a reasonably possible alternative may result in significantly different amounts of profit, income, expense, total assets, or total liabilities.

The NBU uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair values, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the consolidated financial statements are categorized within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement taken as a whole:

- Level 1 – quoted (unadjusted) market prices in active markets for identical assets or liabilities
- Level 2 – valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
- Level 3 – valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable.

Transaction costs are incremental costs that are directly attributable to the acquisition, issue, or disposal of a financial asset or financial liability. The incremental cost is one that would not have been incurred if the transaction had not taken place. Transaction costs do not include debt premiums or discounts, financing costs, internal administrative or storage costs.

Amortized cost is the amount at which the financial asset or liability was recognized at initial recognition, less any principal repayments, plus or minus the cumulative amortization of any difference between that initial amount and the maturity amount using the effective interest rate method, and for financial assets, adjusted for the amount of provision for credit losses.

The effective interest rate method is a method of calculating amortized cost of financial asset or financial liability and allocating interest income or interest expense over the

relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument or a shorter period, if appropriate, to the net carrying amount of the financial asset or amortized cost of the financial liability.

The effective interest rate adjusted for the credit risk is the rate at which estimated future cash payments or proceeds are exactly discounted over the expected life of a financial asset to the amortized cost of the initially impaired financial assets.

Transactions in Foreign Currencies 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 2019 and 2018, the calculation of the official hryvnia exchange rate against the U.S. dollar takes 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 2019, 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 currencies for which TIS BLOOMBERG publishes the BFIX quotation on the day the official hryvnia exchange rate is calculated. As of 31 December 2018, 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 daily reference exchange rates of currencies to euro released by the European Central Bank and on exchange rate of domestic currencies to the U.S. dollar set by respective central (national) banks. In 2018-2019, 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 official 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/ official 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 2019 (UAH)	31 December 2018 (UAH)
USD 1	23.6862	27.688264
SDR 1	32.7539	38.508604
Euro 1	26.422	31.714138
1 troy ounce	35,802.17	35,364.835
GBP 1	31.0206	35.131366

Remeasurement of monetary assets and liabilities in foreign currency and monetary gold – as well as gold in foreign banks due to the change in the official hryvnia exchange rate against foreign currencies/ official price of investment metals – are reported as financial results in the consolidated income statement recognized in the period in which they are occurred.

Transactions with the International Monetary Fund

The NBU acts as a depository and a fiscal agent as to the received funds in relations between Ukraine and the International Monetary Fund (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 reported in special drawing rights' (SDR) holdings and 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 from IMF quota contributions and like a fiscal agent for borrowings, as well as 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 income statement. Nonreimbursable fees under arrangements of 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.

Transactions with Financial Instruments

The NBU classifies all financial assets into the categories that are at fair value through profit or loss and at amortized cost depending on the models determined to manage financial assets and cash flows 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. 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 which 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 set cash flows on specified dates that are solely payments of securities' principal and interest on the principal amount outstanding.

Such securities mainly include domestic government debt securities with fixed coupons and domestic government debt securities with coupon calculated as inflation index for the last 12 month plus determined margin (hereinafter referred to as "indexed government bonds"). The NBU recognizes indexed government bonds as instrument with a floating interest rate and accrues interest income using effective interest rate. At the same time, the effective interest rate is reviewed monthly based on actual inflation rate for the reporting period and not based on inflation rate forecasts.

Debt Securities 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, which relates to types other than model for management of financial assets to collect cash flows and model of management of financial assets to both collect cash flows as set by 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 due to the outcome of completed analysis for characteristics of financial assets cash flows which is 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 at the principal or most beneficial markets, if no quotations are available, based on the valuation model (Note 35).

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.

Loans to Banks and Other Borrowers at Amortized Cost

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

Domestic public debt

Domestic public debt includes loans granted to the Government of Ukraine. Domestic public debt is reported under the model for financial asset management intended to collect contractual cash flows, which are solely payments of principal and interest on the principal amount outstanding. The domestic public debt is subsequently measured 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 recognized as follows:

transactions with financial instruments are recorded in the consolidated statement of financial position at a 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 recorded 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 (except for derivative financial instruments) are initially recorded at fair value as of transaction date less transaction costs.

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 initial recognition differs from the transaction price, it accounts for that instrument at that date as follows:

at the estimated value, 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 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 that 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 at fair value through profit or loss, and derivative financial instruments are remeasured after each change in their fair value. Results from changes in fair value are recognized in profit or loss of the consolidated statement of other comprehensive income in the period in which they arise

Foreign currency funds 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.

Financial Assets Impairment Policy and Principles of Recognition of Allowances for Expected Credit Losses

During estimation of impairment and assessment of expected credit losses for financial assets the NBU is guided by requirements of IFRS 9: Financial Instruments.

Allowance for expected credit losses are recorded through recognition of respective changes in allowance as expenses (as part of *Net decrease in major interest bearing financial assets and Net increase in allowance for other assets* lines of the consolidated statement of comprehensive income).

The NBU recognizes allowances for expected credit losses on financial assets (deposits granted, loans at amortized cost, debt securities at amortized cost, accounts receivable) and allowances for credit related commitments.

An allowance for expected credit losses is measured in the amount of credit losses over the expected life of the financial instrument if the credit risk on that financial instrument has increased significantly from the date of its initial recognition. Otherwise, the allowance for expected credit losses is measured in the amount equal to 12-month expected credit losses. The NBU's policies in respect of determining credit risk are disclosed in Note 28.

The NBU reports its financial instruments as one of the following impairment stages:

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

Impairment Stage Two (Stage 2): financial instruments with a significant increase in credit risk at the reporting since initial recognition, but with no objective evidence of impairment present

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

Originated credit-impaired financial assets: financial assets with the objective evidence of impairment at the date of initial recognition.

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

Depending on the impairment stage for financial assets, allowances for expected credit losses are recorded 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.

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

Subsequent to initial recognition, allowances for expected credit losses of originated credit-impaired financial assets are charged or released only in case of change in expected credit losses and recognized as part gain on release or loss on charges of allowances for expected credit losses.

Allowances for expected credit losses are charged and released pursuant to decisions of the NBU Board at least on a monthly basis (for accounts receivable and other financial assets under contracts – at least once a quarter) as of the end of the last business day of the month/quarter.

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.

The NBU determines criteria for significant increase in credit risk of financial instruments mainly based on the change in rating of a borrower and counterparty since the date of initial recognition (Note 28).

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.

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

Assessment on individual basis is applied for financial assets for which objective evidence of impairment were identified, and assets that are government related obligations,

obligations guaranteed by the government, or obligations of state-owned enterprises and organizations (including state-owned banks and the Deposit Guarantee Fund (DGF)).

Assessment on collective basis is applied for financial instruments with common credit risk characteristics (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 set by the NBU's internal methodology).

Credit losses on accounts receivable and other financial assets under contracts are assessed by a simplified method.

In the event the amount of expected credit losses decreases as a result of the events that evidence 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 other comprehensive income.

Unrecoverable 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 as to recovery of contractual cash flows.

Change in terms (modification) of financial assets

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

If the change in terms not significant, 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 under 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' revision and is recognized as income/expenses on change in terms (modification) of financial assets' in the consolidated statement of comprehensive income.

Repo Transactions

Funds paid under the agreements for purchase and sale of securities with counterparty banks with repurchase obligation (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.

Property and Equipment

Property and equipment (PE) items are carried at historical cost, less accumulated depreciation and impairment loss.

Historical cost of acquired PE items includes the costs on acquisition and set-up.

Costs of 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 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 representing higher of two estimates : fair value less cost to sell or value in use. Write-down of the carrying amount is recognized in profit or loss in the consolidated statement of comprehensive income. Impairment of assets recognized in previous periods is reversed if change in estimates used to determine the expected recoverable amount occurred.

Profits or losses on disposals determined as the difference between the proceeds and the asset's carrying amount are recognized in profit or loss of the consolidated statement of comprehensive income.

Capital investments in progress are carried at historical cost. Upon completion, assets are transferred to buildings and constructions at historical cost. Capital investments in progress are not depreciated until the asset is ready for use.

Noncurrent Assets Held for Sale

The NBU recognizes its noncurrent assets as held for sale when the carrying amount of assets is recovered through sale rather than use in operating activity.

To recognize noncurrent assets as held for sale, assets should be ready for their immediate sale, and such a sale should be highly probable.

Noncurrent assets held for sale are recognized at lower of: carrying amount or fair values less costs to sell. If carrying amount of items as of the date of recognition as held for sale exceeds their fair value, then such items are written down.

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 (by the NBU's resolution on the 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 enhancement of investment property items that lead to increase in initially expected benefits from their use increase the historical 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.

Depreciation of PE and Investment Property

Depreciation of property, plant 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 later, useful life is reviewed and adjusted as necessary). Depreciation is calculated using the straight-line method for an even decrease in historical 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 fixed assets	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 historical 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 2 to 8 years and subsequently measured at historical cost, less accumulated amortization and impairment loss.

Investment Metals and Other Precious Metals

Investment metals include stocks of gold (other than monetary gold), silver, platinum, and palladium held at the State Treasury of Ukraine. Investment metals are accounted at their physical weight in troy ounces and their value in hryvnias at the official price of investment metals.

The official exchange rates of hryvnia against investment metals (official price of investment metals) at which the metals are carried in the consolidated financial statements were as follows:

	31 December 2019 (UAH)	31 December 2018 (UAH)
1 troy ounce of gold	35,802.17	35,364.835
1 troy ounce of silver	423.27	416.847
1 troy ounce of platinum	22,532.45	21,956.793
1 troy ounce of palladium	44,989.33	34,776.460

Unrealized revaluation gains or losses from investment metals due to changes of the official price of investment metals are included in other comprehensive income in the consolidated statement of comprehensive income for the period when they emerged. Realized revaluation gains or losses from investment metals are included in retained earnings.

Investment metals placed on interest bearing deposits with foreign banks are included in 'Funds and deposits in foreign currency and investment metals'. Revaluation gains or losses from investment metals placed with foreign banks due to changes of the official price of investment metals are included in other comprehensive income in the consolidated statement of comprehensive income for the period when they emerged.

Precious metals that include gold ingots that do not meet the defined standards, gold scrap and scrap of other metals are accounted at their cost in stocks of tangible assets.

Investment and precious metals are included in 'Other assets' in the consolidated statement of financial position.

Banknotes and Coins in Circulation

The amount of banknotes and coins in circulation is the nominal value of banknotes and coins (small, circulating, commemorative, investment) that are legal tender and issued into circulation by the NBU after the hryvnia introduction in September 1996. Banknotes and coins in circulation are recognized as liabilities at the nominal value after their disbursement to banks and customers of the NBU. 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

Accounts of banks are recognized when the NBU receives the funds from counterparty banks. These liabilities are not derivative instruments and are initially recognized at fair value less transaction costs and are subsequently measured at amortized cost.

Accounts of Government and Other Institutions

Accounts of government and other institutions are nonderivative liabilities to government and other customers, they are initially recognized at fair value less transaction costs, and are subsequently measured at amortized cost.

Certificates of Deposit Issued by the NBU

Certificates of deposit issued by the NBU are initially recognized at fair value including transaction costs, and are subsequently measured at amortized cost using the effective interest rate method.

Borrowings Received

Borrowings received are initially measured at fair value including transaction costs and subsequently measured at amortized cost applying the method of effective interest rate.

Income and Expenses Recognition

Interest income and expenses are recognized in the consolidated statement of comprehensive income for all debt instruments, excluding debt securities at fair value through profit or loss, on an accrual basis using the effective interest rate method:

for financial assets in the first and the second stage of impairment – based on the gross book value

for financial assets in the third stage of impairment – based on the amortized cost

for purchased or originated credit-impaired financial assets – applying the credit-adjusted effective interest rate to amortized cost.

Interest income on debt securities at fair value through profit or loss is measured based on the nominal interest rate and recognized in the consolidated statement of comprehensive income in results on transactions with debt securities measured at fair value.

All other fees and commissions and other income and expenses are recognized on an accrual basis depending on completion of a specific transaction assessed as a ratio of the actual services provided (received) to the total contractual services to be provided.

Unrealized gains or losses from remeasurement of assets and liabilities are recognized as a result of changes of the hryvnia exchange rate to foreign currencies, monetary gold, official price of investment metals during the reporting year and also due to remeasurement of securities, derivatives, and other financial instruments at their current fair value.

Income or expenses resulted from remeasurement of assets and liabilities are recognized as realized at disposal or redemption of the respective remeasured assets and

liabilities to the extent of the unrealized amounts as of the dates of such disposals or redemptions.

Income or expenses from revaluation of foreign currencies, monetary gold, and investment metals are recognized as realized at the end of the reporting month in the case of outflows of foreign currencies, monetary gold, and investment metals for the respective month, which are measured as reduction of the total open position in foreign currencies, monetary gold, and investment metals in the amount proportionate to the reduction amount.

Costs Related to Production of Banknotes, Coins, Souvenirs, and Other Products

The NBU produces banknotes and coins of the Ukrainian national currency. Costs associated with the banknotes and coins production (other than commemorative coins made of precious metals, and investment coins) are designated as the NBU's expenses when the produced banknotes and coins are transferred by the Printing and Minting Works to the Central Vault of the NBU. Expenses for the banknotes and coins production include depreciation of plant and machinery, staff costs, and other production costs.

Costs associated with the production of commemorative coins made of precious metals and investment coins less their nominal value are recognized as an asset in 'Other assets' of the NBU's consolidated statement of financial position and are recognised as expenses in the periods when the coins are sold.

Staff Costs

Payroll expenses, payments of the social security tax, transfers of contributions to the NBU's Corporate Nonstate Pension Fund, as well as expenses incurred on staff training and development are recognized for the periods when they are incurred.

NBU Corporate Nonstate Pension Fund

The NBU is the founder of the Corporate Nonstate Pension Fund, which is a fund with defined contributions. The NBU pays the contributions to the fund on contractual terms. After the contributions have been paid, the NBU bears no obligations for pension payments. Contributions to the fund are recognized as staff costs when they are due. Upon retirement of the NBU's employees, all benefits are paid by the NBU Corporate Nonstate Pension Fund.

The NBU acts as the administrator, asset manager and the custodian of the NBU Corporate Nonstate Pension Fund.

Taxation and transfer of distributable profits to the State Budget of Ukraine

Pursuant to the Tax Code of Ukraine, the NBU makes settlements with the State Budget of Ukraine in accordance with the Law of Ukraine *On the National Bank of Ukraine*.

The NBU transfers the distributable profits to the State Budget of Ukraine pursuant to the Law of Ukraine *On the National Bank of Ukraine*. The distributable profit is calculated by decreasing the profits by amounts of unrealized gains for the reporting period transferred to the

revaluation reserves and by increasing the profits by amounts of compensation of unrealized losses on revaluation reserves and realized gains. These transfers are treated as distributions to owners and are recorded in the consolidated statement of changes in equity (Note 19).

Other taxes payable by the NBU are included in administrative and other expenses.

Revaluation Reserves for Assets and Liabilities

Pursuant to the Law of Ukraine *On the National Bank of Ukraine* unrealized gains on revaluation of foreign currency and monetary gold due to changes in the official hryvnia exchange rate against foreign currencies and monetary gold during the reporting period, as well as unrealized gains on revaluation of securities and derivative financial instruments to their fair values and unrealized gains or losses on revaluation of investment metals due to changes in the official price of investment metals are transferred by the NBU to 'Revaluation reserve for assets and liabilities' within 'Equity' in the consolidated statements of financial position and changes in equity.

The revaluation reserve is used to compensate for unrealized losses on revaluation of foreign currencies, monetary gold, securities, and derivative financial instruments at fair value, should they accumulate during the reporting year.

The revaluation reserve for foreign currencies, monetary gold, securities, and derivative financial instruments is included in distributable profits in the respective reporting periods.

Provisions for Contingent Liabilities

NBU provisions for contingent liabilities include provisioning for legal or constructive obligations (resulting from past events), particularly under lawsuits the settlement of which is very likely (an adverse scenario being more probable than a positive one) to cause an outflow of resources that carry economic benefits and amounts (expenses) that can be reliably measured. Provisions for contingent liabilities are included in profit or loss in the consolidated statement of comprehensive income for the period when they emerged (Note 18).

Cash and cash equivalents

For the purposes of reporting cash flows, cash and cash equivalents include cash in foreign currencies, SDR holdings, financial assets 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.

Offsetting

Financial assets and liabilities are offset and the net amount is subsequently reported in the consolidated statement of financial position only when there is a legally enforceable right to offset the recognized amounts, and there is an intention to either settle on a net basis, or to realize the asset and settle the liability simultaneously.

Introduction of new and amended standards and interpretations of the financial statements

Amended IFRS and interpretations that came into effect were adopted on 1 January 2019.

IFRS 16: Leases (effective for annual reporting periods beginning on or after 1 January 2019). IFRS 16 specifies how a reporting entity should recognize, measure, present, and disclose leases. The standard introduces a single lessee accounting model and requires a lessee to recognize assets and liabilities for all leases with a term of more than 12 months, unless the underlying asset is of low value. IFRS 16: Leases substantially carries forward the lessor accounting requirements in IAS 17: Leases. Accordingly, a lessor continues to classify its leases as operating leases or finance leases.

Amendments to IFRS 9: Financial Instruments – Prepayment Features with Negative Compensation. The amendments remedy an unintended consequence to the notion of ‘reasonable additional compensation’.

The amendments allow for financial assets with a prepayment option that could result in the option’s holder receiving compensation for early termination to meet the SPPI condition, if specified criteria are met.

In addition to that, the IAS Board has discussed the accounting for financial liabilities, the modification or exchange of which do not result in derecognition. According to the review findings, two paragraphs were added on the aforesaid issues, where the IAS Board observed that the accounting in such cases is the same as it is for modifying a financial asset. This does not lead to derecognition. In particular, if the gross carrying amount of a financial asset (amortized cost of a financial liability) is changed, it will lead to an immediate gain or loss in profit or loss at the date such a financial asset (financial liability) is changed.

The amendments apply retrospectively to annual reporting periods beginning on or after 1 January 2019. There are specific transition provisions depending on when the amendments are first applied, relative to the initial application of IFRS 9: Financial Instruments.

Other adopted standards and amendments:

IFRIC 23: Uncertainty over Income Tax Treatments

IAS 28: Investments in Associates and Joint Ventures stipulating that explanations for decisions to measure investments at fair value through profit or loss must be provided separately for each investment¹

Amendment to IAS 19: Employee Benefits (February 2018) – Plan Amendment, Curtailment or Settlement¹

Annual improvements to IFRS in 2015–2017 (amendments to IFRS 3, IFRS 11, IAS 12, IAS 23).

The amended IFRS and interpretations did not have significant impact on the NBU’s performance 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 contribution of assets between an investor and its associate or joint venture³

IFRS 17: Insurance Contracts, is a new financial reporting standard for insurance contracts that determines recognition and measurement, presentation and disclosure of information²

Amendments to IAS 1 and IAS 8 are intended to simplify the definition of ‘material’ in IAS 1, however do not amend the main concept of ‘material’ in the Standards. Definition of ‘material’ in IAS 8 was replaced with a reference to IAS 1¹

Amendments to references to the IFRS Conceptual Framework for Financial Reporting¹

Amendments to IFRS 3: Business Combinations¹

Amendments to IFRS 9, IAS 39 and IFRS 7: Reform of the Base Interest Rate¹.

The NBU did not apply the above mentioned new and revised standards early. The NBU’s management anticipates that the application of the standards mentioned above will not have a significant effect on the NBU’s performance and financial position.

¹ The amendments apply to annual reporting periods beginning on or after 1 January 2020, however early application will be permitted.

² The amendments apply to annual reporting periods beginning on or after 1 January 2023, however early application will be permitted.

³ The amendments apply to annual reporting periods beginning on or after a date to be specified. Early application is permitted.

Approach to presenting gross carrying amounts and allowances for expected credit losses

The following approach is applied to disclosing gross carrying amounts: the consolidated financial statements include changes in gross carrying amounts and allowances for expected credit losses only for the financial assets with existing outstanding amounts as of the start and/or end of the reporting period.

Change in accounting policy regarding cash and cash equivalents

In 2019, the NBU changed its accounting policy regarding definition of cash equivalents. According to the new policy, foreign securities with maturities of up to three months are not included in cash equivalents and respective cash flows are presented within investment activities..

The NBU's management believes that such accounting policy is more relevant and compliant with the purpose of cash equivalents, and gives a more fair presentation of substance

and economic reality of these assets as the business purpose of these foreign securities is to manage foreign currency reserves, as opposed to be a part of liquidity management.

The effect of the accounting policy change on the consolidated financial statements is presented in the tables below.

Amendments to the Cash and Cash Equivalents Note:

	As presented in the financial statements as of 31 December 2018	The effect of the accounting policy change	Adjusted comparative information as of 31 December 2018 (UAH million)
Foreign securities with maturities of up to three months	22,725	(22,725)	–
Total for cash and cash equivalents	139,241	(22,725)	116,516

	As presented in the financial statements as of 31 December 2017	The effect of the accounting policy change	Adjusted comparative information as of 31 December 2017 (UAH million)
Foreign securities with maturities of up to three months	50,456	(50,456)	–
Total cash and cash equivalents	134,970	(50,456)	84,514

Changes to the consolidated cash flow statement:

	As presented in the financial statements as of 31 December 2018	The effect of the accounting policy change	Adjusted comparative information as of 31 December 2018 (UAH million)
Investment activity			
Net increase in foreign securities	(52,738)	27,731	(25,007)
Net cash outflows from investment activity	(38,033)	27,731	(10,302)
Net flows of cash and cash equivalents	4,271	27,731	32,002
Cash and cash equivalents at the start of the reporting year	134,970	(50,456)	84,514
Cash and cash equivalents at the end of the reporting year	139,241	(22,725)	116,516

Reclassification

As of 31 December 2018, the following reclassifications have been to conform to the presentation in the consolidated statement of financial position as of 31 December 2019:

	As presented in the financial statements as of 31 December 2018	Reclassifications	Adjusted comparative information as of 31 December 2018 (UAH million)
Liabilities			
Banknotes and coins in circulation	400,119	215	400,334
Other liabilities	1,221	(215)	1,006

In the consolidated statement of comprehensive income:

	As presented in the financial statements as of 31 December 2018	Reclassifications	Adjusted comparative information as of 31 December 2018 (UAH million)
Statement of comprehensive income			
Result on transactions with debt securities measured at fair value	6,668	(6,668)	–
Result of transactions with financial instruments other than debt securities measured at fair value	41	(41)	–
Result on transactions with financial instrument measured at fair value	–	6,709	6,709

Additionally, the reclassification have been made of expenses on the financial assets with a negative interest rate and the reclassification of expenses of the Banknote Printing

and Minting Works, which are excluded from cost of production. Information on these reclassifications is disclosed in Notes 22 and 27.

3 Critical Accounting Estimates and Judgments in Applying Accounting Policies

The NBU uses estimates, assumptions, and professional judgment that affect the amounts of assets and liabilities reported in the consolidated financial statements. Estimates and judgments 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. The most significant estimates and judgments are outlined below.

Measurement of expected credit losses for demand deposits and term deposits in foreign currency and monetary gold

The NBU regularly reviews demand deposits and term deposits in foreign currency and monetary gold measured at amortized cost for impairment.

The NBU's management uses accumulated statistical information of 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 recognition of allowance 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 as bearing "zero" credit risk, if they are direct obligations of:

- the International Monetary Fund or the Bank of International Settlements, denominated in any currency
- a country, denominated in the currency of such country, except for obligations in euro
- a foreign central bank, denominated in the currency of the central bank's home country, except for obligations in euro
- the European Central Bank, government of the Federal Republic of Germany and Deutsche Bundesbank denominated in euro.

As of 31 December 2019 and 2018 all demand funds and term deposits in foreign currency and monetary gold had a low level of credit risk or "zero" credit risk.

Measurement of expected credit losses on securities that are measured at amortized cost

The NBU regularly revises its securities portfolio measured at amortized cost for impairment.

The NBU's management applies their professional judgment in respect of evidences of significant increase in of credit risk and reduction of future cash flows for securities portfolio in order to determine a need for recognition of allowance for expected credit losses. Such evidence may include information of a negative change in issuer's solvency.

Government debt securities denominated in domestic currency of the issuer's country, except for euro obligations, are considered to be "zero" credit risk. For debt securities that are considered to be "zero" of credit risk, probability of default for a period of 12 months and for the maturity of the financial instrument are deemed insignificant, i.e. close to zero.

As of 31 December 2019 there is an objective evidence of impairment of bonds of the State Mortgage Institution, which are measured at amortized cost in the NBU's portfolio (violation by the issuer of securities of the issuance terms - failure to pay interests that are payable to the NBU as the bonds' holder during recent interest payment period according to the issuance terms). Therefore these securities were transferred to a third stage of impairment.

The NBU's management believes that as of 31 December 2019 and 31 December 2018 there were no other signs of impairment of securities accounted at amortized cost.

All government debt securities of Ukraine in the NBU's portfolio at amortised cost were denominated in hryvnia, and therefore were classified as "zero" credit risk.

Measurement of expected credit losses on loans granted to banks and other borrowers

The NBU regularly reviews its loan portfolio for impairment.

The majority of loans to banks and other borrowers are assessed on an individual basis. The NBU's management uses professional judgment to estimate future cash flows under each loan. Allowances for expected credit losses are calculated using a discounted cash flow method, taking into account loan repayments and collateral sale under the respective loan. While estimating future impairment losses for loans to the banks under liquidation, declared insolvent or having significant financial difficulties (stage 3), the NBU's management applies judgment and estimates future cash flows primarily from sale of collateral. However, the NBU expects recovery of outstanding debt mainly through cash flows from debt repayment rather than from collateral sale

under certain loans that were classified as impaired (stage 3) as of 31 December 2019.

The NBU measures 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 discrepancy 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, would lead to an increase in the expected credit losses by UAH 2,432 million or a decrease by UAH 326 million, respectively, as of 31 December 2019 (as of 31 December 2018 this would have led to an increase in the allowances for loan impairment by UAH 1,639 million or decrease by UAH 884 million, respectively).

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

Economic Developments

The economy of Ukraine grew steadily in 2019: real GDP grew by 3.2%, compared with 3.4% as of year-end 2018 (<http://ukrstat.gov.ua>).

In 2019, the current account deficit narrowed to 0.7% of GDP and was entirely offset by capital inflows to the public and real sector. As a result, gross international reserves rose to the highest level since the end of 2012 (to USD 25.3 billion as of 31 December 2019, which equals 3.9 months of future imports).

Inflationary pressures subsided in 2019: consumer inflation declined to a six-year low of 4.1%, versus 9.8% in 2018 (<http://ukrstat.gov.ua>). The NBU achieved its medium-term inflation target of 5% ± 1 pp, which it declared in 2015. The fall in inflation to its target in 2019 was mainly the result of the NBU's consistent monetary policy, which aims to deliver price stability, and the prudent fiscal policy.

The key factor behind the rapid disinflation was the appreciation of the hryvnia fueled by a surplus of foreign currency that existed on the market throughout most of 2019. In turn, an increase in foreign currency supply was caused by exporters selling large amounts of their foreign currency revenues and foreign investors showing lively interest in

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. As of 31 December 2019, the NBU reports no signs of impairment in property and equipment and intangible assets based on the results of such analysis (Note 11).

Provisions for contingent liabilities under lawsuits filed against the NBU

The NBU's management analyzes lawsuits, in which it acts as defendant, in order to identify a high probability of potential 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 potential losses as high mainly when the court of first instance rules unfavorably for the NBU.

Related party transactions.

The NBU carries out transactions with related parties, mainly with the government of Ukraine, banks and organizations controlled by the state. In accordance with IFRS 9, financial instruments are initially recognized at fair value. If there is no active market to determine market interest rates, the NBU shall apply professional judgment. A basis for such judgment is pricing for similar types of transactions with unrelated parties and analysis of the effective interest rate. See related parties transactions in Note 37.

hryvnia-denominated government bonds. With a lasting period of macroeconomic stability and attractive yields, nonresidents' portfolio of hryvnia-denominated domestic government debt securities rose by USD 4.3 billion in 2019. On the other hand, higher productivity – especially in agriculture, which led to another record harvest of grain and oil crops – boosted export proceeds. As prices for exported goods declined and import prices fell even lower, terms of trade improved also contributing to the growth in foreign currency supply in Ukraine.

As of year-end 2019, the consolidated budget ran a deficit of UAH 84.3 billion. The deficit-to-GDP ratio remained virtually unchanged from a year ago and was lower than the IMF criterion. Coupled with the effect of the hryvnia's strengthening, this led to a reduction, to almost 50%, in the ratio of public and publicly guaranteed debt to GDP. The currency composition of public debt also improved.

In 2019, the banking system continued to have a substantial liquidity surplus (as seen in balances of banks' correspondent accounts and holdings of NBU certificates of deposit), which increased notably in Q4. Certificates of deposit grew by UAH 90 billion in 2019, to UAH 151.9 billion as of the end of 2019. Balances of banks' correspondent accounts increased by UAH 16.7 billion, to UAH 52.4 billion.

In 2019, the main source of the banking system's liquidity inflows was purchases of foreign currency the NBU carried out when the supply of foreign currency exceeded demand. As of the end of the year, the NBU was a net buyer of foreign currency, purchasing a total of USD 7.9 billion. Liquidity was mainly absorbed in 2019 by the government's transactions and an increase in cash in circulation.

As of 31 December 2019, Fitch and Standard & Poor's upgraded Ukraine's sovereign rating to B, and Moody's affirmed the Caa1 rating for Ukraine (as of 31 December 2018, Ukraine's sovereign rating was Caa1 according to Moody's and B- according to Standard & Poor's and Fitch).

Changes in Operational and Political Environment of Ukraine in 2019

In 2019, the economy of Ukraine remained affected by the unresolved armed conflict in some regions of Luhansk and Donetsk oblasts as well as by complicated political and economic relations with Russia. Additional trade restrictions imposed by Russia in late 2018 and lower global energy prices made the share of Russia in Ukraine's total exports and imports of goods decline further (to 5.7% and 11.2% in 2019 respectively). On the other hand, the European Union remained Ukraine's largest trade partner in 2019, accounting for more than one third of the country's total exports and imports of goods. Among other things, this was due to the Deep and Comprehensive Free Trade Area established between Ukraine and the EU.

Political and economic risks built up in early 2019 on the back of the presidential and parliamentary elections. However, the democratic and unhampered elections and prompt formation

of the new government resulted in a lower risk premium for Ukraine.

New currency laws came into force on 7 February 2019. In particular, the NBU loosened currency restrictions for businesses and households and introduced an additional tool to smooth out FX fluctuations, namely FX interventions through swaps. The final goal of these legislative and regulative changes is the transition to the free movement of capital, which, however, will be a gradual process.

Further economic growth and the macrofinancial stability greatly depend on the implementation of planned reforms and continued cooperation with the IMF.

Events Subsequent to the Reporting Date

The risk of the spread of the novel coronavirus across the globe and in Ukraine, which emerged after the reporting date, and measures implemented to prevent the infection from spreading can lead to a significant economic slowdown in Ukraine in 2020. Moreover, despite a number of reforms and improved macrofinancial conditions, the Ukrainian economy remains vulnerable to unfavorable external events – primarily a global economic crisis, falling global commodity prices, and capital outflows. At the same time, the economy of Ukraine faces the current crisis being more resilient than it was during previous crises.

An aggravation of these factors may have a mixed effect on the NBU's performance and financial position. However, currently the extent of the effect cannot be measured reliably. The management of the NBU is closely monitoring current developments and is taking actions to mitigate effects of the negative factors.

5 Funds and Deposits in Foreign Currency and Investment Metals

	2019	2018
		(UAH million)
Financial assets at amortized cost		
Foreign currency cash	589	1,816
Demand deposits	14,085	41,592
Time deposits in foreign currency	74,848	73/288
Loss allowances for expected credit losses on deposits in foreign currency that are measured at amortized cost	(10)	(25)
Total financial assets that are measured at amortized cost	89,512	116,671
Financial assets that are measured at fair value through profit or loss		
Demand deposits <i>for settling futures transactions</i>	8	10
Total financial assets	89,520	116,681
Nonfinancial assets		
Term deposits and demand deposits:		
in gold	648	–
Total nonfinancial assets	648	–
Total funds and deposits in foreign currency and investment metals	90,168	116,681

The sum of demand deposits at amortized cost as of 31 December 2019 includes balances of special purpose accounts of UAH 97 million (UAH 169 million as of 31 December 2018), which are maintained by the NBU within the credit lines granted by international financial institutions, and which are restricted for use.

The sum of demand deposits at fair value through profit or loss as of 31 December 2019 includes funds of UAH 8 million (UAH 10 million in 2018) for settling futures transactions under agreements on investment management and the provision of advisory services between the IBRD and the NBU (Note 35).

For the purposes of the consolidated statement of cash flow, the cash flows generated by gold-denominated term deposits

are treated as investment activity, whereas those generated by gold-denominated demand deposits - as operating activity.

All funds and deposits in foreign currency are uncollateralized as of 31 December 2019 and 31 December 2018.

All funds and deposits in foreign currency are expected to be recovered within 12 months (as of 31 December 2018, these funds and deposits were also expected to be recovered within 12 months).

Foreign currency funds and deposits are analyzed by geographical concentration risk in Note 29, by credit risk - as analyzed in Note 30, by currency risk - in Note 31, by interest rate risk - in Note 32, by liquidity risk - in Note 33.

In 2019, movements in gross carrying amounts of demand deposits were as follows:

	Stage 1	Stage 2	Stage 3	Initially impaired assets	Total
					(UAH millions)
Gross carrying value of demand deposits as of 1 January 2019	41,592	–	–	–	41,592
Purchased/originated assets	–	–	–	–	–
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or repaid assets	(25,947)	–	–	–	(25,947)
Assets written off against allowances for expected credit losses	–	–	–	–	–
Other changes	(1,560)	–	–	–	(1,560)
Gross carrying value of demand deposits as of 31 December 2019	14,085	–	–	–	14,085

In 2018, movements in gross carrying amounts of demand deposits were as follows:

	Stage 1	Stage 2	Stage 3	Initially impaired assets	Total
	(UAH million)				
Gross carrying value of demand deposits as of 1 January 2018	11,636	–	–	–	11,636
Purchased/originated assets	29,956	–	–	–	29,956
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or repaid assets	–	–	–	–	–
Assets written off against allowances for expected credit losses	–	–	–	–	–
Other changes	–	–	–	–	–
Gross carrying value of demand deposits as of 31 December 2018	41,592	–	–	–	41,592

In 2019, movements in gross carrying amounts of term deposits in foreign currency were as follows:

	Stage 1	Stage 2	Stage 3	Initially impaired assets	Total
	(UAH million)				
Gross carrying value of term deposits in foreign currency as of 1 January 2019	73,288	–	–	–	73,288
Purchased/originated assets (placed)	74,848	–	–	–	74,848
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or repaid assets (returned)	73,288	–	–	–	73,288
Assets written off against allowances for expected credit losses	–	–	–	–	–
Other changes	–	–	–	–	–
Gross carrying value of term deposits as of 31 December 2019	74,848	–	–	–	74,848

In 2019, movements in allowances for expected credit losses on term deposits in foreign currency were as follows:

	Stage 1	Stage 2	Stage 3	Initially impaired assets	Total
	(UAH million)				
Allowance for expected credit losses on term deposits in foreign currencies as of 1 January 2019	25	–	–	–	25
Purchased/originated assets	10	–	–	–	10
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or repaid assets	(25)	–	–	–	(25)
Assets written off against allowances for expected credit losses	–	–	–	–	–
Change in parameters/models used for calculating allowances for expected credit losses and their partial repayment	–	–	–	–	–
Allowance for expected credit losses on term deposits in foreign currency as of 31 December 2019	10	–	–	–	10

In 2018, movements in gross carrying amounts of term deposits in foreign currency were as follows:

	Stage 1	Stage 2	Stage 3	Initially impaired assets	Total
					(UAH million)
Gross carrying value of term deposits in foreign currency as of 1 January 2018	10,217	–	–	–	10,217
Purchased/originated assets (placed)	73,288	–	–	–	73,288
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or repaid assets (returned)	(10,217)	–	–	–	(10,217)
Assets written off against allowances for expected credit losses	–	–	–	–	–
Other changes	–	–	–	–	–
Gross carrying value of term deposits as of 31 December 2018	73,288	–	–	–	73,288

In 2018, movements in allowances for expected credit losses on term deposits in foreign currency were as follows:

	Stage 1	Stage 2	Stage 3	Initially impaired assets	Total
					(UAH million)
Allowance for expected credit losses on term deposits in foreign currency as of 1 January 2018	3	–	–	–	3
Purchased/originated assets	25	–	–	–	25
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or repaid assets	(3)	–	–	–	(3)
Assets written off against allowances for expected credit losses	–	–	–	–	–
Change in parameters/models used for calculating allowances for expected credit losses and their partial repayment	–	–	–	–	–
Allowance for expected credit losses on term deposits in foreign currency as of 31 December 2018	25	–	–	–	25

6 Foreign Securities

As of 31 December 2019, foreign securities comprised the following:

	Government bonds	Securities issued by international agencies, banks and other issuers	Total
(UAH million)			
Foreign securities at fair value through profit or loss:			
Debt securities broken down by issuers:			
securities issued by U.S. issuers:			
denominated in USD	269,697	5,239	274,936
securities issued by EU issuers:			
denominated in USD	9,089	47,828	56,917
denominated in EUR	149	17,256	17,405
denominated in GBP	8,008	1,489	9,497
denominated in Chinese renminbi	–	3,808	3,808
securities issued by other issuers:			
denominated in USD	4,167	68,734	72,901
denominated in EUR	1,315	37,712	39,027
denominated in AUD	544	250	794
denominated in GBP	–	2,612	2,612
denominated in Chinese renminbi	270	13,655	13,925
denominated in JPY	–	13,036	13,036
Total debt securities	293,239	211,619	504,858
Capital instruments:			
securities issued by the Black Sea Trade and Development Bank	–	120	120
investment in the Interstate Bank	–	1	1
Total capital instruments	–	121	121
Total foreign securities at fair value through profit or loss:	293,239	211,740	504,979

In 2019, the interest income on foreign securities that are included in the consolidated statement of comprehensive income, result on transactions with debt securities at fair value, totaled UAH 7,275 million (compared to UAH 5,072 million in 2018).

All foreign securities are expected to be recovered within 12 months, except for capital instruments, totaling UAH 121 million (UAH 121 million as of 31 December 2018).

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 29, by credit risk – in Note 30, by currency risk – in Note 31, by interest rate risk – in Note 32, and by liquidity risk – in Note 33.

As of 31 December 2018, foreign securities comprised the following:

	Government bonds	Securities issued by international agencies, banks and other issuers	Total
			(UAH million)
Foreign securities that are measured at fair value through profit or loss:			
Debt securities broken down by issuers:			
securities issued by U.S. issuers:			
denominated in USD	173,912	6,609	180,521
securities issued by EU issuers:			
denominated in USD	14,705	60,884	75,589
denominated in EUR	178	13,517	13,695
denominated in GBP	3,251	3,619	6,870
denominated in Chinese renminbi	–	406	406
securities issued by other issuers			
denominated in USD	3,137	83,386	86,523
denominated in EUR	–	38,841	38,841
denominated in AUD	605	296	901
denominated in GBP	–	3,232	3,232
denominated in Chinese renminbi	–	20,949	20,949
denominated in JPY	–	5,343	5,343
Total debt securities	195,788	237,082	432,870
Capital instruments:			
securities issued by the Black Sea Trade and Development Bank	–	120	120
investment in the Interstate Bank	–	1	1
Total capital instruments	–	121	121
Total foreign securities that are measured at fair value through profit or loss	195,788	237,203	432,991

Information about the nominal value, yield to maturity, coupon rate, and maturities of foreign debt securities as of 31 December 2019 is presented in the table below:

	Total nominal value in foreign currency, million	Total nominal value in hryvnia equivalent, UAH million	Coupon rate, % p.a.	Frequency of coupon payments	Maturity
Debt securities that are measured at fair value through profit or loss broken down by issuers:					
Government bonds:					
securities issued by U.S. issuers:					
denominated in USD	11,273	267,004	1.125–3.125	Quarterly, every 6 months,	From 4.5 months to 2.9 years
securities issued by EU issuers:					
denominated in USD	381	9,024	1.5–2.5	Quarterly, every 6 months, once a year	From 2.2 months to 2.6 years
denominated in EUR	6	145	0.375	Once a year	3.1 years
denominated in GBP	256	7,950	0.5–4.75	Quarterly, every 6 months,	From 2.2 months to 3.6 years
securities issued by other issuers:					
denominated in USD	174	4,117	1.875–2.625	Quarterly, every 6 months,	From 4.7 months to 4.4 years
denominated in EUR	50	1,321	0.125	Once a year	6.9 years
denominated in AUD	32	527	2–5.75	Every 6 months	From 1.4 years to 2.9 years
denominated in Chinese renminbi	80	269	2.95	Every 6 months	1.5 years
Securities issued by international agencies, banks and other issuers:					
securities issued by U.S. issuers:					
denominated in USD	219	5,187	1.375–2.75	Quarterly, every 6 months	From 3 months to 2 years
securities issued by EU issuers:					
denominated in USD	2,002	47,415	0–3.125	Quarterly, every 6 months, once a year, without coupon payments	From 10 days to 3.5 years
denominated in EUR	648	17,122	0–4	Quarterly, once a year, without coupon payments	From 8 days to 4.7 years
denominated in GBP	48	1,489	0–0.625	Once a year, without coupon payments	From 17 days to 4.7 months
denominated in Chinese renminbi	1,130	3,826	0–4.5	Every 6 months, without coupon payments	From 1.4 months to 10.9 months
securities issued by other issuers:					
denominated in USD	2,888	68,413	0–3.3	Quarterly, every 6 months, without coupon payments	From 10 days to 4.5 years
denominated in EUR	1,422	37,572	0–0.75	Quarterly, once a year, without coupon payments	From 14 days to 4.8 years
denominated in AUD	15	248	1.7517	Quarterly	1.9 years
denominated in GBP	84	2,606	0.875–1.17238	Quarterly, once a year	From 3.1 months to 1.8 years
denominated in Chinese renminbi	4,089	13,845	0–4.8	Every 6 months, once a year, without coupon payments	From 2.4 months to 2.3 year
denominated in JPY	60,300	13,041	0–0.42	Every 6 months, without coupon payments	From 1.2 months to 4.8 years

Information about the nominal value, yield to maturity, coupon rate, and maturities of foreign debt securities as of 31 December 2018 is presented in the table below:

	Total nominal value in foreign currency, million	Total nominal value in hryvnia equivalent, UAH million	Coupon rate, % p.a.	Frequency of coupon payments	Maturity
Debt securities that are measured at fair value through profit or loss broken down by issuers:					
Government bonds:					
securities issued by U.S. issuers:					
denominated in USD	6,323	175,077	0.875–3.625	Every 6 months	From 7.6 months to 2.9 years
securities issued by EU issuers:					
denominated in USD	534	14,777	1.125–2.72694	Quarterly, every 6 months, or once a year	From 4.7 months to 1.8 years
denominated in EUR	6	174	0.375	once a year	Up to 4.1 years
denominated in GBP	92	3,243	0.5–2.0	Every 6 months	From 6.8 months to 3.6 years
securities issued by other issuers:					
denominated in USD	115	3,179	1.25–2.91963	Quarterly, every 6 months,	From 1 months to 3.8 years
denominated in AUD	29	565	1.75–5.75	Every 6 months	From 1.9 years to 3.9 years
Securities issued by international agencies, banks and other issuers:					
securities issued by U.S. issuers:					
denominated in USD	239	6,617	1.25–2.96819	Quarterly, every 6 months,	From 9.6 months to 3 years
securities issued by EU issuers:					
denominated in USD	2,208	61,122	0–3.6475	Quarterly, every 6 months, or once a year without coupon payments	From 14 days to 4.5 years
denominated in EUR	423	13,415	0–4.125	Quarterly, once a year, without coupon payments	From 2.9 months to 5.4 years
denominated in GBP	103	3,619	0–1.125	Once a year, without coupon payments	From 4.7 months to 1 year
denominated in Chinese renminbi	100	403	4.5	Every 6 months	1.9 years
securities issued by other issuers:					
denominated in USD	3,021	83,655	0–3.7475	Quarterly, every 6 months, without coupon payments	From 1.4 months to 4.8 years
denominated in EUR	1,225	38,850	0–0.75	Quarterly, once a year, without coupon payments	From 14 days to 4.4 years
denominated in AUD	15	293	2.79	Quarterly	2.9 years
denominated in GBP	92	3,232	0.875–1.29244	Quarterly, once a year	From 6.9 months to 2.8 years
denominated in Chinese renminbi	5,295	21,316	0–4.8	Once a year, without coupon payments	From 18 days to 2.4 years
denominated in JPY	21,300	5,344	0–0.42	Every 6 months, without coupon payments	From 2 months to 2.9 years

7 SDR holdings

SDR holdings are demand funds denominated in SDR on the account opened with the IMF for Ukraine.

Movements in the SDR holding account in 2019 and 2018 were as follows:

	2019	2018
		(UAH million)
Balance of SDR holdings as of 1 January	100	60,860
Proceeds from the IMF:		
In favor of the NBU (Note 17)	–	38,309
In favor of the Government	–	–
Purchase of SDRs	51,271	8,767
Other proceeds and payments	–	183
Repayment of loans:		
On behalf of the NBU (Note 17)	(15,438)	(19,989)
On behalf of the Government	(26,396)	(37,536)
Payment of loan-related fees and commissions	(15)	(927)
Translation of SDRs to other foreign currencies:		
In favor of the NBU	–	(38,309)
In favor of the Government	–	–
Payment of interest for the use of IMF loans:		
On behalf of the NBU	(6,155)	(5,491)
On behalf of the Government	(2,546)	(3,498)
Payment of interest for the use of funds received under SDR allocation:		
On behalf of the NBU	(31)	(27)
On behalf of the Government	(462)	(413)
Other payments	(1)	(1)
Income on SDR holdings	6	219
Exchange rate differences	(99)	(2,047)
Balance of SDR holdings as of 31 December	234	100

During 2019, no funds were received from the IMF.

In 2018, the account of SDR holdings received funds in the amount of SDR 1,000 million (UAH 38,309 million at the official exchange rate at the date of payment) under the Stand-By Program, which were translated to other foreign currencies.

The NBU as the fiscal agent performs debt settlements on behalf of the Ukrainian Government in favor of the IMF for SDR purchases (loans received by the Government from the

IMF). The Government reimburses the funds to the NBU through the Single Treasury Account. When such funds are reimbursed, the respective amount is included in 'Increase/decrease on accounts of government and other institutions' in the consolidated cash flow statement. In 2019, the Ukrainian Government reimbursed UAH 26,396 million.

SDR holdings are analyzed by geographical concentration risk in Note 29, by currency risk – in Note 31, by interest rate risk – in Note 32, by liquidity risk – in Note 33.

8 Domestic securities

As of 31 December 2019, domestic securities comprised the following:

	Government securities	Corporate securities	Total
			(UAH million)
Securities at fair value through profit or loss:			
In foreign currencies:			
Government derivatives denominated in USD	987	–	987
Total securities at fair value through profit or loss	987	–	987
Debt securities at amortized cost:			
In the national currency:			
Domestic government debt securities	345,440	–	345,440
Bonds of other government institutions	–	953	953
Allowances for expected credit losses on bonds of other government institutions at amortized cost	–	(189)	(189)
Total debt securities at amortized cost	345,440	764	346,204
Total domestic securities	346,427	764	347,191

Under the Law of Ukraine *On the National Bank of Ukraine*, the NBU performs transactions with domestic securities only in the secondary market.

Domestic government debt securities (hereinafter – T-bills&bonds) are issued by the Ministry of Finance of Ukraine and have the nominal value of UAH 1,000 each.

In 2018 and 2019, the NBU purchased no T-bills&bonds.

As of 31 December 2019, bonds of other government institutions included bonds of the State Mortgage Institution with an additional collateral in the form of government guarantees on issuer liabilities provided by the Cabinet of Ministers of Ukraine (hereinafter – the SMI bonds). The SMI bonds were repossessed by the NBU in November 2019 at nominal value of UAH 946 million and carrying value of UAH 938 million as the amicable agreement settlement with a Ukrainian bank on repayment of its debt under loans. The SMI bonds have nominal value of UAH 100,000 each.

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 — the notional value). Payments on government derivatives depend on reaching the certain GDP indicators and the indicator of real GDP growth for 2019–2038.

All domestic securities are expected to be redeemed later than 12 months from the reporting date, excluding the nominal value of T-bills&bonds and bonds of other government institutions and the accrued interest on debt securities totaling UAH 21,439 million payable within 2020 (as of 31 December 2018: all domestic securities were expected to be redeemed later than 12 months from the reporting date, excluding the nominal value of T-bills&bonds and bonds of other government institutions and accrued interest on debt securities totaling UAH 23,381 million payable within 2019).

Domestic securities are analyzed by credit risk in Note 30, by currency risk – in Note 31, by interest rate risk – in Note 32, by liquidity risk – in Note 33. Estimated fair values of domestic securities are disclosed in Note 35.

As of 31 December 2018, domestic securities comprised the following:

	Government securities	Corporate securities	Total
			(UAH million)
Securities at fair value through profit or loss:			
In foreign currencies:			
Government derivatives denominated in USD	692	–	692
Total derivatives at fair value through profit or loss	692	–	692
Debt securities at amortized cost:			
In the national currency:			
Domestic government debt securities	360,744	–	360,744
Total debt securities at amortized cost	360,744	–	360,744
Total domestic securities	361,436	–	361,436

Information on the nominal value, yield to maturity, coupon income, and maturities of domestic securities as of 31 December 2019 is presented in the table below:

	Total nominal value in the UAH equivalent, UAH million	Total nominal value in foreign currencies, in million	Yield to maturity, % p.a.	Coupon rate, %, p.a.	Frequency of coupon payments	Maturity
Securities at fair value through profit or loss:						
In foreign currencies:						
Government derivatives	1,038	44	–	–	–	Up to 20.4 years
Debt securities at amortized cost:						
In the national currency:						
Domestic government debt securities	337,077	–	7.43–28.91	4.9–14.5	Once a year, every 6 months	From 21 days to 27.9 years

Information on the nominal value, yield to maturity, coupon income, and maturities of domestic securities as of 31 December 2018 is presented in the table below:

	Total nominal value in the UAH equivalent, UAH million	Total nominal value in foreign currencies, in million	Yield to maturity, % p.a.	Coupon rate, %, p.a.	Frequency of coupon payments	Maturity
Securities at fair value through profit or loss:						
In foreign currencies:						
Government derivatives	1,214	44				Up to 21.4 years
Debt securities at amortized cost:						
In the national currency:						
Domestic government debt securities	348,101	–	7.22–20.41	8.12–14.50	Once a year, every 6 months	From 8 days to 28.9 years

During 2019, movements in gross carrying amounts of government securities were as follows:

	Stage 1	Stage 2	Stage 3	Credit-impaired assets	Total
					(UAH million)
Gross carrying amounts of government securities as of 1 January 2019	360,744	–	–	–	360,744
Purchased/originated assets	–	–	–	–	–
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or redeemed assets	(11,024)	–	–	–	(11,024)
Assets written off against allowances	–	–	–	–	–
Other changes	(4,280)	–	–	–	(4,280)
Gross carrying amounts of government securities as of 31 December 2019	345,440	–	–	–	345,440

During 2018, movements in gross carrying amounts of government securities were as follows:

	Stage 1	Stage 2	Stage 3	Credit-impaired assets	Total
					(UAH million)
Gross carrying amounts of government securities as of 1 January 2018	371,064	–	–	–	371,064
Purchased/originated assets	–	–	–	–	–
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or redeemed assets	(12,969)	–	–	–	(12,969)
Assets written off against allowances	–	–	–	–	–
Other changes	2,649	–	–	–	2,649
Gross carrying amounts of government securities as of 31 December 2018	360,744	–	–	–	360,744

Derecognized or redeemed assets include the nominal value of government securities. Coupon amount paid on the redeemed government securities is included in 'Other changes'.

During 2019, movements in gross carrying amounts of corporate securities were as follows:

	Stage 1	Stage 2	Stage 3	Credit-impaired assets	Total
					(UAH million)
Gross carrying amounts of corporate securities as of 1 January 2019	–	–	–	–	–
Purchased/originated assets	938	–	–	–	938
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	(938)	–	938	–	–
Derecognized or redeemed assets	–	–	–	–	–
Assets written off against allowances	–	–	–	–	–
Other changes	15	–	(189)	–	(174)
Gross carrying amounts of corporate securities as of 31 December 2019	15	–	749	–	764

During 2019, movements in loss allowances for corporate securities were as follows:

	Stage 1	Stage 2	Stage 3	Credit-impaired assets	Total
					(UAH million)
Allowances for expected credit losses on corporate securities as of 1 January 2019	–	–	–	–	–
Purchased/originated assets	6	–	–	–	6
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	(6)	–	6	–	–
Derecognized or redeemed assets	–	–	–	–	–
Assets written off against allowances	–	–	–	–	–
Other changes	–	–	183	–	183
Allowances for expected credit losses on corporate securities as of 31 December 2019	–	–	189	–	189

9 Loans to Banks and Other Borrowers

Loans to banks and other borrowers by the purpose of their issue are classified as follows:

	2019	2018
		(UAH million)
Loans granted to banks to support their liquidity:		
for stabilizing banking activities	51,324	57,094
through tenders conducted by the NBU	386	4,494
Other	10	10
Loans granted to the Deposit Guarantee Fund	–	1,458
Loans granted under credit lines to support small and medium entities from the funds received from the European Bank for Reconstruction and Development (the EBRD)	36	36
Other	2	2
Allowance for expected credit losses on loans to banks and other borrowers	(37,915)	(40,949)
Total loans to banks and other borrowers	13,843	22,145

In 2019, the NBU supported the liquidity of banks through establishing a standing refinancing line (overnight loans), refinancing banks for the period up to 14 days (in 2018 - up to 90 days) by holding tenders.

In 2019, the movements in gross carrying value of loans to banks were as follows:

	Stage 1	Stage 2	Stage 3	Initially impaired assets	Total
					(UAH million)
Gross carrying value of loans to banks as of 1 January 2019	4,302	–	57,296	–	61,598
Purchased/originated loans	104	–	–	–	104
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or repaid loans	(4,302)	–	(2,335)	–	(6,637)
Assets written off and otherwise derecognized against allowances	–	–	(112)	–	(112)
Other changes (including partial repayment)	–	–	(3,233)	–	(3,233)
Gross carrying value of loans to banks as of 1 January 2019	104	–	51,616	–	51,720

Allowance for expected credit losses on loans to banks in 2019 were as follows:

	Stage 1	Stage 2	Stage 3	Initially impaired assets	Total
					(UAH million)
Allowance for expected credit losses on loans to banks as of 1 January 2019	–	–	40,911	–	40,911
Purchased/originated loans	–	–	–	–	–
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or repaid assets	–	–	(923)	–	(923)
Assets written off and otherwise derecognized against allowances	–	–	(47)	–	(47)
Amortization of discount	–	–	(1,100)	–	(1,100)
Change in parameters/models used for calculating allowances and their partial repayment	–	–	(964)	–	(964)
Allowance for expected credit losses on loans to banks as of 31 December 2019	–	–	37,877	–	37,877

In 2018, the movements in gross carrying value of loans to banks were as follows:

	Stage 1	Stage 2	Stage 3	Initially impaired assets	Total
					(UAH million)
Gross carrying value of loans to banks as of 1 January 2018	6,049	–	61,013	1,506	68,568
Purchased/originated loans	4,195	–	–	–	4,195
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or repaid loans	(5,831)	–	(258)	(1,506)	(7,595)
Assets written off and otherwise derecognized against allowances	–	–	(48)	–	(48)
Other changes (including partial repayment)	(111)	–	(3,411)	–	(3,522)
Gross carrying value of loans to banks as of 31 December 2018	4,302	–	57,296	–	61,598

Total loans classified as initially derecognized repaid in 2018.

Allowance for expected credit losses on loans to banks in 2018 were as follows:

	Stage 1	Stage 2	Stage 3	Initially impaired assets	Total
					(UAH million)
Allowance for expected credit losses on loans to banks as of 1 January 2018	1	–	42,630	–	42,631
Purchased/originated loans	–	–	–	–	–
Transfer to Stage 1	–	–	–	–	–
Transfer to Stage 2	–	–	–	–	–
Transfer to Stage 3	–	–	–	–	–
Derecognized or repaid assets	(1)	–	(42)	–	(43)
Assets written off and otherwise derecognized against allowances	–	–	(48)	–	(48)
Amortization of discount	–	–	(1,121)	–	(1,121)
Change in parameters/models used for calculating allowances and their partial repayment	–	–	(508)	–	(508)
Allowance for expected credit losses on loans to banks as of 31 December 2018	–	–	40,911	–	40,911

As of 31 December 2018, gross carrying value of loans to Deposit Guarantee Fund amounted to UAH 1,458 million. In 2019, all loans were at stage 1 and were repaid in full during 2019 (as of 31 December 2017 gross carrying value of loans to Deposit Guarantee Fund amounted to UAH 6,479 million. In 2018, all loans were at stage 1. The loans were repaid in

full for UAH 2,674 million, partial repayment and other changes stood UAH 2,347 million).

As of 31 December 2019 and 2018, loans granted under credit lines to support small and medium entities from funds received from the EBRD and other loans were at stage 3,

gross carrying value was UAH 38 million, allowance for expected credit losses was UAH 38 million.

Loans to banks and other borrowers are analyzed by geographical concentration risk in Note 29, by credit risk – in

Note 30, by foreign currency risk – in Note 31, by interest rate risk – in Note 32, and by liquidity risk – in Note 33. Estimated fair value of loans to banks and other borrowers is presented in Note 35.

10 IMF Quota Contributions

The quota balance is a special type of asset that represents Ukraine's contribution as a member of the IMF. Quotas vary based on the economic size of each country and are determined by the Board of Governors of the IMF. 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 promissory notes issued by the NBU to the IMF, with the remainder being credited to the IMF accounts No. 1 and No. 2 (Note 19).

As of 31 December 2019, Ukraine's total quota in the IMF amounted to SDR 2,012 million (UAH 65,894 million at the year-end official UAH/SDR exchange rate) (31 December 2018: SDR 2,012 million, or UAH 77,472 million at the year-end official UAH/SDR exchange rate). The quota does not earn interest. Quota contributions are a noncurrent asset.

The reserve position in the IMF is a specific type of asset that is created as a result of the conversion of a part of the contribution of a member country to the IMF liquidity quota. The reserve position is part of the currency reserves of the country.

As of 31 December 2019, the reserve position of Ukraine in the IMF amounted to SDR 241,031 or UAH 8 million at the official exchange rate of UAH against SDR at the year-end (31 December 2018: SDR 241,031 or UAH 10 million at the official exchange rate of UAH against SDR at the year-end).

IMF quota contributions are analyzed by geographical concentration risk concentration in Note 29, by foreign currency risk – in Note 31, and by liquidity risk – in Note 33.

11 Property and Equipment and Intangible Assets

	Buildings and structures	Vehicles	Machinery and equipment	Tools, fixtures, and fittings	Other fixed assets	Construction in progress	Intangible assets	Total
(UAH million)								
Historical cost as of 1 January 2018	5,143	156	4,624	111	240	173	475	10,922
Depreciation and amortization as of 1 January 2018	(2,248)	(126)	(2,476)	(100)	(201)	(9)	(341)	(5,501)
Book value as of 1 January 2018	2,895	30	2,148	11	39	164	134	5,421
Inflows	1	3	66	2	8	30	11	121
Transfers to other categories, including:	7	–	27	(1)	(3)	(25)	(5)	–
<i>Initial cost</i>	7	–	27	(1)	(3)	(25)	(5)	–
Disposals, including:	(177)	–	(3)	(1)	(1)	(51)	–	(233)
<i>Initial cost</i>	(265)	(6)	(61)	(8)	(9)	(51)	(33)	(433)
<i>Depreciation and amortization</i>	88	6	58	7	8	–	33	200
Transfers to the category held for sale, including:	(47)	–	–	–	–	–	–	(47)
<i>Initial cost</i>	(108)	–	–	–	–	–	–	(108)
<i>Depreciation and amortization</i>	61	–	–	–	–	–	–	61
Transfers to investment property:	(4)	–	–	–	–	–	–	(4)
<i>Historical cost</i>	(4)	–	–	–	–	–	–	(4)
Depreciation and amortization charges in the current reporting period	(112)	(11)	(303)	(2)	(8)	–	(42)	(478)
Historical cost as of 31 December 2018	4,774	153	4,656	104	236	127	448	10,498
Depreciation and amortization as of 31 December 2018	(2,211)	(131)	(2,721)	(95)	(201)	(9)	(350)	(5,718)
Book value as of 31 December 2018	2,563	22	1,935	9	35	118	98	4,780
Inflows	–	1	143	1	6	98	36	285
Transfers to other categories, including:	13	–	(4)	–	(4)	(2)	(3)	–
<i>Initial cost</i>	13	–	(4)	–	(4)	(2)	(3)	–
<i>Other inflows</i>								
<i>Historical cost</i>	–	–	–	–	3	–	–	3
<i>Depreciation and amortization</i>	–	–	–	–	(3)	–	–	(3)
Disposals, including:	(242)	–	(4)	–	(3)	(1)	–	(250)
<i>Initial cost</i>	(385)	(2)	(69)	(6)	(14)	(1)	(3)	(480)
<i>Depreciation and amortization</i>	143	2	65	6	11	–	3	230
Transfers to investment property:	(3)	–	–	–	–	–	–	(3)
<i>Historical cost</i>	(3)	–	–	–	–	–	–	(3)
Depreciation and amortization charges in the current reporting period	(98)	(9)	(268)	(2)	(8)	–	(41)	(426)
Historical cost as of 31 December 2019	4,399	152	4,726	99	227	222	478	10,303
Depreciation and amortization as of 31 December 2019	(2,166)	(138)	(2,924)	(91)	(201)	(9)	(388)	(5,917)
Book value as of 31 December 2019	2,233	14	1,802	8	26	213	90	4,386

As of 31 December 2019, historical cost of fully depreciated property and equipment that were still in operation amounted to UAH 1,766 million (31 December 2018: UAH 1,646 million).

Fixed assets and intangible assets are noncurrent assets.

As of 31 December 2019, based on the results of impairment test, no signs of impairment were identified.

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 2019, pursuant to the regulatory acts of the Cabinet of Ministers of Ukraine, free-of-charge transfer of items of state

property from the NBU to other bodies authorized to manage state property took place. The result of the transfer of those assets amounted to UAH 248 million (31 December 2018: UAH 232 million), which are recognized in equity as a transaction with the owner.

12 Other Assets

	2019	2018
		(UAH million)
Other financial assets measured at amortized cost:		
Loans to the NBU's employees	75	98
Allowance for expected credit losses on loans to employees	(6)	(5)
Receivables	171	247
Allowance for expected credit losses on receivables	(12)	(7)
Other	-	-
Total financial assets at amortized cost	228	333
Other financial assets at fair value through profit or loss		
Proprietary rights on loan agreements repossessed by the NBU	8	13
Total other financial assets	236	346
Other nonfinancial assets		
Investment metals	1,743	1,616
Current tangible assets	1,092	900
Commemorative and investment coins, souvenirs and other products	541	602
Precious metals and stones	339	308
Advance payments	100	178
Investments in associates	31	132
Investment property	47	49
Noncurrent tangible assets held for sale	46	47
Other	17	18
Allowance for impairment on other nonfinancial assets	(4)	(8)
Total other nonfinancial assets	3,952	3,842
Total other financial assets	4,188	4,188

Other financial assets are not secured.

In 2019 there was a free of charge transfer of the NBU's share in authorized capital of the GUF with the carrying value of UAH 177 million (Note 1).

All other assets were expected to be recovered within 12 months, except for noncurrent receivables, investment metals, and investments in associates.

As of 31 December 2019, the gross carrying value of loans to employees was UAH 75 million, provisions for expected credit losses – UAH 6 million (as of 31 December 2018, the gross carrying value of loans to employees was UAH 98

million, provisions for expected credit losses – UAH 5 million). As of 31 December 2019 and 2018, loans to employees were at stages 1, 2 and 3. During a year ended 31 December 2019, no transition between stages, nor other changes occurred (during a year ended 31 December 2018, no transition between stages, nor other changes occurred).

Other financial assets are analyzed by geographical concentration risk in Note 29, by credit risk – in Note 30, by foreign currency risk – in Note 31, by interest rate risk – in Note 32, and by liquidity risk – in Note 33.

13 Accounts of Banks

	2019	2018
		(UAH million)
Correspondent accounts:		
Denominated in the national currency	52,438	35,662
Denominated in foreign currencies	23,686	16
Term deposits:		
Denominated in foreign currencies	–	41
Accounts of banks on special use terms:		
in domestic currency	1,959	2,178
in foreign currencies	352	612
Funds placed to ensure the repayment of the debts of banks to the NBU:		
in foreign currencies	9	–
Total accounts of banks	78,444	38,509

As of 31 December 2019 and 2018, interest on the balances in the correspondent account is not accrued.

As of 31 December 2019 and 2018, no assets were allowed to be considered by banks to cover reserve requirement.

Accounts of banks on special-use terms as of 31 December 2019 and 2018 included funds placed for the purposes of liquidation committees of banks to make settlements in the process of a bank's liquidation, and the accounts opened for

other purposes specified by the laws of Ukraine and the NBU's regulations.

As of 31 December 2019 and 2018, all accounts of banks to mature within 12 months.

Accounts of banks are analyzed by geographical concentration risk in Note 29, by foreign currency risk – in Note 31, by interest rate risk – in Note 32, and by liquidity risk – in Note 33.

14 Accounts of Government and Other Institutions

	2019	2018
		(UAH million)
Funds of budgets and budget entities	36,277	40,417
Deposit Guarantee Fund	2,498	7,082
Other	207	228
Total accounts of government and other institutions	38,982	47,727

The NBU services the accounts of the State Budget of Ukraine and local budgets, which are consolidated on one 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 rates of 9.53% as of 31 December 2019 (31 December 2018: 4.00%).

As of 31 December 2019 and 2018, all accounts of government and other institutions were maturing within 12 months.

Accounts of government and other institutions are analyzed by geographical concentration risk in Note 29, by foreign currency risk – in Note 31, by interest rate risk – in Note 32, and by liquidity risk – in Note 33.

15 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 evidencing the placement of banks' funds with the NBU and the right of banks to receive on their maturity the funds placed, together with the interest accrued. Yield on the certificates of deposit is set by the NBU individually for each placement based on the current objectives of monetary policies.

In 2019, transactions on the placement of certificates of deposit were performed under agreements with banks for the period of one day (overnight deposits) and up to 100 days [in 2018, for the period of one day (overnight deposits) and up to 100 days].

As of 31 December 2019, the nominal value of the certificates of deposit issued by the NBU was UAH 1 million each, with

the initial period of placement being from 6 to 14 days, and a weighted average yield of 12.73% per annum (31 December 2018: a weighted average yield of 17.03% per annum and an initial period of placement from 5 to 14 days). The weighted average interest rate for certificates of deposit placed in 2019 was 15.18% per annum, and the initial period of placement varied from 1 to 15 days (in 2018: a weighted average yield of 15.64% per annum, and the initial period of placement varied from 1 to 91 days).

As of 31 December 2019 and 2018, all certificates of deposit issued by the NBU were maturing within 12 months.

Certificates of deposit are analyzed by geographical concentration risk in Note 29, by foreign currency risk – in Note 31, by interest rate risk – in Note 32, and by liquidity risk – in Note 33.

16 Borrowings received

As of 31 December 2019, the NBU used the funds in the amount of USD 100 million (UAH 2,369 million) received within the bilateral loan agreement between the NBU and the Swiss National Bank [as of 31 December 2018: USD 100 million (UAH 2,769 million)].

Borrowings received are analyzed by geographical concentration risk in Note 29, by foreign currency risk – in Note 31, by interest rate risk – in Note 32, and by liquidity risk – in Note 33.

17 Liabilities to the IMF

	2019	2018
	(in UAH millions)	
Liabilities to the IMF for SDR purchases	168,385	214,155
Liabilities to the IMF for SDR allocations	2,671	3,142
IMF account No. 2	3	3
Liabilities to the IMF apart from quota contributions	171,059	217,300
Liabilities to the IMF with respect to quota settlement	65,721	77,268
IMF account No. 1	165	194
Liabilities to the IMF to pay quota contributions	65,886	77,462
Total liabilities to the IMF	236,945	294,762

Liabilities to the IMF for SDR allocation represent funds received by the NBU for special SDR allocation.

Liabilities to the IMF for purchases of SDRs represent loans received from the IMF by the NBU. During 2019, no proceeds came from the IMF (in 2018, the NBU's liabilities to the IMF increased due to the receipt of SDR 1,000 million in proceeds from the IMF (UAH 38,309 million at the official exchange rate at the transaction date, or UAH 37,720 million at the annual exchange rate of the IMF)) (Note 7).

IMF account No. 1 is the IMF's hryvnia account with the NBU that is used for transactions with the IMF related to the servicing and repayment of IMF loans. IMF account No. 2 is the IMF's hryvnia account with the NBU that is used by the IMF in Ukraine for hryvnia receipts and administrative disbursements.

Liabilities to the IMF for quota contributions represent liabilities for quota settlement. During 2019, no changes occurred in liabilities to the IMF for quota contributions due to administrative payments being made in hryvnias (in 2018, liabilities to the IMF for quota contributions decreased by UAH 5.6 million due to the need to replenish IMF account No. 1, and by UAH 2.6 million due to administrative payments made by the IMF in hryvnias, which resulted in the IMF's reserve position increasing by SDR 137,353).

During 2019 and 2018, no changes occurred in the size of the quota in the IMF (Note 10).

During 2019, liabilities worth SDR 427 million (UAH 15,438 million at the official exchange rate at the transaction date, or UAH 15,945 million at the annual exchange rate of the IMF) were repaid to the IMF (in 2018, liabilities worth SDR 516

million (UAH 19,989 million at the official exchange rate at the transaction date, or UAH 19,306 million at the annual exchange rate of the IMF) were repaid to the IMF) (Note 7).

All liabilities to the IMF are noncurrent, except for balances on IMF accounts No. 1 and No. 2, liabilities to the IMF for SDR allocation, and liabilities to the IMF to repay a loan of SDR 469 million (UAH 17,296 million at the IMF's annual exchange rate) and interest accrued on liabilities to the IMF

(in 2018, SDR 427 million (UAH 16.113 billion at the IMF's annual exchange rate) and interest accrued on liabilities to the IMF).

Liabilities to the IMF are analyzed by geographical concentration risk in Note 29, by foreign currency risk – in Note 31, by interest rate risk – in Note 32, and by liquidity risk – in Note 33.

18 Other liabilities

	2019	2018
	(in UAH millions)	
Other financial liabilities		
Due to employees	385	373
Accounts payable	276	200
Other	11	1
Total other financial liabilities	672	574
Other nonfinancial liabilities		
Provision for contingent liabilities	131	418
Accounts payable on taxes	4	13
Other	3	1
Total other nonfinancial liabilities	138	432
Total other liabilities	810	1,006

Other financial liabilities are analyzed by geographical concentration risk in Note 29, by foreign currency risk – in Note 31, by interest rate risk – in Note 32, and by liquidity risk – in Note 33.

19 Liabilities on profit distribution to the State Budget of Ukraine

The NBU determines distributable profit in accordance with Article 5 of the Law of Ukraine *On the National Bank of Ukraine* (as amended). The part of distributable profit that remains after general provisions have been formed and that is payable to the State Budget of Ukraine shall be transferred upon confirmation by an external auditor and approval by the NBU Council of the NBU's annual financial statements. According to the amendments made in March 2020 to the Law of Ukraine *On the National Bank of Ukraine*, the general provisions formed in 2019 should equal 10% of the average annual amount of monetary liabilities of the NBU (in 2018, in accordance with the Law of Ukraine *On the National Bank of Ukraine*, general provisions should equal 10% of the amount of monetary liabilities).

In accordance with the Law of Ukraine *On the National Bank of Ukraine*, the NBU is not entitled to transfer to the State Budget of Ukraine a part of distributable profit that is higher than that determined in the annual financial statements as confirmed by the external auditor and approved by the NBU Council. Total funds transferred by the NBU in 2019 to the State Budget of Ukraine amounted to UAH 64.898 billion (up from UAH 44.614 billion in 2018). Profit was transferred in

seven installments between April and August, in line with the schedule agreed with the Ministry of Finance of Ukraine.

In 2019, the NBU switched to the direct method in disclosing information about the calculation of distributable profit. The change did not affect the amount of distributable profit. Under the new disclosure approach, the key indicator is operating income – the income (before consolidation adjustments) that the NBU generates during a year, excluding the results of the revaluation of assets and liabilities, inclusively due to exchange rate changes.

In 2018, the calculation of distributable profit was disclosed using the indirect method, in which distributable profit is presented as the NBU's profit for the year adjusted for income and expenses that are not components of distributable profit. In these financial statements, the comparative information for 2018 has been changed and presented using the 2019 approach.

The NBU's management believes that the new presentation method is more relevant and clear and that it makes the information more useful.

Reconciliation of the NBU's operating income with its profit for 2019:

	NBU's income and expenses	Consolidation adjustments	Income and expenses according to the Consolidated Statement of Comprehensive Income
			(in UAH millions)
Net interest income	20,307	42	20,349
Interest income on financial assets at fair value through profit or loss	7,275	–	7,275
Net fee and commission income/(expense)	251	1	252
Net decrease/increase in reserves for assets and liabilities	1,367	1	1,368
Other income/(expenses)	(3,234)	(32)	(3,266)
Operating income	25,966	12	25,978
Result on transactions with financial assets and liabilities in foreign currency and monetary gold	(43,441)	–	(43,441)
Result on transactions with financial assets at fair value through profit or loss (net of interest income)	6,156	–	6,156
Result on transactions with financial instruments	(37,285)	–	(37,285)
Adjustment to reflect the annual profit attributable to noncontrolling interest	–	(2)	(2)
Loss for the year	(11,319)	10	(11,309)

Net decrease/(increase) in reserves for assets and liabilities includes the items "Release/(charge) of provisions for contingent liabilities" and "Net increase in reserves for other assets" of the consolidated statement of comprehensive income. Other income/(expenses) include the items "Staff

costs," "Expenses on the production of banknotes, coins, souvenirs, and other products", "Administrative and other expenses," and "Income tax expense of subsidiary" of the consolidated statement of comprehensive income.

Reconciliation of the NBU's operating income with its profit for 2018:

	NBU results	Adjustment to reflect a (positive)/negative result of subsidiaries' operations	Consolidated results
(in UAH millions)			
Net interest income	34,320	59	34,379
Interest income on financial assets at fair value through profit or loss	5,072	–	5,072
Net fee and commission income/(expense)	(859)	3	(856)
Net decrease/increase in reserves for assets and liabilities	2,579	(3)	2,576
Other expenses	(2,746)	(24)	(2,770)
Operating income	38,366	35	38,401
Result on transactions with financial assets and liabilities in foreign currency and monetary gold	(2,223)	–	(2,223)
Result on transactions with financial instruments measured at fair value through profit or loss (net of interest income)	1,637	–	1,637
Result on transactions with financial instruments	(586)	–	(586)
Adjustment to reflect the annual profit attributable to noncontrolling interest	–	(5)	(5)
Profit of the NBU for the year	37,780	30	37,810

Liabilities for transferring distributable profit to the State Budget of Ukraine, which are determined in accordance with the Law of Ukraine *On the National Bank of Ukraine*, are calculated as follows:

	Comments	2019	2018
(in UAH millions)			
Operating income of the NBU		25,966	38,366
Realized result on transactions with financial assets and liabilities in foreign currency and monetary gold	23	9,633	7,048
Realized result on transactions with financial instruments at fair value through profit or loss	24	1,749	567
Unrealized losses not compensated by revaluation reserves of financial instruments to their fair value	24	(270)	(588)
Unrealized result on revaluation of disposed securities and derivative financial instruments from previous years that realized in the reporting year		1,057	530
Realized result on investment metals disposed		173	181
Release of other reserves, and result on free-of-charge transfer of assets		4,995	327
Distributable profit for the year		43,303	46,431
Result of IFRS 9 implementation		–	22
Impact of change in accounting policy on determination of unrealized and realized results for foreign currencies, monetary gold, and investment metals		–	22,011
Total distributable profit		43,303	68,464
General reserves created		(581)	(3,566)
Liabilities on profit distribution to the State Budget of Ukraine		42,722	64,898

20 Capital Management

The function of the NBU's capital is to ensure economic independence and ability to perform the functions established by law. Total amount of capital managed by the NBU as of 31 December 2019 was UAH 83,329 million (down from UAH 137,465 million as of 31 December 2018). No external capital requirements exist for the NBU as a central bank, except for the size of authorized capital stipulated by the Law of Ukraine *On the National Bank of Ukraine*.

In accordance with the Law of Ukraine *On the National Bank of Ukraine*, the NBU must have UAH 100 million in authorized capital. By its decision based on the results of the year ended 31 December 2007, the NBU Council increased the NBU's authorized capital to UAH 100 million.

Composition of the NBU's equity as of 31 December 2019:

	2019	2018
	(in UAH millions)	
Authorized capital	100	100
General reserves	50,816	47,251
Other reserves	–	5,243
Retained earnings	623	3,597
Revaluation reserves of foreign currency, monetary gold	25,486	78,560
Revaluation reserves of investment metals	596	625
Revaluation reserves of financial instruments to their fair values	5,708	2,089
Total equity	83,329	137,465

21 Cash and Cash Equivalents

	2019	2018 Adjusted comparative information p	2017 Adjusted comparative information
	(UAH million)		
Foreign currency cash	589	1,816	1,941
Demand deposits (other than restricted funds)	13,988	41,423	11,577
Short-term deposits with maturities of up to three months (other than gold, investment metals, and restricted funds)	74,808	73,179	10,212
SDR holdings	234	98	60,784
Total cash and cash equivalents	89,619	116,516	84,514

Changes in liabilities resulted from financial activity in 2019:

	Note	As of 1 January 2019	Changes caused by cash flows	Interest paid	Changes in exchange rate	Interest expenses accrued	Other	As of 31 December 2019
	(UAH million)							
Banknotes and coins in circulation		400,334	24,922	–	–	–	–	425,256
Liabilities to the IMF	17	294,762	(15,438)	(6,186)	(42,792)	6,362	237	236,945
Term deposits	13	41	(40)	–	(1)	–	–	–
Certificates of deposit issued by the NBU	15	61,867	90,022	(9,534)	–	9,649	(72)	151,932

The NBU classifies interests paid as cash flows from operating activity in the consolidated statement of cash flows.

Changes in liabilities resulted from financial activity in 2018:

	Note	As of 1 January 2018	Changes caused by cash flows	Interest expenses paid	Changes in exchange rate	Interest expenses accrued	Other	As of 31 December 2018
(UAH million)								
Issuance of banknotes and coins into circulation		361,759	38,575	–	–	–	–	400,334
Liabilities to the IMF	17	286,656	18,320	(9,429)	(6,440)	5,687	(32)	294,762
Term deposits	13	–	9	–	32	–	–	41
Certificates of deposit issued by the NBU		67,024	(5,076)	(7,566)	–	7,528	(43)	61,867

22 Interest Income and Expenses

	2019	2018
(UAH million)		
Interest income		
Income on domestic securities at amortized cost	32,500	42,980
Income on loans to banks and other borrowers	2,887	3,739
Income on accounts and deposits in foreign currency	1,170	801
Income on SDR holdings	6	219
Income on domestic public debt	135	157
Other	4	14
Total interest income at effective interest rate	36,702	47,908
Interest expenses		
Expenses on certificates of deposit issued by the NBU	(9,606)	(7,473)
Expenses on transactions with the IMF	(6,362)	(5,687)
Expenses on accounts of Deposit Guarantee Fund	(163)	(216)
Expenses on borrowings received	(136)	(134)
Other operating expenses	(1)	–
Total interest income at effective interest rate	(16,268)	(13,510)
Interest expenses on demand funds and term deposits with negative interest rate	(85)	(17)
Net interest income	20,349	34,381

Other interest income includes interest income on loans to employees.

In 2019, income on domestic securities at amortized cost included income on inflation-linked domestic government bonds of UAH 11,041 million (in 2018 - UAH 19,730 million).

The NBU changed the presentation of expenses on financial assets with negative interest rate. Expenses on amounts

placed with negative interest rate are presented within interest expenses (in 2019 - UAH 85 million, in 2018 - UAH 17 million). To provide a consistent presentation of information, the relevant expenses for 2018 have been reclassified from income on foreign currency funds and deposits and fees and commission expenses in the consolidated statement of comprehensive income in amount of UAH 7 million and UAH 10 million respectively.

23 Result on Transactions with Financial Assets and Liabilities in Foreign Currency and Monetary Gold

	2019	2018
		(UAH million)
Unrealized result on transactions with financial assets and liabilities in foreign currency and monetary gold	(53,074)	(9,271)
Realized result on transactions with financial assets and liabilities in foreign currency and monetary gold	9,633	7,048
Total result on transactions with financial assets and liabilities in foreign currency and monetary gold	(43,441)	(2,223)

24 Results on transactions with Financial Instruments at Fair Value through Profit or Loss

	2019	2018
		(UAH million)
Securities of nonresidents measured at fair value through profit or loss:		
Interest income	7,275	5,072
Unrealized gain allocated to revaluation reserve of financial instruments to their fair value	4,268	1,664
Unrealized loss compensated by revaluation reserve of financial instruments to their fair value	(18)	(47)
Unrealized loss not compensated by revaluation reserve of financial instruments to their fair value	(269)	(581)
Total unrealized gain on securities of nonresidents measured at fair value with revaluation result recognized through profit or loss	11,256	6,108
Realized result on securities of nonresidents measured at fair value through profit or loss (unrealized result that realized in the in current year)	1,747	561
Total results on securities of nonresidents measured at fair value through profit or loss	13,003	6,669
Derivative financial instruments		
Unrealized gain allocated to revaluation reserve of financial instruments to their fair value	427	41
Unrealized loss compensated by revaluation reserve of financial instruments to their fair value	–	(1)
Unrealized loss not compensated by revaluation reserve of financial instruments to their fair value	(1)	(6)
Total unrealized result on derivative financial instruments	426	34
Realized result on derivative financial instruments (unrealized results realized in current year)	7	(2)
Total result on derivative financial instruments	433	32
Property rights on loan agreements the right of claim of which was transferred to the NBU		
Realized result (unrealized result realized in the current year)	(5)	8
Total result on property rights under loan agreements the right of claim of which was transferred to the NBU	(5)	8
Total result on transactions with financial instruments at fair value through profit or loss	13,431	6,709

25 Other Income

	2019	2018
		(UAH million)
Income on sale of investment and commemorative coins, souvenirs and other products	681	1,013
Fines, penalties, forfeit received/returned	134	(85)
Gain on sale of fixed assets and intangible assets	74	2
Income on registration and granting licenses	3	4
NBU's share in profit of associated companies	76	29
Other	60	56
Total other income	1,028	1,019

26 Staff Costs

	2019	2018
		(UAH million)
Payroll	1,422	1,165
Single contribution for mandatory state social security and contributions to nonstate pension funds	320	282
Financial aid and other social benefits	14	5
Other	13	7
Total staff costs	1,769	1,459

Staff training and development costs, expenditures for voluntary medical insurance of employees, etc. were included in other staff costs.

27 Administrative and Other Expenses

	2019	2018
		(UAH million)
Consulting and legal services	111	298
Depreciation and amortization	207	237
Utilities and household expenses	160	163
Expenses for maintenance of noncurrent tangible and intangible assets	152	130
Maintenance and sale of collateral	152	–
Taxes, duties, and charges	29	64
Business trips	27	28
Telecommunication services and maintenance	24	23
Banknote Printing and Minting Works' expenses not included into cost of production	418	283
Other	92	94
Total administrative and other expenses	1,372	1,320

Depreciation and amortization charges in 2019 exclude depreciation of UAH 219 million (in 2018: UAH 241 million) for fixed assets 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.

NBU changed the presentation of costs of Banknote Printing and Minting Works that are not included into cost of production. In consolidated statement of comprehensive income for 2019 such expenses of UAH 418 million are

indicated in *Administrative and other expenses*. In order to ensure a consistent presentation of 2018 information, the respective costs in the amount of UAH 283 million were transferred from item Costs related to production of banknotes, coins, souvenirs, and other products to item Administrative and other expenses of consolidated statement of comprehensive income and are outlined in this Note.

Other expenses include the cost of sales of the services of the waste treatment facilities of the Banknote Paper Mill, remuneration to members of the NBU Council, etc.

28 Financial Risk Management

The NBU manages its financial risks in order to limit potential losses of its 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 Office for Financial and Operational Risks. 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 conducting 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 Financial Risk Division, which is a part of the Office for Financial and Operational Risks, is the second line of defense in financial risk management processes. This division is responsible for:

- 1) providing methodological, coordinative and organizational 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 paragraph 15 of Article 7 of the Ukrainian Law *On the National Bank of Ukraine*
- financial risks arising from Ukraine's international (foreign exchange) reserves
- financial risks arising from the management of the pension assets of the NBU Corporate Non-State Pension Fund.
- 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 is broken down into:

default risk, which is defined as a 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, that the counterparty will fail to meet their obligations to the NBU, resulting in default on the settlement date).

The risk of a credit rating decrease is defined as the possibility that the credit rating of a counterparty/issuer will be downgraded below the minimum acceptable credit rating that allows the NBU to include the assets arising from this counterparty/issuer in its international (foreign exchange) reserves.

Market risk

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 risk is broken down into:

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 is a market risk arising from unfavorable changes in the market value of non-fixed-income shares and other securities

commodity risk is a market risk arising from unfavorable changes in the market value of commodities, including precious metals, such as gold

volatility risk is 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.

Of the market risks, the NBU has the greatest exposure to currency and interest rate risks.

The table below shows an analysis of the sensitivity of the NBU's positions to currency risk. The analysis was conducted on the assumption of a 20% and 5% increase/decrease in the exchange rates of the U.S. dollar, Euro, SDR and other currencies against the hryvnia in 2019 and 2018 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% and 5% respectively in relation to those that were in effect in late 2019 and 2018 respectively were used to translate those amounts into hryvnias.

The effect of exchange rate movements on profit or loss and profit for the year was as follows:

	31 December 2019		31 December 2018	
	(in UAH millions)			
	+20%	-20%	+5%	-5%
US dollar	89,913	(89,913)	19,258	(19,258)
Euro	10,649	(10,649)	3,602	(3,602)
SDR	(34,138)	34,138	(10,853)	10,853
GBP	2,741	(2,741)	864	(864)
Other currencies	6,714	(6,714)	2,079	(2,079)

The table below presents an analysis of the sensitivity of the NBU's positions to credit risk. The effect on profit or loss and profit for the year was as follows:

	31 December 2019		31 December 2018	
	(in UAH millions)			
	+100 bp	-100 bp	+100 bp	-100 bp
Sensitivity of interest-bearing financial assets	2,891	(2,891)	3,108	(3,108)
Sensitivity of interest-bearing financial liabilities	(3,131)	3,131	(2,757)	2,757
Net impact on profit or loss and distributable profit	(240)	240	351	(351)

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 Ukrainian international (foreign exchange) reserves. This risk can arise when the NBU has difficulties in quickly selling or recalling a large amount of assets in which Ukrainian international (foreign exchange) 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 (foreign exchange) reserves are held.

For a detailed assessment of financial risks, see Notes 29 to 33.

29 Analysis of Financial Assets and Liabilities by Geographical Concentration Risk

As of 31 December 2019, the geographical concentration risk of the NBU's financial assets and liabilities was presented as follows:

	Ukraine	OECD countries	IMF	Other	Total
					(in UAH million)
Financial assets					
Funds and deposits in foreign currencies	589	88,819	–	112	89,520
Foreign securities	–	435,146	–	69,833	504,979
SDR holdings	–	–	234	–	234
Domestic securities	347,191	–	–	–	347,191
Loans to banks and other borrowers	13,843	–	–	–	13,843
Domestic public debt	1,727	–	–	–	1,727
IMF quota contributions	–	–	65,894	–	65,894
Other financial assets	88	21	127	–	236
Total financial assets	363,438	523,986	66,255	69,945	1,023,624
Financial liabilities					
Banknotes and coins in circulation	425,256	–	–	–	425,256
Accounts of banks	78,441	–	–	3	78,444
Accounts of government and other institutions	38,981	1	–	–	38,982
Certificates of deposit issued by the NBU	151,932	–	–	–	151,932
Borrowings received	–	2,369	–	–	2,369
Liabilities to the IMF except for quota contributions	–	–	171,059	–	171,059
Liabilities to the IMF in respect of quota contributions	–	–	65,886	–	65,886
Other financial liabilities	577	95	–	–	672
Total financial liabilities	695,187	2,465	236,945	3	934,600
Net balance sheet position	(331,749)	521,521	(170,690)	69,942	89,024

As of 31 December 2018, the geographical concentration risk of the NBU's financial assets and liabilities was presented as follows:

	Ukraine	OECD countries	IMF	Other	Total
	(UAH million)				
Financial assets					
Funds and deposits in foreign currencies	1,816	114,753	–	112	116,681
Foreign securities	–	345,277	–	87,714	432,991
SDR holdings	–	–	100	–	100
Domestic securities	361,436	–	–	–	361,436
Loans to banks and other borrowers	22,145	–	–	–	22,145
Domestic public debt	1,834	–	–	–	1,834
IMF quota contributions	–	–	77,472	–	77,472
Other financial assets	214	–	132	–	346
Total financial assets	387,445	460,030	77,704	87,826	1,013,005
Financial liabilities					
Banknotes and coins in circulation	400,334	–	–	–	400,334
Accounts of banks	38,508	–	–	1	38,509
Accounts of government and other institutions	47,726	1	–	–	47,727
Certificates of deposit issued by the NBU	61,867	–	–	–	61,867
Borrowings received	–	2,769	–	–	2,769
Liabilities to the IMF except for quota contributions	–	–	217,300	–	217,300
Liabilities to the IMF in respect of quota contributions	–	–	77,462	–	77,462
Other financial liabilities	551	23	–	–	574
Total financial liabilities	548,986	2,793	294,762	1	846,542
Net balance sheet position	(161,541)	457,237	(217,058)	87,825	166,463

30 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 2019 and 2018 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 following information is provided as of 31 December 2019:

	Credit rating	Total	% in financial assets	Stage 1	Stage 2	Stage 3
Funds and deposits in foreign currencies:						
Demand deposits	AAA	8,568	9.6	8,568	–	–
	AA+	6	0.0	6	–	–
	AA	253	0.3	253	–	–
	AA-	2	0.0	2	–	–
	A+	2,705	3.0	2,705	–	–
	A	709	0.8	709	–	–
	A-	1,850	2.1	1,850	–	–
Term deposits	AAA	8,299	9.3	8,299	–	–
	AA+	35,967	40.2	35,967	–	–
	AA-	13,966	15.5	13,966	–	–
	A+	187	0.2	187	–	–
	A	16,429	18.4	16,429	–	–
Foreign currency cash	Riskless	589	0.6	589	–	–
Total funds and deposits in foreign currencies:		89,530	100.0	89,530	–	–
Foreign securities:						
Government bonds	AAA	273,942	54.3	273,942	–	–
	AA+	5,190	1.0	5,190	–	–
	AA	9,690	1.9	9,690	–	–
	AA-	448	0.1	448	–	–
	A+	3,969	0.8	3,969	–	–
Bonds of international agencies, banks, and other issuers	AAA	32,487	6.4	32,487	–	–
	AA+	5,158	1.0	5,158	–	–
	AA	14,140	2.8	14,140	–	–
	AA-	22,312	4.4	22,312	–	–
	A+	71,513	14.2	71,513	–	–
	A	59,969	11.9	59,969	–	–
	A-	6,040	1.2	6,040	–	–
Total foreign debt securities		504,858	100.0	504,858	–	–
Domestic securities:						
Government securities	B	346,427	99.7	346,427	–	–
Corporate securities	Not rated	953	0.3	–	–	953
Total domestic securities		347,380	100.0	346,427	–	953
Loans to banks and other borrowers:						
Loans to banks	B-	7,712	14.9	–	–	7,712
	Not rated	44,008	85.0	104	–	43,904
Loans to the Deposit Guarantee Fund	Not rated	–	–	–	–	–
Loans to other borrowers	Not rated	38	0.1	–	–	38
Total loans to banks and other borrowers		51,758	100.0	104	–	51,654
Domestic public debt	B	1,727	100.0	1,727	–	–
Other financial assets	AAA	127	50.0	127	–	–
	AA	3	1.2	3	–	–
	Not rated	124	48.8	124	–	–
Total other financial assets		254	100.0	254	–	–

The following information is provided as of 31 December 2018:

	Credit rating	Total	% in financial assets	Stage 1	Stage 2	Stage 3
(UAH million)						
Funds and deposits in foreign currencies:						
Demand deposits	AAA	27,096	23.2	27,096	–	–
	AA+	9	0.0	9	–	–
	AA	856	0.7	856	–	–
	AA-	2	0.0	2	–	–
	A+	9,818	8.4	9,818	–	–
	A	3,821	3.3	3,821	–	–
Term deposits	AAA	9,986	8.6	9,986	–	–
	AA+	5,349	4.6	5,349	–	–
	AA-	1,901	1.6	1,901	–	–
	A+	29,933	25.6	29,933	–	–
	A	26,119	22.4	26,119	–	–
Foreign currency cash	Riskless	1,816	1.6	1,816	–	–
Total funds and deposits in foreign currencies:		116,706	100.0	116,706	–	–
Foreign securities:						
Government bonds	AAA	180,840	41.8	180,840	–	–
	AA+	5,941	1.4	5,941	–	–
	AA	4,491	1.0	4,491	–	–
	AA-	3,167	0.7	3,167	–	–
	A+	1,349	0.3	1,349	–	–
Bonds of international agencies, banks, and other issuers	AAA	37,402	8.6	37,402	–	–
	AA+	11,662	2.7	11,662	–	–
	AA	15,178	3.5	15,178	–	–
	AA-	24,127	5.6	24,127	–	–
	A+	80,656	18.6	80,656	–	–
	A	64,591	14.9	64,591	–	–
	A-	3,466	0.9	3,466	–	–
Total foreign debt securities		432,870	100.0	432,870	–	–
Domestic securities	B-	361,436	100.0	361,436	–	–
Total domestic securities		361,436	100.0	361,436	–	–
Loans to banks and other borrowers:						
Loans to banks	B-	9,810	15.5	–	–	9,810
	Not rated	51,788	82.1	4,302	–	47,486
Loans to the Deposit Guarantee Fund	Not rated	1,458	2.3	1,458	–	–
Loans to other borrowers	Not rated	38	0.1	–	–	38
Total loans to banks and other borrowers		63,094	100.0	5,760	–	57,334
Domestic public debt	B-	1,834	100.0	1,834	–	–
Other financial assets	AAA	132	36.9	132	–	–
	Not rated	226	63.1	221	1	4
Total other financial assets		358	100.0	353	1	4

Loans granted to banks to support their liquidity 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 2019, the gross carrying value balance in the amount of UAH 104 million had the internal rating of C (as of 31 December 2018, UAH 4,302 million and UAH 1 million had the internal ratings of BBB and CCC, respectively).

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.

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 non-payment 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 low.

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, which is considered to be pre-default. 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.

Domestic securities without international ratings assigned include corporate bonds of state-owned entities whose ratings are limited by the sovereign rating of Ukraine.

Total loans granted to five banks with the highest level of credit exposures as of 31 December 2019 amounted to UAH 37,114 million (as of 31 December 2018: UAH 42,048 million), or 69% (31 December 2018: 67%) of total loans to banks and other borrowers, before allowance. The allowance recognized on the loans granted to five banks amounted to UAH 26,185 million as of 31 December 2019 (31 December 2018: UAH 28,002 million).

Summarized below is information on net credit risk by types of collateral received as of 31 December 2019:

	Maximum credit risk exposure	Cost of collateral accepted as security	Net credit risk (loans to banks)	Net credit risk (domestic public debt)
(UAH million)				
Loans secured by:				
Real estate	11,397	28,758	11,397	–
Securities	95	102	–	–
Other types of collateral	2,351	3,706	2,342	–
Unsecured loans	1,727	–	–	1,727
Total loans to banks and other borrowers	15,570	32,566	13,739	1,727

Summarized below is information on net credit risk by types of collateral received as of 31 December 2018:

	Maximum credit risk exposure	Cost of collateral accepted as security	Net credit risk (loans to banks)	Net credit risk (domestic public debt)
(UAH million)				
Loans secured by:				
Real estate	13,669	30,669	13,604	–
Securities	5,696	7,014	–	–
Other types of collateral	2,780	4,409	2,776	–
Unsecured loans	1,834	–	–	1,834
Total loans to banks and other borrowers	23,979	42,092	16,380	1,834

As of 31 December 2019 and 2018, there is no credit risk exposure under loans to the Deposit Guarantee Fund.

accepted as security is the fair value of collateral used by the NBU in the calculation of allowance at the reporting date.

Maximum credit risk exposure is represented by the carrying amounts of loans outstanding at the reporting date. Collateral

The following information summarizes the gross carrying amounts of loans by collateral types as of 31 December 2019:

	Loans to banks to support their liquidity	Loans granted under credit lines to support small and medium enterprises from funds received from the European Bank for Reconstruction and Development	Loans to the Deposit Guarantee Fund and other borrowers	Domestic public debt	Total
(UAH million)					
Loans secured by:					
Real estate	14,993	–	–	–	14,993
Securities	95	–	–	–	95
Property rights on loan agreements	1,993	–	–	–	1,993
Other types of collateral	989	–	–	–	989
Unsecured loans	33,650	36	2	1,727	35,415
Total loans to banks and other borrowers	51,720	36	2	1,727	53,485

The following information summarizes the gross carrying amounts of loans by collateral types as of 31 December 2018:

	Loans to banks to support their liquidity	Loans granted under credit lines to support small and medium enterprises from funds received from the European Bank for Reconstruction and Development	Loans to the Deposit Guarantee Fund and other borrowers	Domestic public debt	Total
(UAH million)					
Loans secured by:					
Real estate	17,893	–	–	–	17,893
Securities	4,238	–	1,458	–	5,696
Property rights on loan agreements	2,636	–	–	–	2,636
Other types of collateral	1,042	–	–	–	1,042
Unsecured loans	35,789	36	2	1,834	37,661
Total loans to banks and other borrowers	61,598	36	1,460	1,834	64,928

The NBU conducts operations on banks refinancing by granting them overnight and refinancing loans and, as of 31 December 2019 and 2018, it had outstanding amounts due on such loans. The NBU grants to banks overnight and refinancing loans that are provided by a pool to include the following types of assets (property): government bonds, certificates of deposit issued by the NBU, bonds of international financial organizations (issued in accordance with the legislation of Ukraine), and foreign currencies (USD, EUR, GBP, CHF, JPY).

To secure for fulfillment of obligations under the stabilization loans granted to banks to support their liquidity before 2017 and which remained outstanding as of 31 December 2019

and 2018, the NBU accepted securities (domestic government bonds and corporate bonds, including those provided by the guarantee of the Cabinet of Ministers of Ukraine), foreign currencies, shares of banks' qualifying holders, real estate, and property rights under loan agreements. Effective from 2017, the NBU has ceased to grant stabilization loans. Instead of stabilization loans, the NBU may grant to banks loans of urgent liquidity support, but no such loans to banks have been granted yet.

For the banks and other borrowers estimated at Stage 3 of impairment, the cash flows from which are expected to be received only upon the sale of collateral, net credit risk is equal to the maximum credit exposure.

For the banks and other borrowers estimated at Stages 1 and 2 of impairment, net credit risk is calculated as the difference between the maximum credit exposure and value of the collateral accepted to secure for assets.

For all groups of assets, the NBU determines default as inability or reluctance of a counterparty/issuer/borrower to fulfill its financial liabilities to the NBU, which leads to direct financial losses from the credit risk materialization. A default on obligations to the NBU is recognized, in particular, on outstanding financial assets which, at the reporting date, have at least one past due payment exceeding 90 calendar days.

For the purpose of estimating allowances for financial assets and liabilities within the general approach, the NBU uses a model of expected credit losses, a key element of which is to reflect on a timely basis deterioration or improvement of credit quality of financial instruments with reference to the effect of current and forward-looking information. Amount of expected credit losses depends on the degree of decrease in credit quality from the date of the initial recognition of a financial instrument.

The NBU recognizes credit losses as the difference between all cash flows payable by a counterparty/issuer/borrower under contractual terms and all cash flows the NBU expects to receive discounted at the effective interest rate. In determining future cash flows to calculate expected credit losses, the NBU considers all conditions of a financial instrument over its life (e.g., option of early repayment, term extension, requirements to early repay a loan, and other similar options). Cash flows that are taken into consideration include cash flows from sales of pledged property or other sources that improve the financial instrument's credit quality, which form an integral part of contractual terms. The NBU applies professional judgments/assumptions in order to be able to reliably estimate the expected life of financial instruments.

Professional judgments/assumptions represent a documented reasonable decision of the NBU's staff based on the following:

compliance of actual actions in determining each component for assessing expected credit losses with requirements of the NBU's methodology on assessment of expected credit losses on financial instruments

a comprehensive and objective analysis of all the information that has an effect on measuring the components and factors (events, features) for assessing credit risk and expected credit losses

the NBU's own experience based on reliable, consistent, complete, and integral statistical data accumulated for at least three consecutive years

ensuring a full, timely, and objective assessment of credit risk and expected credit losses in compliance with the principles

determined by the NBU's methodology on assessment of expected credit losses on financial instruments

To calculate expected credit losses, the NBU uses the following three approaches:

1) group assessment (credit risk parameters), according to which an expected credit loss is a multiplication result of loss given default, probability of default, and exposure at default, with reference to the forecast scenarios weighted by probability

2) group assessment (repayment scenarios), with reference to the unconditional probability of their occurrence, according to which an expected credit loss is a present value of the difference between estimated contractual cash flows payable to the NBU under the loan agreements discounted at the effective interest rate and all cash flows the NBU expects to receive under probable scenarios of loan repayments discounted at the effective interest rate

3) individual assessment (customized repayment scenarios), according to which an expected credit loss is a present value of the difference between estimated contractual cash flows payable to the NBU under the loan agreements discounted at the effective interest rate and all cash flows the NBU expects to receive under customized scenarios of loan repayments discounted at the effective interest rate.

The 12-month expected credit losses form a part of the lifetime expected credit losses that may result from a borrower's default event that occurs during 12 months from the reporting date (or a shorter period, if the expected life of the financial instrument is less than 12 months).

The 12-month expected credit losses reflect expected shortfalls of the lifetime cash flows that may result from a default event that occurs during 12 months from the reporting date weighted by probability of default (or probability of a certain range of possible loan repayment scenarios) assessed on the basis of a cumulative probability of a borrower's default during 12 months after the reporting date (or the remaining lifetime).

Lifetime expected credit losses of financial instruments are expected credit losses that may result from a borrower's default event over the expected life of a financial instrument.

Lifetime expected credit losses reflect expected shortfalls in amounts of the lifetime cash flows that may result from a default event that occurs during the lifetime from the reporting date weighted by probability of default (or probability of a certain range of possible loan repayment scenarios) assessed on the basis of a cumulative probability of a borrower's default during the remaining lifetime of a financial instrument as at the reporting date.

A significant increase in credit risk is assessed based on both types of information: quantitative and qualitative factors including the internal credit ratings of borrowers that address changes in the credit risk as at the reporting date.

If own historical data on losses are unavailable or insufficient, it is allowed to use historical data of other institutions on comparable groups of assets. The NBU's staff professional judgement is also allowed.

Own experience regarding losses is adjusted on the basis of current information and economic forecasts in order to reflect the effect of current and forecasted economic conditions that did not exist in the period to which the available historical data on losses belong and exclude the effect of conditions of said period that were nonexistent as at the reporting date.

If own historical statistical information regarding losses is used in order to assess future cash flows, such historical data should be applied only to those groups of assets that have been defined on the principles that are similar to the principles applied in respect of the groups on which the historical data about losses are based.

The information on actual and forecasted economic conditions (macroeconomic indicators) is used for calculating the probability of default taking into consideration the effect of future economic conditions as well as for choosing discounts applied to the collateral value depending on the stage of the economic cycle.

Thus, the methods applied should allow comparing historical losses for the group of assets with similar characteristics of credit risk with the actual data that reflect current conditions as well as forecasts for the future economic situation.

Objective evidence of impairment is recognized at the level of a financial instrument. An instrument-by-instrument approach means that if there is at least one indicator of objective evidence of impairment of a financial instrument, such instrument with its borrower and all the financial instruments of that borrower are recognized as exposed to objective evidence of impairment. An event of default is one of the objective indicators proving the impairment.

31 Foreign Currency Risk

As of 31 December 2019, the NBU had the following positions in currencies:

	UAH	USD	EUR	SDR	GBP	Other	Nonmonetary	Total
	(UAH million)							
Financial assets								
Funds and deposits in foreign currencies	–	78,875	7,028	–	1,596	2,021	–	89,520
Foreign securities	–	404,754	56,432	–	12,109	31,563	121	504,979
SDR holdings	–	–	–	234	–	–	–	234
Domestic securities	346,204	987	–	–	–	–	–	347,191
Loans to banks and other borrowers	13,843	–	–	–	–	–	–	13,843
Domestic public debt	1,727	–	–	–	–	–	–	1,727
IMF quota contributions	–	–	–	65,894	–	–	–	65,894
Other financial assets	88	–	21	127	–	–	–	236
Total financial assets	361,862	484,616	63,481	66,255	13,705	33,584	121	1,023,624
Financial liabilities								
Banknotes and coins in circulation	425,256	–	–	–	–	–	–	425,256
Accounts of banks	54,396	23,979	63	–	1	5	–	78,444
Accounts of government and other institutions	20,245	8,568	10,169	–	–	–	–	38,982
Certificates of deposit issued by the NBU	151,932	–	–	–	–	–	–	151,932
Borrowings received	–	2,369	–	–	–	–	–	2,369
Liabilities to the IMF apart from quota contributions	–	–	–	171,059	–	–	–	171,059
Liabilities to the IMF in respect of quota settlement	–	–	–	65,886	–	–	–	65,886
Other financial liabilities	526	134	5	–	–	7	–	672
Total of financial liabilities	652,355	35,050	10,237	236,945	1	12	–	934,600
Net balance sheet position	(290,493)	449,566	53,244	(170,690)	13,704	33,572	121	89,024

As of 31 December 2018, the NBU had the following positions in currencies:

	UAH	USD	EUR	SDR	GBP	Other	Nonmonetary	Total
	(UAH million)							
Financial assets								
Funds and deposits in foreign currencies	–	70,183	25,333	–	7,175	13,990	–	116,681
Foreign securities	–	342,632	52,536	–	10,102	27,600	121	432,991
SDR holdings	–	–	–	100	–	–	–	100
Domestic securities	360,744	692	–	–	–	–	–	361,436
Loans to banks and other borrowers	22,145	–	–	–	–	–	–	22,145
Domestic public debt	1,834	–	–	–	–	–	–	1,834
IMF quota contributions	–	–	–	77,472	–	–	–	77,472
Other financial assets	214	–	–	132	–	–	–	346
Total financial assets	384,937	413,507	77,869	77,704	17,277	41,590	121	1,013,005
Financial liabilities								
Banknotes and coins in circulation	400,334	–	–	–	–	–	–	400,334
Accounts of banks	37,840	535	129	–	1	4	–	38,509
Accounts of government and other institutions	17,002	25,040	5,685	–	–	–	–	47,727
Certificates of deposit issued by the NBU	61,867	–	–	–	–	–	–	61,867
Borrowings received	–	2,769	–	–	–	–	–	2,769
Liabilities to the IMF apart from quota contributions	–	–	–	217,300	–	–	–	217,300
Liabilities to the IMF in respect of quota settlement	–	–	–	77,462	–	–	–	77,462
Other financial liabilities	537	12	25	–	–	–	–	574
Total of financial liabilities	517,580	28,356	5,839	294,762	1	4	–	846,542
Net balance sheet position	(132,643)	385,151	72,030	(217,058)	17,276	41,586	121	166,463

Assets and liabilities in other currencies mainly included positions in CHF, AUD, JPY, and CNY.

32 Interest Rate Risk

As of 31 December 2019, 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							
Time deposits in foreign currency in OECD	–	1.65	–	–	0.80	2.81	1.65
Foreign securities	–	1.78	0.04	–	0.76	1.90	1.57
SDR holdings	–	–	–	0.75	–	–	0.75
Domestic securities	10.44	–	–	–	–	–	10.44
Loans to banks and other borrowers	17.7	–	–	–	–	–	17.70
Domestic public debt	8.68	–	–	–	–	–	8.68
Financial liabilities							
Deposit Guarantee Fund	9.53	–	–	–	–	–	9.53
Certificates of deposit issued by the NBU	12.73	–	–	–	–	–	12.73
Borrowings received	–	4.88	–	–	–	–	4.88
Liabilities to the IMF apart from quota contributions	–	–	–	3.06	–	–	3.06

The sign “–” in the table above means that the NBU has no respective interest-bearing assets or liabilities in corresponding currency.

Interest is accrued at floating rates on SDR holdings and liabilities to the IMF (interest rates are reviewed on a weekly basis).

Also domestic securities include indexed government debt securities.

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 national currency.

Interest on foreign securities is accrued at both variable and fixed rates.

As of 31 December 2018, 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							
Time deposits in foreign currency in OECD	–	2.61	–	–	0.79	2.45	2.45
Foreign securities	–	2.80	0.17	–	1.04	3.06	2.45
SDR holdings	–	–	–	1.11	–	–	1.11
Domestic securities	13.17	–	–	–	–	–	13.17
Loans to banks and other borrowers	18.13	–	–	–	–	–	18.13
Domestic public debt	8.53	–	–	–	–	–	8.53
Financial liabilities							
Deposit Guarantee Fund	4.00	–	–	–	–	–	4.00
Certificates of deposit issued by the NBU	17.03	–	–	–	–	–	17.03
Borrowings received	–	5.19	–	–	–	–	5.19
Liabilities to the IMF apart from quota contributions	–	–	–	3.26	–	–	3.26

Analysis of 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 2019, 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 million)							
Financial assets							
Funds and deposits in foreign currencies	83,721	4,086	–	–	–	1,713	89,520
Foreign securities	30,054	73,963	101,639	297,887	1,315	121	504,979
SDR holdings	234	–	–	–	–	–	234
Domestic securities	6,272	9,667	150,481	47,714	132,070	987	347,191
Loans to banks and other borrowers	6,442	–	–	7,401	–	–	13,843
Domestic public debt	–	27	81	432	1,187	–	1,727
IMF quota contributions	–	–	–	–	–	65,894	65,894
Other financial assets	5	1	6	21	13	190	236
Total financial assets	126,728	87,744	252,207	353,455	134,585	68,905	1,023,624

	On demand and up to 1 month	1–3 months	3–12 months	1–5 years	Over 5 years	Non- interest bearing	Total
Financial liabilities							
Banknotes and coins in circulation	–	–	–	–	–	425,256	425,256
Accounts of banks	–	–	–	–	–	78,444	78,444
Accounts of government and other institutions	2,498	–	–	–	–	36,484	38,982
Certificates of deposit issued by the NBU	151,932	–	–	–	–	–	151,932
Borrowings received	–	2,369	–	–	–	–	2,369
Liabilities to the IMF apart from quota contributions	170,172	–	–	–	–	887	171,059
Liabilities to the IMF in respect of quota settlement	–	–	–	–	–	65,886	65,886
Other financial liabilities	–	–	–	–	–	672	672
Total of financial liabilities	324,602	2,369	–	–	–	607,629	934,600
Net gap	(197,874)	85,375	252,207	353,455	134,585	(538,724)	89,024
Cumulative gap	(197,874)	(112,499)	139,708	493,163	627,748	89,024	

As of 31 December 2018, 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 million)							
Financial assets							
Funds and deposits in foreign currencies	103,202	10,794	–	–	–	2,685	116,681
Foreign securities	24,720	65,997	107,492	233,977	684	121	432,991
SDR holdings	100	–	–	–	–	–	100
Domestic securities	7,879	7,082	153,593	48,083	144,107	692	361,436
Loans to banks and other borrowers	9,630	3,517	1,528	7,470	–	–	22,145
Domestic public debt	–	27	81	432	1,294	–	1,834
IMF quota contributions	–	–	–	–	–	77,472	77,472
Other financial assets	6	2	8	27	17	286	346
Total financial assets	145,537	87,419	262,702	289,989	146,102	81,256	1,013,005
Financial liabilities							
Banknotes and coins in circulation	–	–	–	–	–	400,334	400,334
Accounts of banks	–	–	–	–	–	38,509	38,509
Accounts of government and other institutions	7,082	–	–	–	–	40,645	47,727
Certificates of deposit issued by the NBU	61,867	–	–	–	–	–	61,867
Borrowings received	–	2,769	–	–	–	–	2,769
Liabilities to the IMF apart from quota contributions	216,358	–	–	–	–	942	217,300
Liabilities to the IMF in respect of quota settlement	–	–	–	–	–	77,462	77,462
Other financial liabilities	–	–	–	–	–	574	574
Total of financial liabilities	(139,770)	84,650	262,702	–	–	558,466	846,542
Net gap	(139,770)	(55,120)	207,582	289,989	146,102	(477,210)	166,463
Cumulative gap	(139,770)	84,650	262,702	497,571	643,673	166,463	

As of 31 December 2019, a portion of foreign securities bearing variable interest rates amounted to 13.15% of the total portfolio (31 December 2018: 15.60%).

33 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 2019 was as follows:

	On demand and up to 1 month	1 to 3 months	3 to 12 months	1 to 5 years	Over 5 years	Maturity not defined	Total
(UAH million)							
Financial assets							
Funds and deposits in foreign currency	85,433	4,087	–	–	–	–	89,520
Foreign securities	11,569	31,704	112,317	347,953	1,315	121	504,979
SDR holdings	234	–	–	–	–	–	234
Domestic securities	6,272	9,667	5,308	47,714	278,230	–	347,191
Loans to banks and other borrowers	473	250	3,441	9,679	–	–	13,843
Domestic public debt	–	27	81	432	1,187	–	1,727
IMF quota contributions	65,894	–	–	–	–	–	65,894
Other financial assets	4	2	8	159	22	41	236
Total financial assets	169,879	45,737	121,155	405,937	280,754	162	1,023,624
Financial liabilities							
Banknotes and coins in circulation	425,041	–	–	–	–	215	425,256
Accounts of banks	78,444	–	–	–	–	–	78,444
Accounts of state and other institutions	38,982	–	–	–	–	–	38,982
Certificates of deposit issued by the NBU	151,932	–	–	–	–	–	151,932
Loans received	–	–	–	2,369	–	–	2,369
Liabilities to the IMF except IMF quota contributions	2	8,543	7,659	123,521	28,666	2,668	171,059
Liabilities to the IMF with respect to quota settlement	65,886	–	–	–	–	–	65,886
Other financial liabilities	53	3	87	–	–	529	672
Loan commitments	2,000	–	–	–	–	–	2,000
Total financial liabilities	762,340	8,546	7,746	125,890	28,666	3,412	936,600
Liquidity gap arising from financial instruments	(592,461)	37,191	113,409	280,047	252,088	(3,250)	87,024
Cumulative liquidity gap	(592,461)	(555,270)	(441,861)	(161,814)	90,274	87,024	

The NBU's liquidity risk position as of 31 December 2018 was as follows:

	On demand and up to 1 month	1 to 3 months	3 to 12 months	1 to 5 years	Over 5 years	Maturity not defined	Total
(UAH million)							
Financial assets							
Funds and deposits in foreign currency	105,887	10,794	–	–	–	–	116,681
Foreign securities	7,114	16,682	110,744	297,645	685	121	432,991
SDR holdings	100	–	–	–	–	–	100
Domestic securities	7,879	7,082	8,420	48,083	289,972	–	361,436
Loans to banks and other borrowers	9,630	3,517	1,528	7,470	–	–	22,145
Domestic public debt	–	27	81	432	1,294	–	1,834
IMF quota contributions	77,472	–	–	–	–	–	77,472
Other financial assets	4	3	11	173	30	125	346
Total financial assets	208,086	38,105	120,784	353,803	291,981	246	1,013,005
Financial liabilities							
Banknotes and coins in circulation	400,119	–	–	–	–	215	400,334
Accounts of banks	38,509	–	–	–	–	–	38,509
Accounts of state and other institutions	47,727	–	–	–	–	–	47,727
Certificates of deposit issued by the NBU	61,867	–	–	–	–	–	61,867
Loans received	–	–	–	2,769	–	–	2,769
Liabilities to the IMF except IMF quota contributions	3	5,894	11,443	135,864	60,960	3,136	217,300
Liabilities to the IMF with respect to quota settlement	77,462	–	–	–	–	–	77,462
Other financial liabilities	48	4	11	–	–	511	574
Total financial assets	625,735	5,898	11,454	138,633	60,960	3,862	846,542
Liquidity gap arising from financial instruments	(417,649)	32,207	109,330	215,170	231,021	(3,616)	166,463
Cumulative liquidity gap	(417,649)	(385,442)	(276,112)	(60,942)	170,079	166,463	

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).

Repayment periods under contractual undiscounted cash flows from financial liabilities as of 31 December 2019 were as follows:

	On demand and up to 1 month	1 to 3 months	3 to 12 months	1 to 5 years	Over 5 years	Maturity not defined	Total
(UAH million)							
Financial liabilities							
Banknotes and coins in circulation	425,041	–	–	–	–	215	425,256
Accounts of banks	78,444	–	–	–	–	–	78,444
Accounts of state and other institutions	38,982	–	–	–	–	–	38,982
Certificates of deposit issued by the NBU	152,278	–	–	–	–	–	152,278
Loans received	–	29	87	2,513	–	–	2,629
Liabilities to the IMF except IMF quota contributions	2	9,041	11,411	133,268	31,272	2,668	187,662
Liabilities to the IMF with respect to quota settlement	65,886	–	–	–	–	–	65,886
Other financial liabilities	53	3	87	–	–	529	672
Loan commitments	2,000	–	–	–	–	–	2,000
Total future payments on financial liabilities	762,686	9,073	11,585	135,781	31,272	3,412	953,809

Repayment periods under contractual undiscounted cash flows from financial liabilities as of 31 December 2018 were as follows:

	On demand and up to 1 month	1 to 3 months	3 to 12 months	1 to 5 years	Over 5 years	Maturity not defined	Total
							(UAH million)
Financial liabilities							
Banknotes and coins in circulation	400,119	–	–	–	–	215	400,334
Accounts of banks	38,509	–	–	–	–	–	38,509
Accounts of state and other institutions	47,727	–	–	–	–	–	47,727
Certificates of deposit issued by the NBU	62,021	–	–	–	–	–	62,021
Loans received	–	36	108	3,092	–	–	3,236
Liabilities to the IMF except IMF quota contributions	3	6,641	16,937	154,894	68,090	3,136	249,701
Liabilities to the IMF with respect to quota settlement	77,462	–	–	–	–	–	77,462
Other financial liabilities	48	4	11	–	–	511	574
Total future payments on financial liabilities	625,889	6,681	17,056	157,986	68,090	3,862	879,564

34 Contingent Liabilities, Loan Commitments, and Derivative Financial Instruments

Capital Commitments

As of 31 December 2019, the NBU had capital commitments with respect to the acquisition, construction, and improvement of property and equipment and intangible assets totaling UAH 175 million (UAH 118 million as of 31 December 2018).

Loan Commitments

As of 31 December 2019, the NBU had commitments for granting loans to the Deposit Guarantee Fund under an open uncommitted revolving line of credit totaling UAH 2,000 million (the NBU had no loan commitments as of 31 December 2018).

Derivative Financial Instruments

Since October 2013, the NBU has been carrying out transactions with futures for the purpose of regulating the interest rate risk under an Investment Management and Consulting Services Agreement between the NBU and the International Bank for Reconstruction and Development.

As of 31 December 2019, the NBU had 269 long stock-exchange interest futures contracts maturing in March 2020, the notional value of which equaled UAH 1,373 million or USD 58 million, and 90 short stock-exchange interest futures contracts maturing from June 2020 to December 2020, the notional value of which equaled UAH 524 million or USD 22

million (as of 31 December 2018, the NBU had 478 long stock-exchange interest futures contracts maturing in March 2019, the notional value of which equaled UAH 2,993 million or USD 108 million, and 258 short stock-exchange interest futures contracts maturing from June 2019 to March 2020, the notional value of which equaled UAH 1,740 million or USD 63 million). Funds for settlements under futures transactions worth UAH 8 million (UAH 10 million in 2018) were measured at fair value and included in funds and deposits in foreign currency (Note 5).

Legal Proceedings

From time to time and in the normal course of business, claims against the NBU occur. As of 31 December 2019 and 31 December 2018, there were no lawsuits that had been filed against the NBU that had a low likelihood of resulting in losses, according to NBU estimates. Accordingly, the NBU made no provisions for liabilities that could arise from these lawsuits.

At the same time, for lawsuits against the NBU that, as the NBU estimated, had a high likelihood of resulting in losses, the NBU made respective provisions (Note 18). The NBU is also a defendant in claims for restoration of some banks. At present, the mechanism for the restoration of banks in Ukraine is not regulated by the law.

35 Fair Value of Financial Assets and Liabilities

The NBU determines the fair value of financial assets and liabilities using available market information, where it exists, and the appropriate valuation methodologies. However, professional judgment is required to interpret market data in order to measure the estimated fair value.

Financial Assets and Liabilities Carried at Fair Value

Financial instruments carried at fair value include foreign securities and derivative financial instruments.

The fair value of foreign securities is based on quoted prices in an active market (Level 1 inputs) or other active market quoted prices (consensus price, etc.) obtained from trading information systems (Level 2 inputs). In the absence of information on quoted prices, the fair value is based on discounted cash flows 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 derivative financial instruments is determined on the basis of quoted prices in an active market (Level 1 inputs).

Financial Assets and Liabilities Carried 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 the 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 said model takes into account future interest payments and principal repayments, repayment periods, and discount rate.

For the purposes of estimating the fair value of domestic securities, the NBU uses the following approaches:

for long-term inflation-linked 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 for one month and compared to the previous month over the period from March 2019 to November 2019), and Level 3 inputs (the December 2019 FOCUSECONOMICS consensus forecast of consumer price indices for the next five years and target consumer price indices established by the NBU for the period from year 6 to year 30)

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)

for bonds of other state institutions, 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 Level 3 inputs (risk premiums of securities compared to the risk of government debt securities determined with the use of expert judgment at the level of 1,313 basis points, taking into account the availability of government guarantees in respect of those securities).

To measure the fair value of domestic public debt in domestic currency, the NBU's weighted average rate on all refinancing instruments (Level 3 inputs) is used as the discount rate.

To measure the fair value of loans to banks and other borrowers, the market rate (the NBU's key policy rate) plus 1.5% as of the calculation date (Level 3 inputs) is used as the discount rate. The discount rates used are as follows:

	2019	2018
	Discount rate, % per annum	Discount rate, % per annum
Domestic securities in domestic currency:		
domestic government debt securities	7.43–13.01	7.22–20.41
bonds of other state institutions	28.91	–
Domestic public debt in domestic currency (1994–1996)	14.51	19.22
Loans to banks and other borrowers in domestic currency	15.0	19.5

The following table summarizes the carrying value and estimated fair values of the financial assets which do not appear in the NBU's consolidated statement of financial position at their fair values:

	2019		2018	
	Carrying value	Fair value	Carrying value	Fair value
				(UAH million)
Domestic securities in domestic currency:				
domestic government debt securities	345,440	332,362	360,744	339,924
bonds of other state institutions	764	824	–	–
Total domestic securities not presented at fair value	346,204	333,186	360,744	339,924
Domestic public debt	1,727	1,307	1,834	1,128
Loans to banks and other borrowers	13,843	14,068	22,145	21,540

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 by levels of fair value hierarchy as follows:

	2019			2018		
	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)	8	–	–	10	–	–
Foreign securities carried at fair value	429,937	41,642	33,400	386,894	5,790	40,307
Domestic securities carried at fair value:						
in foreign currency						
government derivatives	987	–	–	692	–	–
Assets for which fair value is disclosed:						
Domestic securities in domestic currency:						
domestic government debt securities	–	199,209	133,153	–	196,241	143,683
bonds of other state institutions	–	–	824	–	–	–
Domestic public debt	–	–	1,307	–	–	1,128
Loans to banks and other borrowers	–	–	14,068	–	–	21,540

In 2019, there were no significant transfers of financial instruments between Level 1 and Level 2 of fair value hierarchy. In 2019, there were no transfers of financial instruments to or from Level 3 of the fair value hierarchy.

Long-term inflationary domestic government debt securities 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 million)	
Foreign securities as of 1 January 2018	68,310
Income / (expenses)	(2,633)
Purchases of foreign securities	39,921
Redemptions of foreign securities	(60,997)
Sales of foreign securities	(4,294)
Foreign securities as of 31 December 2018	40,307
Income / (expenses)	(6,113)
Purchases of foreign securities	37,364
Redemptions of foreign securities	(38,158)
Sales of foreign securities	–
Foreign securities as of 31 December 2019	33,400

The weighted average modified duration of the financial assets at fair value and are included in Level 3 of the fair value hierarchy (except equity instruments at fair value through profit or loss) was 0.36 as of 31 December 2019 (0.38 as of 31 December 2018). An increase in the yield rates used to determine the fair value of these financial assets as of 31 December 2019 (Level 3 inputs) by 1 basis point would

decrease the fair value of the relevant assets by UAH 121 million (by UAH 151 million as of 31 December 2018), while a decrease in these yield rates by 1 basis point would increase the fair value of these assets by UAH 121 million (UAH 151 million as of 31 December 2018).

36 Presentation of Financial Instruments by Measurement Categories

In accordance with IFRS 9 Financial Instruments, the NBU classifies its financial assets according to the following categories: financial assets measured at fair value through profit or loss and financial assets measured at amortized cost.

All of the NBU's financial liabilities are carried at amortized cost.

As of 31 December 2019, financial assets were broken down into measurement categories as follows:

	Assets at fair value through profit or loss	Assets at amortized cost	Total
			(UAH million)
Financial assets			
Funds and deposits in foreign currency	8	89,512	89,520
Foreign securities	504,979	–	504,979
SDR holdings	–	234	234
Domestic securities	987	346,204	347,191
Loans to banks and other borrowers	–	13,843	13,843
Domestic public debt	–	1,727	1,727
IMF quota contributions	–	65,894	65,894
Other financial assets	8	228	236
Total financial assets	505,982	517,642	1,023,624

As of 31 December 2018, financial assets were broken down into measurement categories as follows:

	Assets that at fair value through profit or loss	Assets at amortized cost	Total
			(UAH million)
Financial assets			
Funds and deposits in foreign currency	10	116,671	116,681
Foreign securities	432,991	–	432,991
SDR holdings	–	100	100
Domestic securities	692	360,744	361,436
Loans to banks and other borrowers	–	22,145	22,145
Domestic public debt	–	1,834	1,834
IMF quota contributions	–	77,472	77,472
Other financial assets	13	333	346
Total financial assets	433,706	579,299	1,013,005

37 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 government, state-controlled entities, key management personnel, etc.

In the normal course of its operations, the NBU conducts transactions with related parties. The year-end balances on these transactions are presented in the table below:

	Notes	2019			2018		
		Government and state-controlled entities	Associates	Other related parties	Government and state-controlled entities	Associates	Other related parties
(UAH million)							
Domestic securities	8	347,191	–	–	361,436	–	–
Loans to banks and other borrowers		11,989	–	–	18,439	–	–
Loans to the Deposit Guarantee Fund	9	–	–	–	1,458	–	–
Provisions for loans to banks and other borrowers		(4,346)	–	–	(4,413)	–	–
Domestic public debt		1,727	–	–	1,834	–	–
Other assets		49	30	–	31	132	–
Accounts of banks		51,564	–	–	16,483	–	–
Accounts of state and other institutions	14	36,278	108	3	40,417	191	3
Accounts of the Deposit Guarantee Fund	14	2,498	–	–	7,082	–	–
Liabilities to transfer distributable profit to the state budget	19	42,722	–	–	64,898	–	–
Certificates of deposit issued by the NBU		56,185	–	–	8,511	–	–
Other liabilities		5	–	–	4	–	–

Other related party transactions include the account balance of the NBU Corporate Nonstate Pension Fund.

The terms of the transactions presented in the table 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 2019 bore interest rates from 14.25% to 16.00% (from 7.00% to 16.00% as of 31 December 2018)

there was no outstanding debt on loans to the Deposit Guarantee Fund as of 31 December 2019 (loans to the Deposit Guarantee Fund as of 31 December 2018 bore the interest rate of 12.5%)

the accounts of the state and other institutions as of 31 December 2019 and 31 December 2018 were noninterest-bearing

the accounts of the Deposit Guarantee Fund bore interest rates of 9.53% as of 31 December 2019 (4.00% as of 31 December 2018)

the balances of required reserves transferred by state-owned banks to correspondent accounts with the NBU (included in accounts of banks in the table above) earned no interest (as of 31 December 2018, no interest was accrued on the balances of required reserves transferred by state-owned banks to the NBU correspondent accounts) (Note 13).

The terms of transactions with the domestic public debt and domestic securities are disclosed in the respective notes.

Income and expense items for transactions with related parties were as follows:

	2019			2018		
	Government and state-controlled entities	Associates	Other related parties	Government and state-controlled entities	Associates	Other related parties
						(UAH million)
Interest income	34,461	–	–	45,675	–	–
Interest expenses	(1,998)	–	–	(2,267)	–	–
Fee and commission income	100	–	–	200	–	–
Other income	411	76	–	150	29	–
Staff costs	–	–	(37)	–	–	(29)
Net decrease in provisions	67	–	–	95	–	–

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 2019, the short-term benefits (salary) of key management personnel were UAH 36.5 million, including remuneration to

members of the NBU Council of UAH 12.4 million (in 2018, the short-term benefits (salary) of key management personnel were UAH 29.4 million, including remuneration to members of the NBU Council of UAH 10.6 million). As of 31 December 2019 and 31 December 2018, there were no outstanding loans to key management personnel.

Short-term benefits (salary) of the Chairperson and members of the NBU Council:

Chairperson and members of the NBU Council	2019, UAH million	Time worked in 2019, months	2018, UAH million	Time worked in 2018, months
Bohdan Danylyshyn	1.6	12	1.6	12
Tymofiy Mylovanov	1.0	8	1.4	12
Viktor Koziuk	1.6	12	1.4	12
Vasyl Furman	1.6	12	1.4	12
Vira Rychakivska	1.6	12	1.4	12
Olena Scherbakova	1.6	12	1.4	12
Mykola Kalenskyi	1.6	12	1	9
Oleksandr Petryk	1.6	12	1	8
Vitalii Shapran	0.2	1.5	–	–
Total	12.4		10.6	

Short-term benefits (salary) of the Chairperson and members of the NBU Board:

Chairperson and members of the NBU Board	2019, UAH million	Time worked in 2019, months	2018, UAH million	Time worked in 2018, months
Yakiv Smolii	4.6	12	3.8	12
Kateryna Rozhkova	4.1	12	3.5	12
Roman Borysenko	3.8	12	3.4	12
Dmytro Sologub	3.9	12	3.3	12
Sergii Kholod	3.9	12	1.5	5
Oleg Churiy	3.8	12	3.3	12
Total	24.1		18.8	

38 Events Subsequent to the Reporting Date

In February and March 2020, liabilities of SDR 234 million (UAH 8,271 million at the official exchange rate as of the transaction date, or UAH 8,648 million at the annual exchange rate of the IMF) were repaid to the IMF as scheduled under the EFF program.

In March 2020, the court rejected the NBU's appeal and upheld the decision of Kyiv Economic Court on the lawsuit filed by the Deposit Guarantee Fund against the NBU to recover losses in the amount of UAH 277 million. The NBU believes that this event after the reporting date indicates a higher probability of an outflow of resources in 2020.

26 March 2020
Kyiv, Ukraine