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# Annual Report 2022





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# Annual Report 2022

Warsaw 2023

Compiled on basis of NBP materials.

Photo of the President of NBP  
Piotr Małecki

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Adam Glapiński  
Governor of Narodowy Bank Polski

Dear Readers,

Since 2020 we have all been grappling with challenges unseen for decades. Although the pandemic was already over, the global economy continued to be affected by its negative consequences in 2022. At the same time, for more than a year we have had to face the repercussions of the war. Russia's aggression against Ukraine is above all a great tragedy for the Ukrainian nation, yet this conflict also has many economic consequences. First, in 2022 we saw the greatest wave of migration in Europe, including in Poland, since World War II. Second, we witnessed major disruptions in foreign trade, including in the commodities markets.

The pandemic, the war and their economic consequences had a strong negative impact on economies, causing both lower economic growth and higher inflation. In 2022 inflation

in the euro area was the highest in the region's history, and in the United States the highest in 40 years. Also in Poland, the consequences of the pandemic and of the war significantly boosted inflation.

In such difficult external circumstances and amid high uncertainty, in the years 2021–2022 Narodowy Bank Polski undertook decisive, adequate and, above all, responsible measures. In order to mitigate the risk of inflation settling at a high level, NBP tightened monetary policy sharply. In the period from October 2021 to September 2022, the NBP reference rate rose by 6.65 percentage points and reached the highest level since the current NBP inflation target was set (i.e. since 2004). These measures are now bearing fruit. In particular, as anticipated by Narodowy Bank Polski, inflation is declining markedly. At the same time, the pursued monetary policy contributes to maintaining sustainable economic growth.

Despite being faced with high uncertainty since 2022, the Polish financial system, in particular the banking sector, remained stable. Narodowy Bank Polski supports the stability of the national financial system by, among other things, conducting research and drawing up reports aimed at identifying the sources of systemic risk for the Polish financial system. The Financial Stability Committee – a collegiate macroprudential authority chaired by the NBP Governor – bases its activities on the findings of such works. The financial consequences of the legal risks of Swiss franc loans and the obligation for banks to meet the so-called MREL requirement by the end of 2023 remain the main challenges faced by banks.

Another important task of the central bank is the issue of currency. Russia's aggression against Ukraine caused concerns as to the ability to ensure uninterrupted supply of cash to banks. The situation was very dynamic and forced us to undertake fast and decisive measures.



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Immediately after the outbreak of the war Narodowy Bank Polski in cooperation with the National Bank of Ukraine launched the exchange of the Ukrainian hryvnia into the Polish zloty. The aim of the operation was to help Ukrainian refugees to use their own funds. Over 100 thousand refugees benefited from the operation. The programme became an example followed by other European countries. These measures were recognised internationally and both banks were granted the Central Banking Currency Manager Award, the most prestigious award in central banking worldwide, recognising the consistent care for the value of the Polish currency by Narodowy Bank Polski during the crisis caused by Russia's aggression against Ukraine.

One of the statutory tasks of Narodowy Bank Polski is to accumulate and manage foreign currency reserves. At the end of 2022, the official foreign currency reserves of Narodowy Bank Polski were the equivalent of EUR 156.5 billion. This ensures the maintenance of an adequate level of the universally used reserve adequacy

ratios, reflecting mainly the potential needs of the balance of payments in emergency situations. Gold reserves are an important part of the foreign currency reserves. In 2023, Narodowy Bank Polski continues the monetary gold purchases started in the years 2018–2019. At the end of June 2023 the gold reserves amounted to 277.1 tonnes, representing 9.4% of NBP's official reserve assets.

I am very proud that in 2022, after the end of my first term of office, I was re-appointed Governor of Narodowy Bank Polski. I would like to thank all my colleagues for their involvement in the protection of the value of the Polish currency. I wish to assure you that bringing down inflation permanently to a low level remains the main task of Narodowy Bank Polski and we will carry out this task while safeguarding economic development, workplaces for Polish citizens and financial stability.

I invite you to read the detailed account of our activities presented in the Annual Report of Narodowy Bank Polski for 2022.



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## **MONETARY POLICY COUNCIL\***

### **Chairperson**

Adam Glapiński

### **Members:**

Ireneusz Dąbrowski  
Iwona Duda  
Wiesław Janczyk  
Cezary Kochalski  
Ludwik Kotecki  
Przemysław Litwiniuk  
Gabriela Masłowska  
Joanna Tyrowicz  
Henryk Wnorowski

## **NBP MANAGEMENT BOARD\*\***

### **Chairperson**

Adam Glapiński

### **Deputy Governor – First Deputy Governor of NBP**

Marta Kightley

### **Deputy Governor of NBP**

Adam Lipiński

### **Members:**

Marta Gajęcka  
Paweł Mucha  
Piotr Pogonowski  
Rafał Sura  
Paweł Szalamacha

\* In 2022, the term of office of the following MPC members came to an end:  
– on 25 January 2022 – Mr Eugeniusz Gatnar's and Mr Jerzy Kropiwnicki's,  
– on 9 February 2022 – Ms Grażyna Ancyparowicz's and Mr Eryk Łon's,  
– on 20 February 2022 – Mr Łukasz Hardt's and Mr Kamil Zubelewicz's,  
– on 30 March 2022 – Mr Jerzy Żyżyński's,  
– on 21 July 2022 – Mr Rafał Sura's (following his resignation as an MPC member).  
The following MPC members were appointed for a six-year term of office:  
– on 26 January 2022 – Mr Ludwik Kotecki and Mr Przemysław Litwiniuk,  
– on 21 February 2022 – Mr Ireneusz Dąbrowski and Mr Henryk Wnorowski,  
– on 23 February 2022 – Mr Wiesław Janczyk,  
– on 7 September – Ms Joanna Tyrowicz,  
– on 7 October 2022 – Ms Iwona Duda and Ms Gabriela Masłowska.

\*\* In 2022, the term of office of the following members of the NBP Management Board came to an end:  
– on 16 July 2022 – Mr Andrzej Kaźmierczak's (in connection with the end of the term of office),  
– on 6 October 2022 – Mr Paweł Szalamacha's (in connection with the end of the first term of office).  
The following members of the NBP Management Board were appointed for a six-year term of office:  
– on 28 July 2022 – Mr Rafał Sura,  
– on 1 September 2022 – Mr Paweł Mucha,  
– on 12 October 2022 – Mr Paweł Szalamacha (the second term).

## Organization Chart of Narodowy Bank Polski as at 31 December 2022



--- Day-to-day oversight exercised in accordance with authorisations granted by the NBP Governor to the Members of the Management Board.  
 — Day-to-day oversight exercised on the basis of the NBP reporting structure, according to the areas of work of organisational units assigned by the NBP Governor to be managed by the NBP Deputy Governors.



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# Summary

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## Summary

1. According to Article 227 section 1 of the Constitution of the Republic of Poland “The central bank of the State shall be Narodowy Bank Polski. It shall have the exclusive right to issue money as well as to formulate and implement monetary policy. Narodowy Bank Polski shall be responsible for the value of Polish currency”. The basic objectives of NBP are stipulated in the Act of 29 August 1997 on Narodowy Bank Polski and in the Banking Act of 29 August 1997, as well as in the Treaty on the Functioning of the European Union and the Statute of the European System of Central Banks and of the European Central Bank. In 2022, NBP conducted its activities in line with the *Monetary Policy Guidelines for 2022 and Narodowy Bank Polski Plan of Activity for 2022–2024*.
2. The *Report* presents the implementation of the statutory responsibilities of NBP in 2022 in the following areas: monetary policy, pursuit of financial stability, issue of currency, foreign exchange reserves management, foreign exchange activities, the payment system, services to the State Treasury, analysis and research, statistics, education and information, and international cooperation. The *Report* also presents the legislative activity, the internal development as well as an overview of the financial and equity position and financial result of NBP for 2022.
3. According to the Constitution of the Republic of Poland and the Act on Narodowy Bank Polski, the governing bodies of NBP comprise: the Governor of Narodowy Bank Polski, the Monetary Policy Council and the Management Board of Narodowy Bank Polski. In 2022, the organisational structure of NBP comprised the Head Office and 16 organisational units.
4. In 2022, in connection with Russia’s aggression against Ukraine, the Management Board of Narodowy Bank Polski took decisions and actions, on an ongoing basis, aimed to provide extensive assistance to the National Bank of Ukraine (NBU).
5. In 2022, monetary policy was conducted in line with the *Monetary Policy Guidelines for 2022*. As in previous years, the main objective of monetary policy was to maintain price stability while supporting sustainable economic growth and financial stability. In the conduct of monetary policy, NBP continued to apply the strategy of direct inflation targeting. Since 2004, the medium-term inflation target has been 2.5%, with a symmetrical band for deviations of  $\pm 1$  percentage point. Monetary policy decisions were made based on available data, including an assessment of the causes and persistence of the shocks affecting the economic situation, including, in particular, inflation processes. An important factor shaping the macroeconomic environment of the NBP monetary policy in 2022 was the onset of Russia’s military aggression against Ukraine in February 2022. Data available before the launch of the Russian invasion indicated that in many economies, including Poland, an economic recovery following the COVID-19 pandemic crisis was taking place amid a concurrent rise in commodity prices, which resulted in accelerated global inflation. The onset of the Russian invasion significantly boosted commodity price growth; this was accompanied by a rise in uncertainty and a deterioration in economic agents’ sentiment, as well as a weakening of the exchange rates of some economies, including the Polish zloty. At the same time, disruptions in international trade persisted. In effect, global economic activity growth declined gradually, while inflation rose sharply in many countries, reaching

the highest levels in decades and significantly exceeding central banks' targets. Also in Poland, inflation picked up considerably in 2022, largely on the back of the sharp rise in global commodity prices (the annual consumer price index in 2022 was 14.4%). Inflation was additionally boosted by the effects of the global supply chain disruptions and high transportation costs in international trade. Under such circumstances, operating costs of enterprises were increasing, which – amid the initially fairly high, but declining over time, demand growth – inclined firms to raise prices of consumer goods, contributing to higher core inflation. This was accompanied by a favourable situation in the domestic labour market, including low unemployment and higher nominal wage growth than in previous years. Given the impact of the negative external supply shocks, which, on the one hand, added considerably to inflation and, on the other, hampered economic activity growth, and also in view of the strong labour market conditions, in the first three quarters of 2022 the risk of inflation running above the NBP inflation target in the monetary policy transmission horizon was significant. In order to reduce this risk, at its meetings between January and September 2022, the Council raised the NBP interest rates eight times, including the reference rate in total from 1.75% to 6.75% following the previous three interest rate increases effected in 2021 Q4. In February 2022, the Council also decided to increase the basic required reserve ratio from 2.00% to 3.50% as of the April required reserve maintenance period. The total scale of increases in the NBP reference rate between October 2021 and September 2022 was 6.65 percentage points, the largest in the Council's history (i.e. since 1998). In 2022 Q4, the NBP reference rate was at its highest level since the NBP inflation target was set at the current level (i.e. since 2004). The tightening of monetary policy by the Council resulted in a significant rise in interest rates in the economy, including an increase in lending rates and rates on household and corporate deposits, as well as higher bond yields. This was conducive to a marked weakening in the growth of credit and monetary aggregates. Most notably, in 2022 Q4 the annual rates of growth in lending to households and in the M1 aggregate were distinctly negative. In 2022 Q4, available information indicated that the weakening of the global economic conditions and the decline in commodity prices, as well as the related expected decrease in inflation abroad would contribute to reducing inflationary pressures in the Polish economy as well. It was judged that the flagging domestic economic growth, including reduced consumption, and slower lending growth would work in the same direction. In these circumstances, the Council judged that the hitherto significant tightening of the NBP monetary policy would support a decline in inflation in Poland towards the NBP inflation target. At the same time, given the strength and persistence of the shocks, which remained beyond the impact of domestic monetary policy, it was indicated that in the short term inflation would remain high, and its return to the target would be gradual. This assessment was supported by the forecasts made at the end of 2022, including the November inflation and GDP projection. As a result, the MPC kept the NBP interest rates unchanged at its meetings from October to December 2022.

6. In 2022, NBP conducted monetary policy using instruments provided for in the *Monetary Policy Guidelines for 2022*. The key instrument of monetary policy in 2022 was the NBP interest rates. As in previous years, the operational target of monetary policy was to keep the POLONIA rate close to the NBP reference rate. The main instrument to achieve this task was the main open market operations, carried out on a regular weekly basis, in the form of issuance of NBP bills, in principle with a 7-day maturity. A supplementary role was played by the fine-tuning open market operations. The achievement of the operational target of monetary policy was supported by the required reserve system, helping to

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stabilise short-term market interest rates. In 2022, banks were able to place surplus funds as overnight deposit with NBP, as well as supplement shortages of funds by drawing on the lombard credit offered by NBP. In the period under discussion, NBP did not conduct structural operations. At the end of 2022, the nominal value of the portfolio of debt securities purchased by NBP under these operations in the years 2020–2021 reached PLN 136.2 billion compared to PLN 144.0 billion at the end of 2021. In March 2022, as part of its interventions in the FX market, NBP sold certain amount of foreign currency for Polish zlotys. In 2022 excess liquidity persisting in the banking sector compared to the previous year dropped. In December 2022, the average level of funds at the disposal of the banking sector in excess of the required reserve amounted to PLN 236.6 billion and was approx. PLN 17.3 billion lower than in the corresponding period of 2021. Excess liquidity was absorbed in 2022 largely through the increase of the required reserve from 2.00% to 3.50% and the increase of the currency in circulation, observed mainly in the period directly following Russia's aggression against Ukraine. Excess liquidity increased mainly on account of FX transactions conducted by NBP including the purchase of foreign currency, mainly from the Ministry of Finance. This increase was partly limited through the NBP's sale of foreign currency mainly for the European Commission.

7. In accordance with Article 3(2)(6) of the Act on Narodowy Bank Polski, the responsibilities of NBP shall include “establishing the necessary conditions for the development of the banking system”. The Polish central bank performs this responsibility on an ongoing basis by acting to ensure stable conditions for the functioning of banks and the whole financial system. In 2022, NBP continued to undertake activities aimed at developing the payment system and safeguarding its smooth functioning. Moreover, Narodowy Bank Polski participated in developing legal provisions on the banking sector, conducted analyses and research on the national banking system and cooperated with the Polish Bank Association.
8. In 2022 Narodowy Bank Polski carried out analytical and research work on the stability and development of the financial system, nationally and internationally. The results of the work were published in cyclical reports. NBP fulfilled its obligations as provided for in the laws by participating in the work of the Financial Stability Committee on macroprudential supervision (FSC-M) and crisis management (FSC-C). The NBP analyses and reports were used extensively by the FSC-M. Narodowy Bank Polski cooperated with domestic financial safety net institutions, including the Ministry of Finance, the Polish Financial Supervision Authority (KNF) and the Bank Guarantee Fund (BFG). The Bank also conducted analyses and research aimed at increasing the knowledge of financial processes and interdependencies between the financial system and the economy, and used for the operationalisation of macroprudential policy. It also cooperated with European institutions to counteract the build-up of systemic risk.
9. The main aim of NBP's issuing activity was to ensure the safety and liquidity of cash transactions. In 2022, the value of currency in circulation (including bank vault cash) increased by 3.7% and at the end of December 2022 amounted to PLN 368.5 billion. NBP activities made it possible to ensure uninterrupted supply of banks with the Polish currency despite a temporary surge in demand for cash in connection with Russia's aggression against Ukraine. NBP launched the programme of exchange of the hryvnia for the Polish zloty for refugees from Ukraine. As part of the issue of collector coins and notes, NBP issued and put into circulation 28 collector coins and 1 collector banknote.



In 2022, the collector banknote: *Lech Kaczyński: It is worth Being a Pole* was granted an international award. The implementation of the National Strategy for Cash Circulation Security was continued. Moreover, NBP introduced improvements to the cash exchange process, it cooperated with cash handlers in terms of their implementation of the GS1 standard when depositing cash to NBP and participated in amending the legal regulations on the protection of currency against counterfeiting.

10. When managing foreign exchange reserves, NBP seeks to ensure the safety and adequate liquidity of invested funds. At the same time, while observing these criteria, it also undertakes measures aimed at raising the long-term yield on the reserves. In 2022, Narodowy Bank Polski maintained its basic assumptions and parameters of strategic asset allocation while increasing its exposure to the so-called green bonds and sustainable development bonds, developed the methods of forecasting long-term return on investment and analysed the possibilities of further diversification of foreign exchange reserves.
11. The foreign exchange activity of NBP involves maintaining a register of bureaux de change, issuing decisions on foreign exchange matters and carrying out statutory inspections. In 2022, a total of 751 inspections relating to foreign exchange matters were carried out, 24 decisions on foreign exchange matters and 35 decisions concerning the breach of the rules of conduct of the currency exchange business or failure to comply with the responsibilities attached to this business were issued. As at 31 December 2022, a total of 4,577 bureaux de change were operating in Poland.
12. The activities of NBP with respect to the payment system consisted mainly in the operation of the payment systems and the performance of interbank settlements, the organisation of payments, and the oversight of the payment system. In 2022, Narodowy Bank Polski continued to work on a new RTGS system in the Polish zloty (SORBNET3) and on the consolidation of the TARGET2 system with the T2S platform. Narodowy Bank Polski joined the continuous gross settlement (CGS) model with the STEP2-T system operated by EBA Clearing. It completed the assessment of the compliance of the SORBNET2 payment system functioning with the European oversight requirements pertaining to the cyber resilience of financial market infrastructures.
13. The provision of bank services to the State Budget by NBP contributed to ensuring the safety and smoothness of settlements of the public finance sector. As at 31 December 2022, NBP operated 27,849 accounts for 2,922 clients. Narodowy Bank Polski handled the State Budget international liabilities and claims and trade in Treasury securities (in total, 22 sale and swap auctions for these securities were organised and nine auctions for the sale of bonds issued by Bank Gospodarstwa Krajowego for the COVID-19 Prevention Fund). Moreover, NBP cooperated with the Ministry of Finance within the Public Debt Management Committee.
14. The analytical and research work conducted at NBP in 2022 aimed to assess the current and future situation in the Polish economy, including in relation to inflation indices and the price-setting process, inflation expectations, estimates and forecasts of GDP and its components, the financial standing of enterprises and the situation in the labour market. Work was also conducted on the development and improvement of the analytical and prognostic tools. The findings of these analyses and research are used by the Management Board of NBP and the Monetary Policy Council in the decision-making process.

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In 2022, NBP organised three international scientific conferences and two other international scientific events. Eight articles by NBP staff were published in journals from the ISI Master Journal list.

15. In 2022, NBP performed statistical tasks comprising the collection of reporting data, primarily from entities of the financial sector and – to a lesser extent – non-financial corporations. Narodowy Bank Polski prepared a reporting infrastructure for new EBA requirements. As part of analytical works on migration processes, NBP conducted an *ad hoc* study among Ukrainian refugees staying in Poland and a scheduled questionnaire survey among Ukraine’s nationals, and modified the Erydan database.
16. In 2022, Narodowy Bank Polski was the initiator and participant of educational projects carried out across the country. In 2022, the NBP completed the second edition of the nationwide educational programme, NBP Gold Schools and subsidised 81 economic education projects implemented all over Poland. Due to Russia’s aggression against Ukraine, NBP provided educational packages to state schools in Poland for children and teenagers from Ukraine. In 2022, NBP expanded the educational offering and exhibits of the NBP Money Centre as well as continued NBP’s communication activities on the Internet, in particular in social media.
17. In 2022, NBP participated in the work of the Standing Committee of the Council of Ministers, the Committee for European Affairs and other inter-ministerial bodies and cooperated with government bodies by issuing opinions on draft normative acts regarding economic policy and with relevance for the banking system. As part of its cooperation with the European Central Bank (ECB), Narodowy Bank Polski participated in reviewing the ECB’s draft opinions on proposals of EU legislation and draft legal acts of individual EU Member States. The drafts covered in particular issues related to financial supervision, financial stability strengthening, countering money laundering and financing of terrorism, cash payments and cybersecurity.
18. In 2022, NBP representatives participated in the work of the EU bodies, including the General Council of the ECB, the General Council of the European Systemic Risk Board (ESRB), the committees and working groups of the ESCB and the ESRB, the Council of ECOFIN (informal meetings), as well as the committees and working groups of the Council of the European Union and the European Commission. The most important work focused on draft Community regulations on the functioning of the financial system and completing the establishment of the banking union. In 2022, NBP also cooperated with international economic and financial institutions, including the World Bank Group, the International Monetary Fund, the European Bank for Reconstruction and Development and the Bank for International Settlements. NBP continued to participate in the temporary increase of the IMF financial resources under the New Arrangements to Borrow (NAB) and a bilateral loan agreement. Due to Russia’s military aggression against Ukraine, Narodowy Bank Polski supported the National Bank of Ukraine to ensure continuity of its operations and financial and payment stability in the region as well as carrying out actions to support Ukraine in the international arena.
19. In 2022, the average headcount at NBP was 16 full-time posts lower than in 2021 and amounted to 3,344 full-time posts.

20. The financial result of NBP for 2022 was negative and amounted to PLN -16.9 billion. As a result of unfavourable situation in the global markets, mainly falling prices of securities, in 2022 NBP recorded unrealised price valuation losses on debt securities (PLN -25.3 billion) and a negative net result on realised price gains/losses on futures transactions and on transactions in securities (PLN -9.9 billion). NBP also posted a negative net result on monetary policy (PLN -12.0 billion). The loss of NBP was reduced by a positive net result on realised foreign exchange gains/losses (PLN 25.5 billion) and a positive net result on interest related to the trading in investment instruments of foreign currency reserves (PLN 6.5 billion). In 2022, operating expenses and depreciation and amortisation expenses amounted to PLN 1.5 billion.



Chapter 1

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# Governing bodies of NBP

# Governing bodies of NBP

According to the Constitution of the Republic of Poland and the Act on Narodowy Bank Polski, the governing bodies of NBP comprise the Governor of Narodowy Bank Polski, the Monetary Policy Council and the Management Board of Narodowy Bank Polski.

## 1.1. Governor of Narodowy Bank Polski

As of 22 June 2022, Adam Glapiński began his second term as Governor of Narodowy Bank Polski.<sup>1</sup>

In 2022, as part of his responsibilities, the Governor of Narodowy Bank Polski chaired the meetings of the Monetary Policy Council and the NBP Management Board as well as the Financial Stability Committee in its macroprudential capacity. Additionally, while representing Narodowy Bank Polski and the Republic of Poland, the Governor of NBP attended (or was represented in) the following meetings<sup>2</sup> of international banking and financial institutions:

- meetings of the General Council of the European Central Bank,
- the annual meeting of the Board of Governors of the European Bank for Reconstruction and Development,
- meetings of the Boards of Governors of the World Bank Group and the International Monetary Fund,
- informal sessions of the ECOFIN,
- meetings of the General Board of the ESRB,
- meetings of the Governors of the Bank for International Settlements.

In 2022, the Governor of NBP issued 34 ordinances concerning, in particular, the detailed rules and mode of withdrawing currency which as a result of wear and tear or damage ceases to be legal tender in the Republic of Poland as well as the interbank clearing and settlements. Moreover, the Governor of NBP issued six announcements: five containing uniform texts of legal acts issued by the governing bodies of NBP, and an announcement concerning the balance sheet and the profit and loss account of Narodowy Bank Polski for 2021.

In his capacity as the head of staff, the Governor of NBP participated in developing and implementing the Bank's human resources policy and supervised compliance with the work standards at NBP.

## 1.2. Monetary Policy Council

In 2022, the Monetary Policy Council acted in accordance with the *Monetary Policy Guidelines for 2022*. In 2022, the MPC held 12 meetings (including 11 decision-making meetings), adopting 16 normative resolutions. MPC resolutions were published in Monitor Polski (Official Gazette)

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<sup>1</sup> On 21 June 2022 the first term of office of Adam Glapiński as Governor of Narodowy Bank Polski ended.

<sup>2</sup> Some of the aforementioned meetings were conducted remotely.

and Dziennik Urzędowy Narodowego Banku Polskiego (Official Journal of Narodowy Bank Polski).

In 2022, the Monetary Policy Council adopted eight resolutions on the reference rate, the interest rate on refinancing loans, the interest rate on term deposits, and the rediscount rate and the discount rate on the bills of exchange at Narodowy Bank Polski (Table 1.1). It also adopted one resolution amending the resolution on the required reserve ratio for banks, credit unions and the National Association of Credit Unions and the level of interest rate on the required reserve (Table 1.2).

**Table 1.1.** NBP interest rates as at the end of 2021 and 2022 (in %)

Reference rate		Lombard rate		Deposit rate		Rediscount rate		Discount rate	
31.12.2021	31.12.2022	31.12.2021	31.12.2022	31.12.2021	31.12.2022	31.12.2021	31.12.2022	31.12.2021	31.12.2022
1.75	6.75	2.25	7.25	1.25	6.25	1.80	6.80	1.85	6.85

Source: NBP data.

**Table 1.2.** Required reserve ratios and the interest rate on the required reserve funds as at the end of 2022

Required reserve ratio / interest rate on the required reserve funds	In %	In force as of
The required reserve ratio on funds in Polish zloty and funds in foreign currency deposited on bank accounts and on funds received in respect of issue of securities	3.50	31 March 2022
The required reserve ratio on funds received from repo and sell-buy-back transactions, as well as funds received for the duration of at least 2 years	0.00	1 March 2018
The interest rate on the required reserve funds deposited on current accounts or reserve requirement accounts by banks, credit unions and the National Association of Credit Unions*	6.75	8 September 2022

\* 1.0 of the reference rate.

Source: NBP data.

The other resolutions adopted by the MPC in 2022 concerned:

- amendments to the resolution on the MPC rules,
- the approval of the annual financial statements of Narodowy Bank Polski as at 31 December 2021,
- the approval of the *Report on Monetary Policy Implementation in 2021*,
- the evaluation of the activities of the NBP Management Board regarding the implementation of the monetary policy guidelines for 2021,
- the approval of the *Report on NBP Operations in 2021*,
- the setting of the monetary policy guidelines for 2023,
- the approval of the *Financial Plan of Narodowy Bank Polski for 2023*.

With regard to Article 23(1)(1) of the Act on Narodowy Bank Polski, the MPC adopted the following documents:

- the *Balance of Payments of the Republic of Poland* for 2021 Q3 and Q4 and for 2022 Q1 and Q2,
- the *International Investment Position of Poland in 2021*,
- the *Forecast of the Balance of Payments of the Republic of Poland for 2023*,
- the *Opinion on the 2023 Draft Budget Act*.

The Council also examined inflation and GDP projections and adopted three *Inflation Reports* (in March, July and November).

In 2022, members of the MPC participated in meetings with market analysts and in conferences and economic research seminars.

### 1.3. Management Board of Narodowy Bank Polski

Pursuant to the Act on Narodowy Bank Polski, the activity of NBP is directed by its Management Board. The Management Board adopts resolutions on matters which are not the exclusive competence of other bodies of NBP and implements the MPC-adopted resolutions. In 2022, the NBP Management Board performed its basic responsibilities in accordance with the *Monetary Policy Guidelines for 2022*, the *Narodowy Bank Polski Plan of Activity for 2022–2024* and the *Financial Plan of Narodowy Bank Polski for 2022*.

The NBP Management Board examined draft resolutions and other materials to be discussed at the MPC meetings.

In 2022, the NBP Management Board addressed the issues concerning:

- inflation and GDP projections,
- current macroeconomic developments in Poland, including the path of inflation processes, the position of public finance, the economic situation of enterprises and households and the developments in the labour, real estate, financial, credit and foreign exchange markets,
- current developments in the world financial markets, including the euro area financial markets and the financial markets of Central and Eastern European countries,
- financial system stability in Poland, including the assessment of the functioning of the banking system and the outlook for its development,
- banking sector liquidity and monetary policy instruments,
- the situation in the interbank market and open market operations.

The NBP Management Board also discussed topics concerning the issue of currency, including the safety of cash transactions in Poland in connection with the Russian aggression against Ukraine, the management of official reserves and the functioning of the Polish payment system.

In 2022, the NBP Management Board held 52 meetings. It adopted 121 resolutions (including: 59 normative acts and 62 non-normative acts)<sup>3</sup> and 154 management resolutions.

The resolutions adopted by the NBP Management Board were primarily related to:

- regulations on operating accounts and deposit accounts for Treasury bills and NBP bills by Narodowy Bank Polski in the SKARBNET4 system and performing securities transactions in this system,

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<sup>3</sup> In accordance with Article 53 and 54 of the Act on Narodowy Bank Polski of 29 August 1997 (Journal of Laws of 2022, item 2025), resolutions of the Management Board of Narodowy Bank Polski constituting normative acts are published in the Official Gazette or in the Official Journal of Narodowy Bank Polski.



- the introduction of a sample agreement on the services of Narodowy Bank Polski provided to participants of auctions on Treasury securities and guaranteed bonds in the SKARBNET4 system,
- the proceedings of Narodowy Bank Polski as a unit cooperating with the General Inspector of Financial Information in the field of counteracting money laundering and terrorism financing,
- the rules of opening and maintaining banks' accounts by Narodowy Bank Polski,
- cash and vault operations at Narodowy Bank Polski,
- the rules of the management of accounting at Narodowy Bank Polski,
- bank fees and commissions charged by NBP,
- the rules for determining the issue of collector banknotes by Narodowy Bank Polski, approving their graphic designs and production patterns and taking decisions on launching their production,
- the organisational rules of NBP,
- the rules of the NBP Management Board.

The management resolutions adopted by the NBP Management Board concerned, among others:

- concluding the agreement on NBP's cooperation with the National Clearing House within the framework of a twinning project for the National Bank of Ukraine,
- the adoption by NBP of the *Declaration of adherence to the Foreign Exchange Global Code* concerning good practice in the wholesale foreign exchange market,
- renewal of NBP's membership in the Official Monetary and Financial Institutions Forum,
- concluding an agreement by NBP with the Bank of England, De Nederlandsche Bank and the European Central Bank on the establishment of the oversight college for Visa Europe Ltd in order to coordinate the cooperation of the aforementioned central banks in their systemic oversight of the activities of Visa Europe Ltd.

In connection with Russia's aggression against Ukraine, Narodowy Bank Polski declared extensive assistance to the National Bank of Ukraine. The NBP Management Board took decisions and actions on an ongoing basis – in accordance with NBP's competences and legal conditions – to support the NBU and its staff. As part of these activities, NBP concluded a framework agreement on cooperation with the National Bank of Ukraine, as well as, among others, agreements on:

- the exchange of hryvnia for Polish zloty,
- the storage of the NBU's deposits in the form of UAH banknotes purchased in other countries and their transfer to the NBU (UAH Storage and Transfer Agreement),
- the activation of the swap agreement with the National Bank of Ukraine.

In addition, in 2022 the NBP Management Board prepared the NBP annual financial statements for 2021.<sup>4</sup>

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<sup>4</sup> In accordance with Article 17(4)(12) of the Act on Narodowy Bank Polski.

## 1.4. Narodowy Bank Polski Plan of Activity

In 2022, the *Narodowy Bank Polski Plan of Activity for 2022–2024*, adopted by the NBP Management Board on 23 December 2021, was implemented. The *Plan* sets out NBP's goals for the forthcoming years and tasks aimed at their implementation.

In accordance with the rules for planning activity at NBP, the NBP Management Board adopted the *Narodowy Bank Polski Plan of Activity for 2023–2025*, effective as of 1 January 2023.

Chapter 2

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# Monetary policy

# Monetary policy<sup>1</sup>

In presenting the *Report on Monetary Policy*, the Monetary Policy Council acts in accordance with Article 227 of the Constitution of the Republic of Poland, which imposes the obligation on the Council to present a report on the achievement of the purposes of monetary policy within 5 months following the end of the fiscal year. In accordance with Article 53 of the Act on Narodowy Bank Polski, the *Report on Monetary Policy* is announced in the Official Gazette of the Republic of Poland, Monitor Polski. The *Report* presents the main elements of the monetary policy strategy, a description of macroeconomic conditions and decisions taken with respect to monetary policy in the year under review, as well as a description of the monetary policy tools applied.

The *Report on Monetary Policy in 2022* is accompanied by the appendices presenting selected macroeconomic data, as well as by *Voting records of the Monetary Policy Council members on motions and resolutions* in the year the *Report* encompasses.

An ex-post assessment of the conduct of monetary policy should take into account, above all, that the decisions of monetary authorities affect the economy with a considerable lag and that they are taken under uncertainty about future macroeconomic developments. Moreover, the economy is subject to macroeconomic shocks that – while remaining outside the control of the domestic monetary policy – may to a large extent affect economic conditions and domestic inflation developments in the short and sometimes in the medium term. In recent years, macroeconomic shocks have been primarily associated with the economic impact of the COVID-19 pandemic and Russia’s military aggression against Ukraine. Due to their particular strength and persistence, these shocks significantly affected the macroeconomic situation, including inflation developments, globally and in Poland.

## 2.1. Monetary policy strategy in 2022

In 2022, the Monetary Policy Council (hereinafter the Council or the MPC) conducted monetary policy in line with the *Monetary Policy Guidelines for 2022*, adopted by resolution No. 8/2021 of 8 September 2021 on adopting the monetary policy guidelines for 2022. The main elements of the monetary policy strategy pursued in 2022 are presented below.

As in previous years, the main objective of monetary policy was to maintain price stability, while supporting sustainable economic growth and financial system stability. This way, the Council pursued the basic objectives of Narodowy Bank Polski set out in the Constitution of the Republic of Poland of 2 April 1997 (Journal of Laws, No. 78, item 483, Journal of Laws of 2001, No. 28, item 319, Journal of Laws of 2006, No. 200, item 1471, Journal of Laws of 2009, No. 114, item 946) and the Act on Narodowy Bank Polski of 29 August 1997 (Journal of Laws of 2022, item 2025). According to Article 227 Section 1 of the Constitution of the Republic of Poland “Narodowy Bank Polski shall be responsible for the value of Polish currency.” The Act

<sup>1</sup> The chapter Monetary Policy is the *Report on Monetary Policy for 2022*, which the Monetary Policy Council adopted at the meeting on 9 May 2023. The responsibilities in this field are exercised in pursuance with Article 3 (2)(5), Article 12, Article 16, Article 17 (3)(1) and (4)(2), Articles 23–24 and the provisions of Chapter 6 of the Act on Narodowy Bank Polski.

on Narodowy Bank Polski states in Article 3 section 1 that “the basic objective of the activity of NBP shall be to maintain price stability, while supporting the economic policy of the Government, insofar as this does not constrain the pursuit of the basic objective of NBP.”

The Council had been pursuing the price stability objective by using an inflation targeting strategy. Under this strategy, since 2004 the monetary policy objective has been to keep inflation – understood as the annual change in the consumer price index – at 2.5%, with a symmetric band for deviations of  $\pm 1$  percentage point in the medium term. In 2004–2022 period, the average inflation in Poland amounted to 2.9%, thus it was in line with the NBP target, although in some years price growth strayed outside the defined band for deviations from the target.

The medium-term nature of inflation target means that – due to macroeconomic and financial shocks – inflation may temporarily deviate from the target and even run outside the band for deviations from the target. The response of monetary policy to shocks is flexible and depends on their causes and the assessment of persistence of their consequences, including the impact on inflation developments. Each time inflation deviates from the target, the Council flexibly determines the desirable time necessary to bring it back to the target, as bringing inflation rapidly back to the target may entail significant costs to macroeconomic and financial stability. In the *Monetary Policy Guidelines for 2022* it was indicated, that when deciding on the changes of monetary policy parameters, the Council would take into consideration the need to accommodate price adjustments that are mostly related to the return of the economy to the sustainable growth path after the COVID-19 pandemic shock, to the process of Poland’s convergence to the more advanced economies and to the consequences of the structural changes taking place in the economy, including the energy transition.

The monetary policy strategy pursued by the Council assumes flexibility of the instruments applied. This means that the range of instruments used by NBP can be adapted to the nature of disturbances observed in the economy and market conditions. The flexible use of monetary policy instruments is conducive to effective functioning of the transmission mechanism as well as macroeconomic and financial stability.

While taking monetary policy decisions, the Council considers the time lags in the transmission mechanism of monetary policy. The time lag between a decision on monetary policy parameters and its peak impact on real variables (such as output or employment) and on inflation takes several quarters and may change over time. Moreover, monetary policy is conducted under uncertainty, in particular about future economic developments.

Stabilising inflation at a low level is an important, yet insufficient condition to maintain balance in the economy, which, in turn, supports price stability in the long term. Imbalances in the financial sector may pose a threat to long-term price stability. Those imbalances should be counteracted mainly by macroprudential policy aimed at reducing systemic risk and in that manner supporting long-term, sustainable economic growth. This is important especially amid the free movement of capital and highly integrated financial markets. Monetary policy conducted by the Council supports macroprudential policy and in particular is conducive to financial system stability and mitigates the risk of imbalances building up in the economy, by taking into account in its decisions developments in asset prices (including real estate prices) and lending growth insofar as this does not constrain the pursuit of the basic objective of NBP.

Besides monetary and macroprudential policy, fiscal policy plays an important role in maintaining macroeconomic stability. A fiscal policy which mitigates the impact of economic shocks, while ensuring long-term stability of public finance, is necessary to maintain macroeconomic stability.

In 2022, as in previous years, the Council implemented the inflation targeting strategy under the floating exchange rate regime. The floating exchange rate regime does not rule out interventions in the foreign exchange market whenever it is warranted by the market conditions or conducive to ensuring the country's macroeconomic or financial stability.

## 2.2. Monetary policy and macroeconomic developments in 2022

In 2022, monetary policy parameters, including the level of the NBP interest rates, were adjusted according to the situation in the economy, with a view of ensuring price stability while supporting sustainable economic growth and the stability of the financial system. The Council's monetary policy decisions were made on the basis of available information, taking into account the assessment of the causes and persistence of the shocks affecting economic situation, in particular, inflation developments.

An important factor shaping the macroeconomic environment of the NBP monetary policy in 2022 was the onset of Russia's military aggression against Ukraine in February 2022. Data available before the launch of the Russian invasion indicated that in many economies, including Poland, an economic recovery following the COVID-19 pandemic crisis was taking place amid a concurrent rise in commodity prices, which resulted in accelerated global inflation. The onset of the Russian invasion significantly boosted commodity price growth; this was accompanied by a rise in uncertainty and a deterioration in economic agents' sentiment, as well as a weakening of the exchange rates of some economies, including the Polish zloty. At the same time, disruptions in international trade persisted. In effect, global economic activity growth declined gradually, while inflation rose sharply in many countries, reaching the highest levels in decades and significantly exceeding central banks' targets.

Also in Poland, inflation picked up considerably in 2022, largely on the back of the sharp rise in global commodity prices (the annual consumer price index in 2022 was 14.4%). Inflation was additionally boosted by the effects of the global supply chain disruptions and high transportation costs in international trade. Under such circumstances, operating costs of enterprises were increasing, which – amid the initially fairly high, but declining over time, demand growth – inclined firms to raise prices of consumer goods, contributing to higher core inflation. This was accompanied by a favourable situation in the domestic labour market, including low unemployment and higher nominal wage growth than in previous years.

Given the impact of the negative external supply shocks, which, on the one hand, added considerably to inflation and, on the other, hampered economic activity growth, and also in view of the strong labour market conditions, in the first three quarters of 2022 the risk of inflation running above the NBP inflation target in the monetary policy transmission horizon was significant. In order to reduce this risk, at its meetings between January and September

2022<sup>2</sup>, the Council raised the NBP interest rates eight times, including the reference rate in total from 1.75% to 6.75%<sup>3</sup> – following the previous three interest rate increases effected in 2021 Q4 (Table 2.1). In February 2022, the Council also decided to increase the basic required reserve ratio from 2.00% to 3.50% as of the April required reserve maintenance period.

The total scale of increases in the NBP reference rate between October 2021 and September 2022 was 6.65 percentage points, the largest in the Council's history (i.e. since 1998). In 2022 Q4, the NBP reference rate was at its highest level since the NBP inflation target was set at the current level (i.e. since 2004; Figure 2.1).

**Figure 2.1.** NBP reference rate



Source: NBP data.

The tightening of monetary policy by the Council resulted in a significant rise in interest rates in the economy, including an increase in lending rates and rates on household and corporate deposits, as well as higher bond yields. This was conducive to a marked weakening in the growth of credit and monetary aggregates.<sup>4</sup> Most notably, in 2022 Q4 the annual rates of growth in lending to households and in the M1 aggregate were distinctly negative.

In 2022 Q4, available information indicated that the weakening of the global economic conditions and the decline in commodity prices, as well as the related expected decrease in inflation abroad would contribute to reducing inflationary pressures in the Polish economy as well. It was judged that the flagging domestic economic growth, including reduced consumption, and slower lending growth would work in the same direction. In these circumstances, the Council judged that the hitherto significant tightening of the NBP monetary policy would support a decline in inflation in Poland towards the NBP inflation target. At the same time, given the strength and persistence of the shocks, which remained beyond the impact of domestic monetary policy, it was indicated that in the short term inflation would remain high, and its return to the target would be gradual. This assessment was supported by the forecasts made at the end of 2022, including the November inflation and

<sup>2</sup> Meetings on the following dates: 4 January, 8 February, 8 March, 6 April, 5 May, 8 June, 7 July and 7 September 2022.

<sup>3</sup> On 8 February 2022, the Council also decided to increase the basic required reserve ratio from 2.0% to 3.5.

<sup>4</sup> The monetary and credit aggregate growth data cited in the *Report* are defined as annual growth resulting from transaction changes. The data refer to monetary financial institutions.

GDP projection. As a result, the MPC kept the NBP interest rates unchanged at its meetings from October to December 2022.

**Table 2.1.** NBP interest rates at the end of the respective months (in %)

Month	Reference rate	Lombard rate	Deposit rate	Rediscount rate	Discount rate
September 2021	0.10	0.50	0.00	0.11	0.12
October 2021	0.50	1.00	0.00	0.51	0.52
November 2021	1.25	1.75	0.75	1.30	1.35
December 2021	1.75	2.25	1.25	1.80	1.85
January 2022	2.25	2.75	1.75	2.30	2.35
February 2022	2.75	3.25	2.25	2.80	2.85
March 2022	3.50	4.00	3.00	3.55	3.60
April 2022	4.50	5.00	4.00	4.55	4.60
May 2022	5.25	5.75	4.75	5.30	5.35
June 2022	6.00	6.50	5.50	6.05	6.10
July 2022	6.50	7.00	6.00	6.55	6.60
August 2022	6.50	7.00	6.00	6.55	6.60
September 2022	6.75	7.25	6.25	6.80	6.85
October 2022	6.75	7.25	6.25	6.80	6.85
November 2022	6.75	7.25	6.25	6.80	6.85
December 2022	6.75	7.25	6.25	6.80	6.85

Source: NBP data.

The following part of the chapter provides information on the macroeconomic background to the Council's decisions in 2022, which is presented in terms of two sub-periods, i.e. 2022 Q1–Q3 and 2022 Q4.

### Monetary policy and macroeconomic developments in 2022 Q1–Q3

Incoming data in early 2022 (i.e. before Russia's military aggression against Ukraine) indicated that global economic activity – following a robust recovery in 2021 – continued to expand, although some countries were experiencing a downturn. Global activity growth benefited from the recovery in consumer demand after the pandemic crisis. This was supported by improving labour market conditions and the smaller scale of epidemic restrictions than the year before. In turn, starting from early 2022, global economic activity was negatively affected primarily by high prices of commodities<sup>5</sup> and supply goods, coupled with the persistent severe disruptions in global supply chains, manifested in limited availability of materials and production components as well as their rising prices.

<sup>5</sup> The average price of oil (oil prices quoted in the *Report* refer to Brent oil quotations in US dollars per barrel) in January 2022 compared to the average before the outbreak of the COVID-19 pandemic (i.e. 2015–2019 average) was roughly 50% higher, the price of natural gas (natural gas prices quoted in the *Report* refer to futures contracts quotes for natural gas delivered to the Dutch TTF hub in US dollars per megawatt hour) was approximately 5 times higher, the price of coal (coal prices quoted in the *Report* refer to quotes for hard coal futures contracts at Richard's Bay in US dollars per tonne) was approximately 2 times higher, and the index of global agricultural commodity prices (in euros) was approximately 30% higher.



Following the onset of Russia’s military aggression against Ukraine in February 2022, there was a renewed sharp increase in commodity prices, including those of energy and agricultural commodities, amid concerns about their availability in view of the prospect of restricted supply, primarily from Russia (Figure 2.2, Figure 2.3, Figure 2.4). Due to the continued steep growth, the average Brent oil price in June 2022 was approximately twice as high as its pre-pandemic average (i.e. the average of 2015–2019). And although the price of oil declined in 2022 Q3 due to the global economic downturn, it remained above its pre-pandemic average. Directly upon the onset of the Russian invasion there was also a sharp rise in natural gas prices in the European market; these prices subsequently fluctuated considerably, running at much higher levels than in previous years. In 2022 Q3, the average price of gas temporarily reached record levels at approximately ten times higher than before the pandemic, due to major concerns about the availability of this commodity in Europe during the winter season in connection with the restricted supply from Russia.<sup>6</sup> In turn, prices of coal in international markets – after a sharp rise at the beginning of 2022 – were running high in the following months, but declined over 2022 Q3. The launch of the Russian military aggression against Ukraine also contributed to a further increase in the prices of agricultural commodities, associated with the reduced supply of some of them and severe cost pressures (resulting from higher energy and input prices, including fertilisers<sup>7</sup>). During the period March–September 2022, the agricultural commodity price index was on average around 60% higher than its pre-pandemic average.

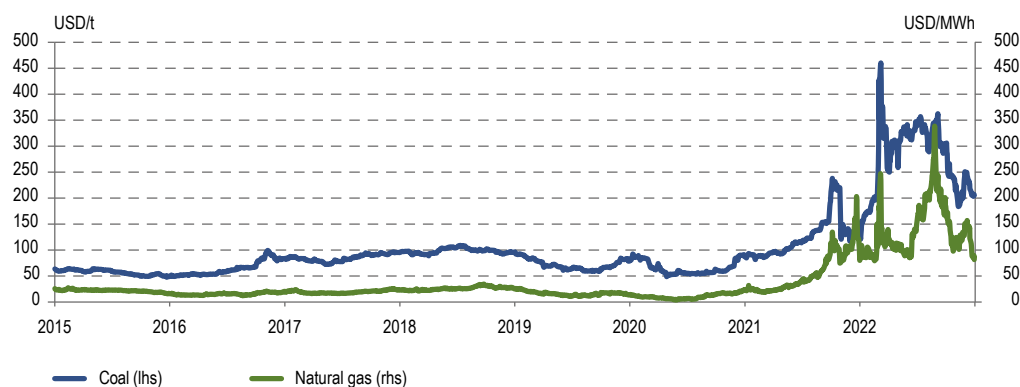
**Figure 2.2.** Brent oil barrel price



Source: Bloomberg data.

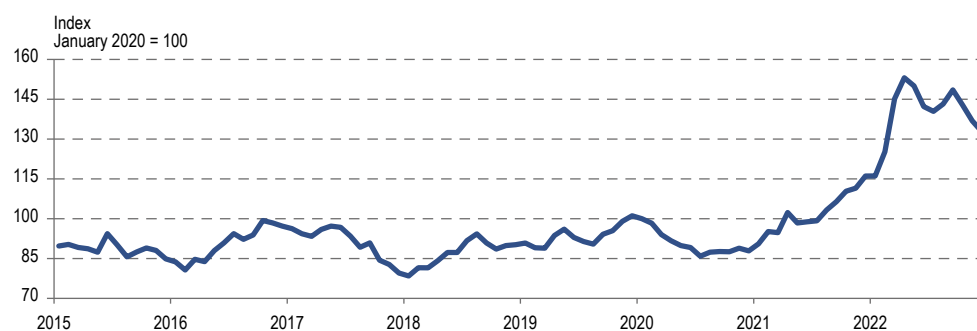
<sup>6</sup> In the wake of the launch of Russia’s aggression against Ukraine, Gazprom limited its gas exports to the European Union including by unilaterally cancelling contracts for the supply of this commodity as well as reducing – and, as of end-August 2022, entirely halting – gas transfer via the Nord Stream 1 pipeline.

<sup>7</sup> The increase in fertiliser prices was driven by higher natural gas prices and its reduced export from Russia and Belarus.

**Figure 2.3.** Natural gas and coal prices

Source: Bloomberg data, NBP calculations.

Besides fuelling the rise in commodity prices, Russia's military aggression against Ukraine contributed to a marked increase in uncertainty about the global economic outlook and a deterioration in the sentiment of economic agents, accompanied by the persistence of severe global supply chain disruptions. In these conditions, and against the background of monetary policy tightening by many central banks, in the first three quarters of 2022 incoming data<sup>8</sup> and forecasts pointed to a gradual decline in annual activity growth and a weakening of economic outlook for Poland's external environment (Figure 2.5). Many institutions also pointed to the increased risk of recession in the euro area in the subsequent quarters, especially in Germany.<sup>9</sup>

**Figure 2.4.** Index of agricultural commodity prices

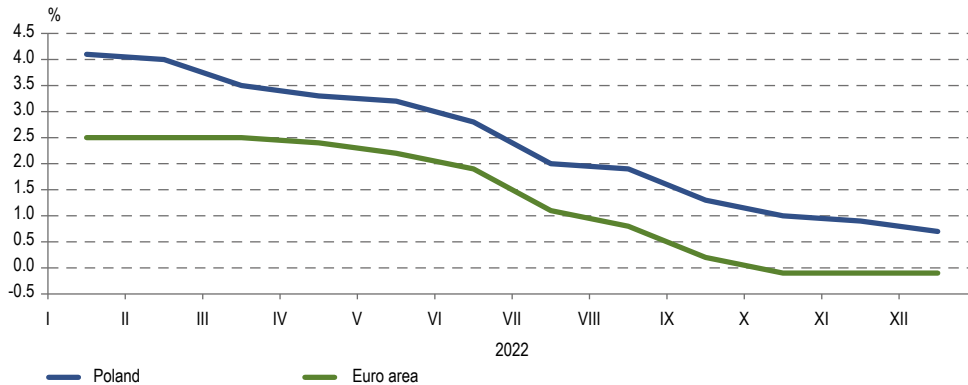
Source: Bureau of Labor Statistics and Eurostat data.

<sup>8</sup> In the euro area, GDP growth was 4.8% y/y in 2021 Q4, 5.5% y/y in 2022 Q1 and 4.4% y/y in 2022 Q2. In the United States, GDP growth amounted to 5.7% y/y in 2021 Q4, 3.7% y/y in 2022 Q1 and 1.8% y/y in 2022 Q2.

<sup>9</sup> The worst-case scenario presented in the European Central Bank's projection of June 2022, assuming, among other things a full cut-off of Russian natural gas supplies to Europe, indicated a potential GDP decline of 1.7% in the euro area in 2023 (GDP in 2023 was to be 5.1% lower than in the baseline scenario). At the same time, the worst-case scenario put forward by the Bundesbank in June 2022 assumed that GDP in Germany would be lower than in the baseline scenario by an average of almost 7% in 2023. In turn, the International Monetary Fund, in the material published in July 2022, estimated that Germany's GDP would be 2.7% lower in 2023 than in the baseline scenario if gas supplies were cut off.

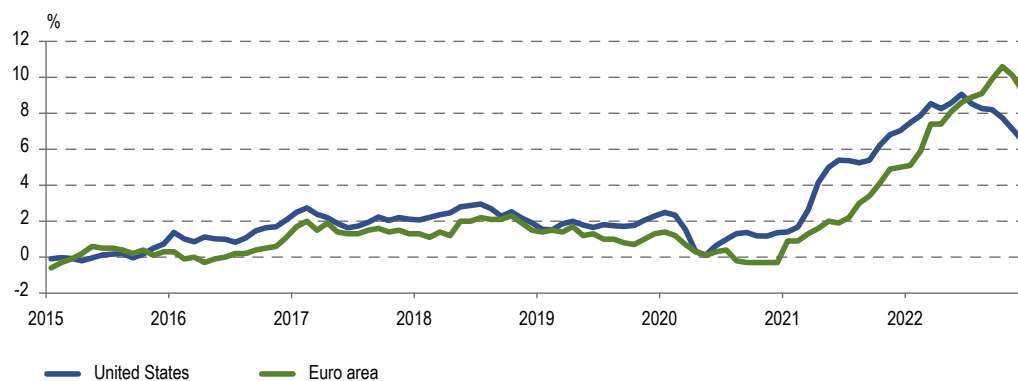
Index of agricultural prices includes prices of wheat, colza, pigmeat, potatoes, sugar, cocoa, coffee, skimmed milk powder, butter and frozen concentrated orange juice. The weights reflect the consumption structure of Polish households.

**Figure 2.5.** The median forecast of analysts surveyed by Bloomberg for GDP growth in 2023 in the euro area and Poland prepared in 2022



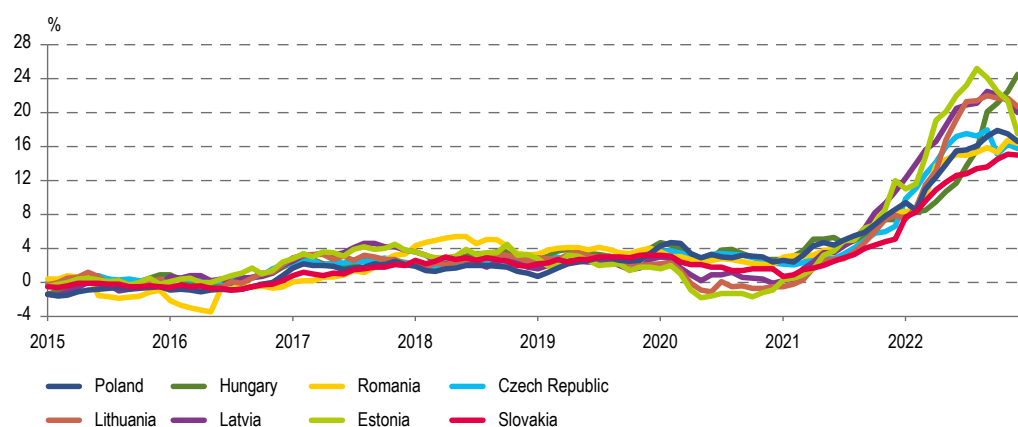
Source: Bloomberg data.

In the first three quarters of 2022, amid steep commodity price growth and protracted disruptions in international trade, inflation in most economies rose significantly, in many of them reaching the highest levels in decades. Core inflation was also rising, driven – in addition to the secondary effects of supply shocks – by robust demand growth related to its recovery from the pandemic crisis and rising labour costs. In the euro area, HICP inflation increased from 5.1% y/y in January 2022 to 9.9% y/y in September (Figure 2.6), which was then the highest reading in the history of this currency area. In the United States, meanwhile, CPI inflation – having risen from 7.5% y/y in January 2022 to 9.1% in June (the highest point since 1981) – fell to 8.2% y/y in September. In the first three quarters of 2022, inflation also rose sharply across the economies of Central and Eastern Europe, including the region's euro area countries (Figure 2.7). In September 2022, HICP inflation was running at 22.5% y/y in Lithuania, 22.0% y/y in Latvia and 24.1% y/y in Estonia. In turn, in the Czech Republic CPI inflation reached 18.0% y/y, in Hungary 20.1% y/y and in Romania 15.9% y/y.

**Figure 2.6.** Consumer price inflation in the United States and the euro area (y/y)

Note: The United States – CPI inflation. The euro area – HICP inflation.

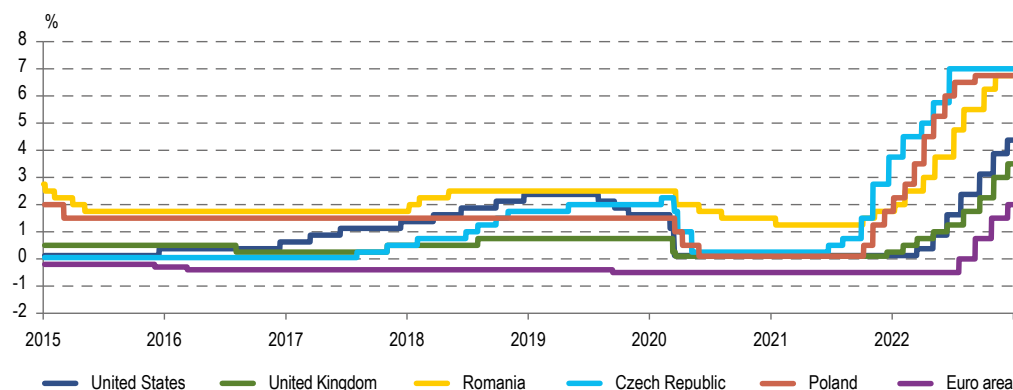
Source: Bureau of Labor Statistics and Eurostat data.

**Figure 2.7.** Consumer price inflation in CEE countries (y/y)

Note: Poland, Czech Republic, Hungary – CPI inflation. Lithuania, Latvia, Estonia, Slovakia – HICP inflation.

Source: Eurostat, OECD and national statistical offices data.

In these conditions, the central banks of many economies tightened monetary policy during the first three quarters of 2022. The European Central Bank (hereinafter the ECB) terminated net asset purchases in June 2022 and raised interest rates in July (for the first time since 2011) and September, including the deposit rate in total by 1.25 percentage points (from -0.50% to 0.75%). The Federal Reserve of the United States (hereinafter the Fed) discontinued net asset purchases in March 2022 and between March and September, it increased the target range for the fed funds rate, in total by 3.00 percentage points (from 0.00–0.25% to 3.00–3.25%). At the same time, central banks of many other economies, including those in Central and Eastern Europe – which had embarked on monetary policy tightening earlier, i.e. in 2021 – continued raising policy rates (with the Czech central bank keeping the rates unchanged in 2022 Q3, following prior hikes; Figure 2.8).

**Figure 2.8.** Interest rates of selected central banks

Note: Central bank interest rate: for the United States – the midpoint of the fed funds range; for the euro area – the deposit facility; for the United Kingdom – Bank Rate; for the Czech Republic – repo 2W; for Romania – monetary policy rate; for Poland – NBP reference rate.

Source: Bloomberg data.

In Poland, the data available at the beginning of 2022 pointed to an ongoing recovery, and forecasts suggested a continuation of favourable economic conditions in the following quarters. The onset of Russia's military aggression against Ukraine in February 2022, along with the economic consequences of the war, caused a deterioration in economic conditions and sentiment, coupled with a strong rise in uncertainty. This was accompanied by a depreciation of the currencies of some economies, including the Polish zloty. In the first three quarters of 2022, incoming information suggested that GDP growth was slowing down, which was also supported by the fading of economic recovery after the pandemic crisis. GDP growth in Poland stood at 8.8% y/y in 2022 Q1<sup>10</sup> (compared with 8.6% y/y in 2021 Q4), subsequently declining to 6.1% y/y in 2022 Q2. At the same time, in 2022 Q1 and Q2, annual consumption growth was relatively high, albeit significantly lower than in 2021 Q4. This was supported by the favourable labour market conditions and the additional demand related to the inflow of refugees from Ukraine, as well as the smaller extent of epidemic restrictions than the year before. Investment was on the rise as well. Yet, data from the end of the period under review pointed to a further decline in annual economic activity growth in 2022 Q3, and the July projection of inflation and GDP predicted a considerable slowdown in GDP growth in the following quarters.

Incoming information in the period under review suggested that labour market conditions were strong, which was reflected in particular by the low unemployment rate and marked nominal wage growth. Alongside that, the inflow of refugees from Ukraine in the aftermath of Russia's military aggression contributed to an increase in labour supply.<sup>11</sup>

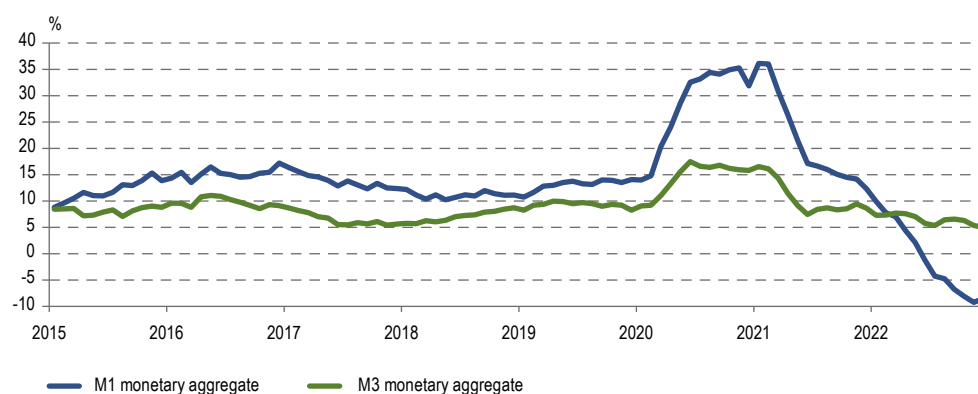
<sup>10</sup> In 2022 Q1, the greatest contribution to annual GDP growth was made by an increase in inventories.

<sup>11</sup> On the other hand, some of the Ukrainians – mainly men – previously working in Poland returned to Ukraine after the launch of the Russian aggression.

In the first three quarters of 2022, inflation in Poland, like in many other economies, picked up (from 9.4% y/y in January to 17.2% y/y in September 2022). The increase in inflation was mainly due to a significant rise in commodity prices in the global markets. Factors boosting inflation also included increases in the regulated national tariffs for energy carriers at the beginning of 2022.<sup>12</sup> The higher commodity prices were reflected in steep food and energy price growth, and – coupled with the protracted disruptions in international trade – they contributed to higher operating costs of enterprises. In turn, demand growth, in spite of its declining momentum, inclined firms to raise the prices of consumer goods. Consequently, core inflation was also on the rise. Meanwhile, inflation was curbed by a reduction in some tax rates under the Anti-inflationary Shield.<sup>13</sup> Forecasts received after the onset of Russia's military aggression against Ukraine indicated that inflation in the following quarters would be higher than previously forecast.

Given the impact of the negative external supply shocks significantly boosting inflation and hampering economic growth, and in view of the favourable situation in the labour market, the Council judged that macroeconomic conditions in the first three quarters of 2022 pointed to a significant risk of inflation running above the target in the monetary policy horizon. In order to reduce this risk – in other words, striving to bring inflation down to the NBP target in the medium term – the Council raised the NBP interest rates eight times, including the reference rate in total from 1.75% to 6.75%, following the previous three interest rate increases effected in 2021 Q4. In February 2022, the Council also decided to increase the basic required reserve ratio from 2.00% to 3.50%, starting from the April required reserve maintenance period.

**Figure 2.9.** Nominal growth rates of monetary aggregates M1 and M3 (y/y)



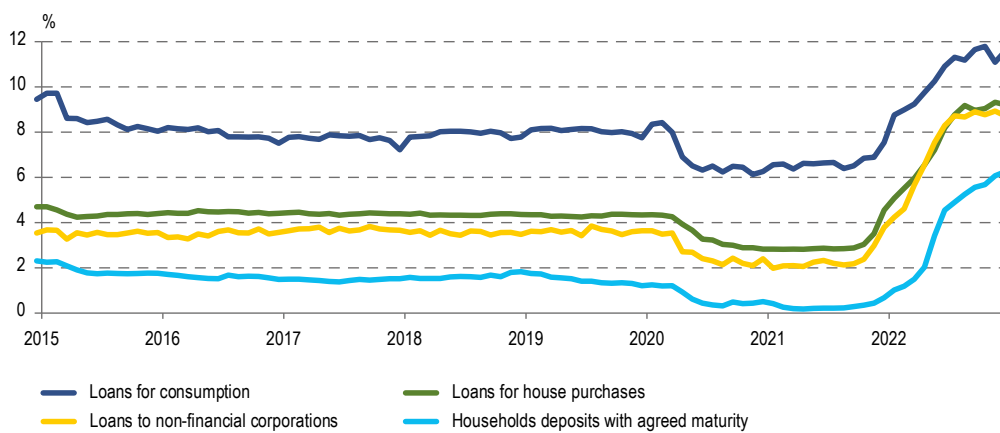
Source: NBP data.

<sup>12</sup> The increase in tariffs was a result of the strong rise in global prices of natural gas and the increase in wholesale electricity prices and prices of CO<sub>2</sub> emission allowances (due to the EU climate policy).

<sup>13</sup> The so-called Anti-inflationary Shield is a package of fiscal policy measures. In 2022, these included a temporary reduction in VAT rates on electricity, heat energy, natural gas, motor fuels, fertilisers and staple foods, the abolition of excise duty on electricity for households, a reduction of excise duty on motor fuels and light heating oil to the minimum level required by EU provisions, and compensation for natural gas distributors in connection with the cap on the increases in the prices of this commodity for tariff-protected recipients.

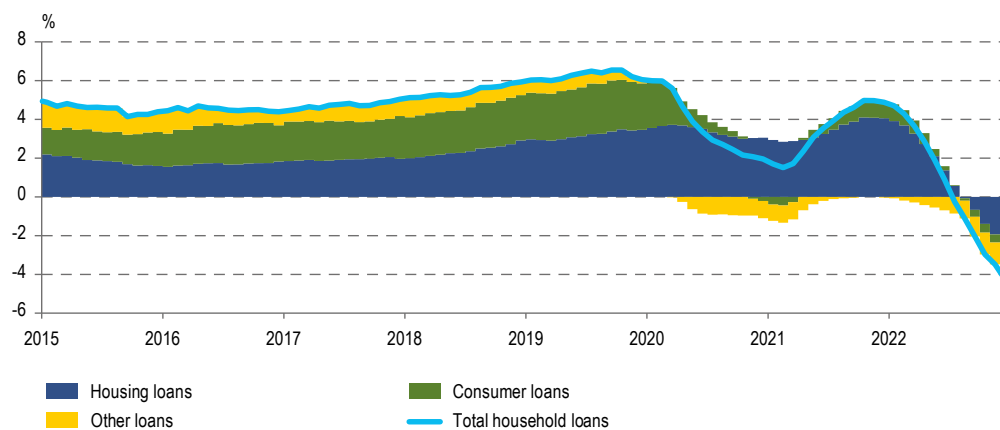
NBP rate increases contributed to a rise in interest rates on household and corporate loans and deposits (Figure 2.10). Bond yields also increased. At the same time, annual growth in household loans was declining markedly in the first three quarters of 2022, moving into negative territory from 2022 Q3 (Figure 2.11), while corporate loans were rising markedly. Annual growth in the M3 monetary aggregate declined over the period under review, remaining clearly positive in nominal terms and negative in real terms since the beginning of 2022. Meanwhile, annual growth in the M1 aggregate in nominal terms was negative from June 2022 (Figure 2.9) and in real terms from February 2022. Alongside that, there was a change in the structure of household deposits, including a shift of some funds from current deposits to term deposits, due to a more significant increase in the interest rates on term deposits.

**Figure 2.10.** Average interest rates on new and renegotiated agreements



Source: NBP data.

**Figure 2.11.** Composition of growth in household loans (y/y)



The category *Other loans* covers credit card loans, loans to individual entrepreneurs and individual farmers, as well as other receivables.

Source: NBP data.

### Monetary policy and macroeconomic developments in 2022 Q4

In 2022 Q4, available data indicated a marked deterioration in economic conditions in the external environment of the Polish economy. The weakening activity growth – observed despite the persistently favourable labour market conditions in many economies, including low unemployment – resulted from high prices of raw materials and supplies, uncertainty related to Russia’s ongoing military aggression against Ukraine, global monetary policy tightening and deteriorating consumer sentiment. This concerned, in particular, the euro area economy, where GDP growth declined significantly in 2022 Q3,<sup>14</sup> and incoming data suggested further deterioration in economic conditions in 2022 Q4, including a considerable risk of a decline in activity.

Following the previous sharp growth, the global prices of many commodities declined in 2022 Q4, yet they persisted at a high level (Figure 2.2, Figure 2.3, Figure 2.4). In particular, global economic slowdown and the abatement of earlier concerns about possible supply shortages worked towards some reduction in commodity prices. However, the prices of some commodities remained several times higher than in previous years, dragging economic activity down.<sup>15</sup>

In 2022 Q4, inflation around the world continued to run high, although in some economies it declined slightly towards the end of the year. The persistently high commodity prices and the lagged effects of the earlier disruptions in international trade, alongside demand factors and rising labour costs, were a significant source of faster price growth. At the same time, core inflation also remained high in most economies. In the euro area, HICP inflation increased to 10.6% y/y in October 2022 (i.e. the highest point in the history of the euro area), and in the following two months it was decreasing (to 9.2% y/y in December 2022). During 2022 Q4, CPI inflation was also elevated in the United States, but fell to 6.5% y/y in December (Figure 2.6). In the Central and Eastern European economies, price growth in 2022 Q4 remained high, despite a certain decline in most of them towards the end of the year (Figure 2.7). In several Central and Eastern European countries (Lithuania, Latvia and Hungary) inflation exceeded 20% in December 2022.

In these conditions, central banks in the external environment of the Polish economy raised interest rates or kept them unchanged after previous hikes (Figure 2.8). In 2022 Q4, the ECB increased interest rates twice, including the deposit rate to 2.00%. Interest rate hikes were also continued by the Fed; at the end of 2022, the target range for the fed funds rate was 4.25–4.50%. Among the central banks of the economies of Central and Eastern Europe, those in the Czech Republic and Hungary kept their key interest rates unchanged towards the end of 2022.

In Poland, data incoming in 2022 Q4 pointed to slowing economic activity growth. GDP growth dropped to 3.9% y/y in 2022 Q3, from 6.1% y/y in Q2, due to the combined effect of a decline in the annual growth of consumption and investment. Available information – including concerning the slowdown in real retail sales growth in annual terms – testified to a further significant slowdown in economic activity in 2022 Q4, amid flagging consumer

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<sup>14</sup> GDP growth in the euro area stood at 2.4% y/y in 2022 Q3 and 1.8% y/y in 2022 Q4. In turn, in the United States GDP growth amounted to 1.9% y/y in 2022 Q3 and 0.9% y/y in 2022 Q4.

<sup>15</sup> The average Brent oil price in December 2022 compared to the average before the COVID-19 pandemic (i.e. 2015–2019) was approximately 40% higher, the price of gas was approximately 6 times higher, price of coal approximately 3 times higher and the agricultural commodity price index was over 45% higher.



demand.<sup>16</sup> Forecasts presented in 2022 Q4 predicted that GDP growth in 2023 would be markedly slower than in 2022 (Figure 2.5).

Information incoming at the end of 2022 suggested that despite the slowdown in economic activity, the situation in the labour market remained sound, including a low unemployment rate – although LFS data for 2022 Q3 pointed to a decline in the number of people employed. Average nominal wages continued to grow strongly, although in real terms annual wage growth was negative.

CPI inflation in Poland declined in the subsequent months of 2022 Q4 (it stood at 17.9% y/y in October, 17.5% y/y in November and 16.6% y/y in December). The decline in inflation in November and December was largely due to slower growth in the prices of energy carriers and fuels. However, inflation continued to run high, which was largely driven by the pass-through of high costs related to the persistently high commodity prices to consumer goods prices – notwithstanding the flagging demand growth. Along with the lingering effects of global supply chain disruptions – despite their gradual easing – this contributed to a rise in core inflation. Forecasts available in 2022 Q4 indicated that inflation would decline towards the NBP inflation target in the following years, but given the significant scale and persistence of the previous shocks, the fall was expected to be gradual, as in other economies. In line with the November inflation and GDP projection, under the assumption of unchanged NBP interest rates, inflation was to return to the NBP target in 2025.

Following the strong tightening of the NBP monetary policy in the previous quarters, in 2022 Q4 interest rates on loans and deposits were running high (Figure 2.10). The average interest rate on new and renegotiated housing loans was 6.3 percentage points higher in December 2022 compared to September 2021 (i.e. the period immediately before the first NBP interest rate increase in 2021), corporate loans 6.5 percentage points higher and household deposits 6.0 percentage points higher. The stock of household loans fell by 4.3% y/y in December 2022 (Figure 2.11). Annual growth in corporate loans declined during 2022 Q4, although it remained high at 9.5% y/y in December 2022. This was accompanied by a further decline in annual growth in monetary aggregates in nominal terms (Figure 2.9), amid negative annual growth in real terms. In December 2022, M3 aggregate growth was 5.0% y/y in nominal terms (i.e. it was more than three times lower than the annual nominal GDP growth in Q4 2022) and approximately -10% y/y in real terms, while M1 aggregate growth was -8.4% y/y in nominal terms and approximately -20% y/y in real terms. At the same time, during 2022 Q4 the zloty appreciated against the main currencies.

To summarize, information available in 2022 Q4 indicated that the global economic downturn and the fall in commodity prices would have a downward effect on global inflation, which – together with weaker domestic economic growth, including a reduction in consumption, as well as slower credit growth – would contribute to reducing inflationary pressures in the Polish economy. Under such circumstances, the Council judged that the hitherto significant monetary policy tightening by NBP would support a decline in inflation in Poland towards the NBP inflation target. At the same time, given the strength and persistence of the shocks, which remain beyond the impact of domestic monetary policy, it was indicated that in the short term inflation would remain high, and its return to the NBP inflation target would be gradual.

<sup>16</sup> In 2022 Q4, GDP growth stood at 2.3% y/y, with a fall in consumption of 1.1% y/y.

This assessment was supported by the forecasts available at the end of 2022, including the November inflation and GDP projection. Accordingly, at its meetings in October, November and December 2022 the Council kept the NBP interest rates unchanged, including the NBP reference rate at 6.75%.

### 2.3. Monetary policy instruments in 2022

In 2022, NBP conducted monetary policy using instruments provided for in the *Monetary Policy Guidelines for 2022*. In the first three quarters of 2022, NBP interest rates were raised and the level of the basic required reserve ratio was increased. In turn, in 2022 Q4 NBP interest rates and the basic required reserve ratio were kept unchanged.

#### Banking sector liquidity in 2022

In 2022 there was a decrease in liquidity surplus prevailing in the banking sector in comparison with the previous year. The average daily level of funds at the disposal of the banking sector in excess of the required reserve stood at PLN 236 600 million in December 2022 and was PLN 17 266 million lower than in the corresponding period of 2021.<sup>17</sup>

The drop in the amount of funds at the disposal of the banking sector during 2022 was primarily due to the increase in the basic required reserve ratio from 2.00% to 3.50%, starting from the April reserve maintenance period. As a result the required reserve in December 2022 was by PLN 30 320 million higher than in December 2021.

The reduction of liquidity surplus in the banking sector over 2022 was also driven by an increase in currency in circulation, particularly visible in the period immediately following the beginning of Russia's military aggression against Ukraine, between February and March of 2022. For this reason the amount of funds at the disposal of the banking sector declined by PLN 13 819 million, when comparison is made between the daily average of December 2022 to the daily average of December 2021.

On the other hand, there were factors contributing to higher liquidity surplus in the banking sector in 2022, primarily the foreign exchange transactions conducted by NBP, including the purchase of foreign currency, mainly from the Ministry of Finance. The increase was partially limited by the NBP sales of foreign currency, mainly to the European Commission. The prevalence of NBP purchases of foreign currency over its sales resulted in an increase of PLN 28 846 million in the funds at the disposal of the banking sector in 2022 (after a comparison of averages is made, as above).

As a result of reduced liquidity surplus in the banking sector, the average daily level of short-term monetary policy operations<sup>18</sup> in December 2022 stood at PLN 236 387 million, i.e. it dropped by PLN 12 463 million against the corresponding value from December 2021.

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<sup>17</sup> In Chapter 2.3 the data and calculations are generally presented in a format where a given month, quarter or year refers to the corresponding reserve maintenance periods.

<sup>18</sup> This item encompasses: the main open market operations (issue of NBP bills), the fine-tuning operations (issue of NBP bills with maturities shorter than the main market operations) and the NBP standing facilities.

## NBP interest rates

The NBP interest rates were the key instrument of monetary policy in 2022. By determining the yield on main open market operations, the NBP reference rate influenced the level of short-term market interest rates.

The NBP lombard rate determined the interest on the lombard credit offered by NBP, enabling overnight borrowing from the central bank. The NBP deposit rate determined the interest on the deposit facility, enabling placement of overnight deposits with NBP.

From January to September 2022 the MPC raised NBP interest rates on eight occasions. As a result the NBP reference rate was increased from 1.75% to 6.75%, the NBP deposit rate from 1.25% to 6.25%, and the NBP lombard rate from 2.25% to 7.25%.

In 2022, the NBP interest rate corridor, set by levels of the deposit rate and the lombard rate, was symmetric around the NBP reference rate and stood at +/-50 bps.

## Open market operations

In 2022, the operational target of monetary policy was to keep the POLONIA rate<sup>19</sup> close to the NBP reference rate. The main instrument to achieve this task was the main open market operations. By using these operations, NBP offered banks the opportunity to balance their liquidity positions during the required reserve maintenance periods, striving to ensure that liquidity conditions in the banking sector were appropriate in terms of achieving its operational target.

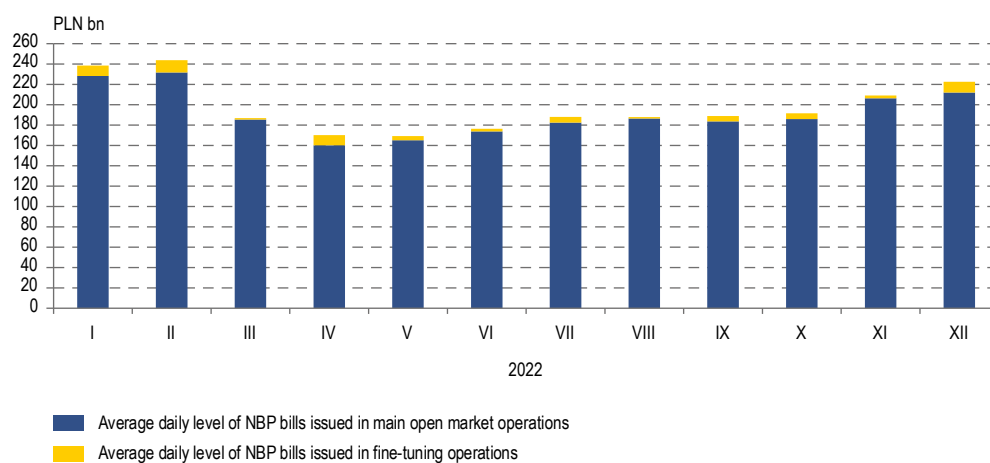
In 2022, the main open market operations were carried out on a regular weekly basis, in the form of issuance of NBP bills, usually with a 7-day maturity.<sup>20</sup> By using these operations, the central bank absorbed the majority of the excess funds at the disposal of the banking sector. The yields on the individual operations equalled the level of the NBP reference rate on the day of the operation. In 2022, NBP conducted 53 main operations. The average daily volume of NBP bills issued under these operations amounted to PLN 191 636 million and was PLN 13 875 million lower than in 2021 (Figure 2.12).

A complementary role with respect to the NBP operational target was played by the fine-tuning operations. In 2022 such operations were carried out in the form of issuance of NBP bills with a yield equal to the NBP reference rate on the date of the operation. In 2022, NBP conducted 12 fine-tuning operations on the last days of the required reserve maintenance periods, and 21 fine-tuning operations on other days within such periods. The maturities of these operations varied from 1 day to 4 days. The average daily level of fine-tuning operations in 2022 amounted to PLN 5 998 million and was PLN 5 604 million higher than in 2021.

<sup>19</sup> The POLONIA rate (Polish Overnight Index Average) is determined as the average (weighted by the volume of the individual transactions) of the interest rates on unsecured interbank overnight deposits on a given working day until 4.30 p.m. between the participants in the POLONIA Reference Rate Fixing.

<sup>20</sup> Except for the operations conducted on 10 November (8-day maturity) as well as 4 November and 30 December (6-day maturity).

**Figure 2.12.** Average daily level of NBP liquidity-absorbing open market operations in individual required reserve maintenance periods in 2022 (nominal value of NBP bills)



Source: NBP data.

In 2022 banks' increased caution in managing their liquidity positions observed since the outbreak of the COVID-19 pandemic was retained. In 2022, it was additionally motivated by the Russia's military aggression against Ukraine launched in February 2022. This caution manifested itself in banks' preference for investing surplus funds in instruments allowing the maximum flexibility in liquidity management, including the deposit facility offered by the central bank.

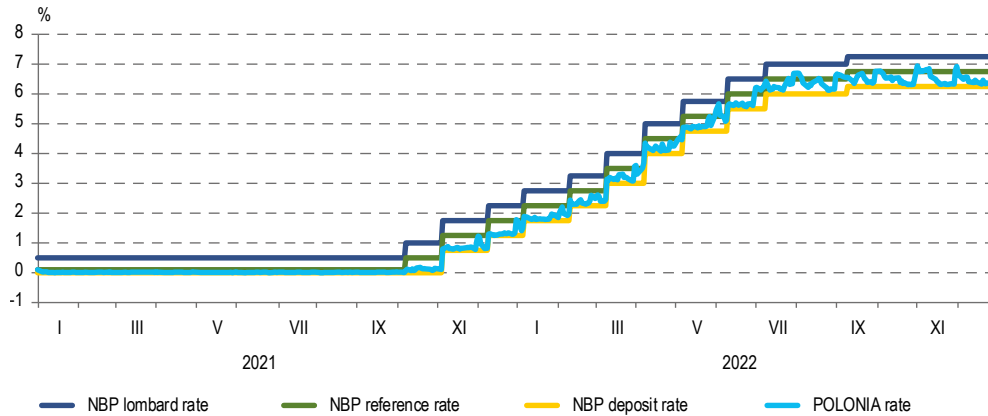
This attitude of banks towards managing own liquidity positions was reflected in the POLONIA rate (Figure 2.13). The average daily absolute deviation of this index from the NBP reference rate in 2022 amounted to 32 bps against 16 bps in 2021.<sup>21</sup> It should be stressed, though, that since October 2021 the width of the NBP interest rates corridor was constant at 100 bps (+/-50 bps around the NBP reference rate), while in the first three quarters of 2021 this corridor was half that size (50 bps) and shaped in an asymmetrical manner (+40/-10 bps).

In 2022, NBP did not conduct structural operations. At the end of 2022 the nominal value of the portfolio of securities (i.e. government bonds and government-guaranteed debt securities issued by Bank Gospodarstwa Krajowego on behalf of the COVID-19 Response Fund and Polish Development Fund) purchased by NBP in 2020–2021 amounted to PLN 136.2 billion, as compared to PLN 144.0 billion as at the end of 2021 (Figure 2.14).<sup>22</sup>

<sup>21</sup> On account of the fact that the POLONIA rate is calculated in accordance with the act/365 convention, while for NBP bills issuance the act/360 convention is used, the average daily absolute deviation of this index from the NBP reference rate is based on a uniform 365-day year. By way of example, in the last quarter of 2022 this deviation was calculated following the recalculation of the NBP reference rate at 6.84%, which means that had the POLONIA rate stood in this period at the level of the NBP reference rate (6.75%), its absolute deviation from the said rate would have amounted to 9 bps.

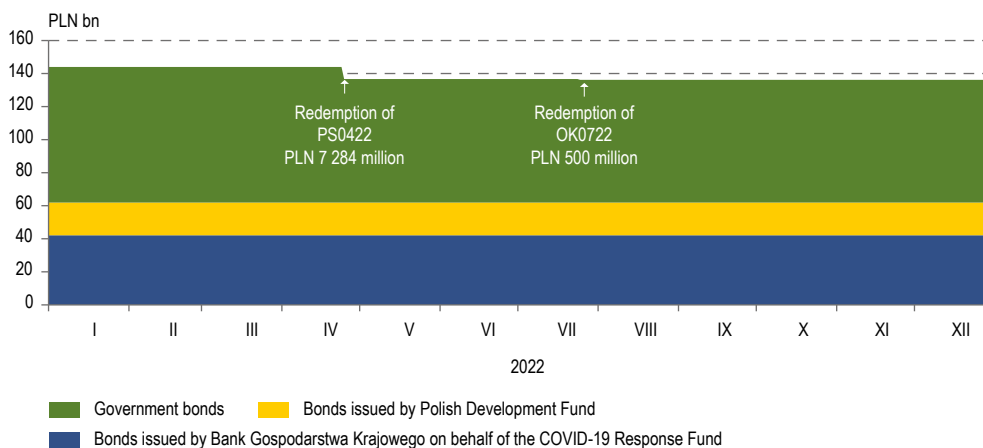
<sup>22</sup> In 2022, redemption of government bonds took place involving the PS0422 series (on 25 April) and the OK0722 series (on 25 July), whose nominal value in the NBP portfolio stood, respectively, at PLN 7 284 million and PLN 500 million.

**Figure 2.13.** NBP interest rates and the POLONIA rate in 2021–2022



Source: NBP data.

**Figure 2.14.** The nominal value of portfolio of the bonds purchased by NBP in 2020 and 2021 as part of the structural open market operations



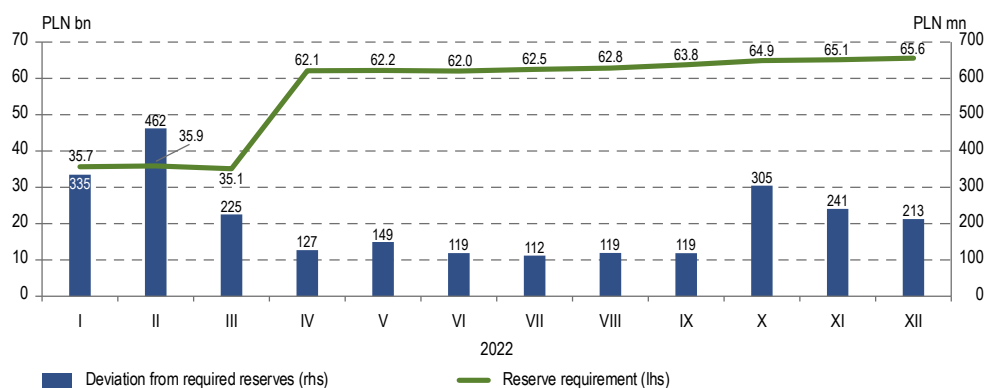
Source: NBP data.

### Reserve requirement

The required reserve system supported the achievement of the operational target of monetary policy, stabilising short-term market interest rates. The average reserve maintenance mechanism enabled entities covered by the required reserve system the freedom to decide on the amount of funds deposited on accounts with the central bank on particular days of the reserve period, provided that the average balance of funds in the accounts with NBP is maintained at a level not lower than the required reserve level.

In 2022, banks, branches of credit institutions, branches of foreign banks operating in Poland, credit unions and the National Association of Cooperative Savings and Credit Unions were subject to the reserve requirement.

**Figure 2.15.** Deviation of the average balance of the required reserve entities' accounts kept in NBP from the required reserve level in individual required reserve maintenance periods in 2022



Source: NBP data.

The required reserve level in December 2022 stood at PLN 65 570 million (including the commercial banks' required reserve at PLN 60 770 million, cooperative banks' required reserve at PLN 4 523 million, and the Cooperative Savings and Credit Union's required reserve at PLN 277 million). In comparison to the required reserve in December 2021, there was an increase in the above-mentioned reserve of PLN 30 320 million, which was primarily due to the increase in the basic required reserve ratio (starting from the April 2022 reserve maintenance period)<sup>23</sup> from 2.00% to 3.50%, i.e. to the level which was mandatory before the COVID-19 pandemic (Figure 2.15).<sup>24</sup>

The interest rate on the required reserve funds in 2022 corresponded to the NBP reference rate. Over the period under analysis, on account of the Council raising NBP interest rates, this rate grew from 1.75% to 6.75%.

In 2022, the average daily level of surplus funds held on accounts with NBP by required reserve entities (i.e. exceeding the amount of the required reserve) varied among the reserve maintenance periods from PLN 112 million to PLN 462 million.

In 2022, there were eight cases when entities failed to maintain the required reserve at the required level.

Moreover, one bank benefited from partial exemption from the reserve requirement during 2022.

<sup>23</sup> The basic required reserve ratio applies to zloty denominated funds and funds in foreign currency held on bank accounts as well as funds obtained from the issue of securities. In 2022, the required reserve ratio for funds obtained in repo and sell-buy-back transactions as well as funds obtained for at least 2 years was 0.00%.

<sup>24</sup> The required reserve in the April 2022 reserve maintenance period increased by PLN 26 986 million in comparison with the level from March 2022.

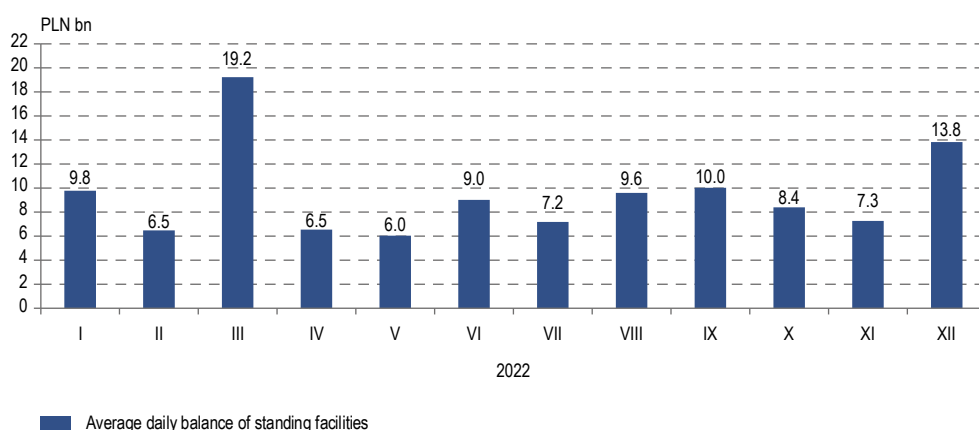
## Standing facilities

In 2022, the lombard credit offered by NBP enabled banks to obtain funds from the central bank on each operating day on an overnight basis. This credit was collateralised with assets accepted by NBP (among others, government securities, securities issued by NBP, government-guaranteed bonds, municipal bonds and high credit quality corporate bonds, as well as covered bonds).

In turn, the deposit facility enabled banks in 2022 to deposit on each operating day their surplus funds on an overnight basis with the central bank.

The interest rate on the above-mentioned instruments constituted, respectively, the upper and lower limit for market rates set for overnight term, reducing the scale of their potential fluctuations.

**Figure 2.16.** Average daily balance of standing facilities in individual required reserve maintenance periods in 2022



Source: NBP data.

In 2022, similarly as in previous years, banks used the lombard credit only occasionally. The total amount of the lombard credit provided to banks by NBP in the period under analysis – calculated for the days when it was used – stood at PLN 62 million, against PLN 10 million in 2021. Its average daily level amounted to PLN 0.17 million against PLN 0.03 million in 2021.

In 2022, the total value of overnight deposits placed by banks with NBP (calculated as the total days of their placement) amounted to PLN 3 488 729 million and was PLN 407 250 million lower than deposits placed in the previous year. The average daily level of such deposits in the period under analysis amounted to PLN 9 506 million against PLN 10 674 million in 2021.

## Bill discount credit

NBP may offer bill discount credit aimed at refinancing loans granted to entrepreneurs by banks.

In 2022, NBP did not use this instrument.

### Foreign exchange swaps

By using foreign exchange swaps, NBP may purchase (or sell) zloty against a foreign currency on the spot market, with its simultaneous resale (or repurchase) as part of a forward transaction on a specified date.

In 2022, NBP did not conduct any such operations as part of monetary policy implementation.

### Foreign exchange interventions

As part of the current monetary policy strategy, NBP may make a purchase or sale of foreign currency in the foreign exchange market for zloty.

The significant depreciation of the zloty observed in the period immediately following the beginning of the Russia's military aggression against Ukraine was not consistent with the fundamentals of the Polish economy nor with the direction of NBP's monetary policy and threatened to disturb the efficient functioning of the financial market. In these circumstances, in March 2022 NBP sold a certain amount of foreign currency in exchange for zloty.



Chapter 3

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# Financial system

# Financial system<sup>1</sup>

A stable-functioning financial system is essential for sustainable economic development in the long-term and for the implementation of the main goal of NBP, i.e. maintaining price stability. The financial stability tasks conferred upon Narodowy Bank Polski include acting with the aim of eliminating or mitigating systemic risk, establishing the necessary conditions for the development of the banking system, and acting in favour of the stability of the financial system.

Maintaining the safety of the banking system, whose assets account for almost three fourths of the assets of domestic financial institutions, is of special significance for the preservation of financial stability in Poland.

## 3.1. Macroprudential supervision

In 2022, Narodowy Bank Polski implemented the tasks arising from the Act on Narodowy Bank Polski on providing support to the Financial Stability Committee as the competent authority for macroprudential supervision (FSC-M), including the analytical and legal support. The Committee held five meetings in 2022.

As part of FSC-M work in 2022 Narodowy Bank Polski:

- Prepared and provided analyses, studies and opinions on the identification and assessment of systemic risk, nationally and internationally, including NBP regular reports: *Financial Stability Report* (twice a year) and *Macroeconomic Stability of the Polish Economy* (once a year) and *Polish Payment System Oversight Report* (once a year).<sup>2</sup>
- Prepared the analyses constituting the base for the FSC-M to formulate recommendations of actions with the aim of mitigating systemic risk, including actions on the countercyclical capital buffer (on maintaining the CCyB requirement at a 0%) and the O-SII<sup>3</sup> buffer. The recommendations applied to the criteria for identifying such institutions, the methods for determining the buffer and its calibration.
- Analysed the developments in the residential real estate market, using, among others, indicators specified in the recommendation of the European Systemic Risk Board.<sup>4</sup>
- Monitored the foreign exposures of the Polish banking sector for the purposes of the potential introduction of the reciprocity rule in the application of macroprudential policy measures in relations to other EU countries.

<sup>1</sup> Tasks in this area are fulfilled pursuant to Article 3(2)(6) and (6a) and (6b) of the Act on Narodowy Bank Polski.

<sup>2</sup> See Chapter *Payment system-oriented activities*.

<sup>3</sup> Other systemically important institution (O-SII) is an entity which is not a global systemically important institution, but which can – due to its size, value, linkages, or business model – create a risk to the stability of the financial system of a given country. The FSC-M issues an opinion which is sought by the Polish Financial Supervision Authority on an annual basis.

<sup>4</sup> Recommendation of the European Systemic Risk Board of 21 March 2019 amending Recommendation ESRB/2016/14 on closing real estate data gaps (ESRB/2019/3).

- Conducted analyses for the FSC-M to draw up opinions on the amount of banks' contribution to the Borrower Support Fund<sup>5</sup> and on the option to reduce the target level of funds covered by the deposit guarantee scheme.<sup>6</sup>
- Provided services of a formal and legal nature with respect to resolutions adopted by the Committee, including recommendations and opinions delivered in accordance with the provisions of the Code of Administrative Procedure, and participated in issuing opinions of legal acts by the FSC-M.
- Cooperated, on behalf of the Committee, with EU bodies and institutions as well as with macroprudential supervision authorities of other Member States.

An NBP representative chaired the work of the permanent working group which provided analytical support to the Committee. In 2022, the working group – relying mainly on materials prepared by NBP – analysed and discussed information on the sources of systemic risk and on their assessment, and more specifically the methods of identifying other systemically important institutions and global systemically important institutions (G-SII).<sup>7</sup> The agenda of its analytical work also included the methods of assessing the adequacy of capital levels in the banking sector in the context of systemic risk, including for the purposes of establishing additional capital buffers.

The Governor of NBP – acting as Chairperson of the FSC-M – submitted to the Sejm of the Republic of Poland (the Polish Parliament) the *Annual Report on Macroprudential Supervision Activity of the Financial Stability Committee 2021*.<sup>8</sup>

Narodowy Bank Polski communicated the current work of the Committee to the public and financial system participants via the website on macroprudential supervision.<sup>9</sup>

### 3.2. Cooperation with other public institutions on financial stability

NBP participated in the work of the Financial Stability Committee in its crisis management capacity (FSC-C). The FSC-C held seven meetings in 2022. It discussed the economic and financial condition of commercial banks and actions aimed at preserving financial stability.

Representatives of NBP participated in the work of the National Working Group for Benchmark Reform, established in July 2022. The group coordinates actions aimed at replacing,

<sup>5</sup> In 2022, the Committee delivered two opinions for the Board of the Borrower Support Fund. Following the amendments to the provisions of the Act of 9 October 2015 on Support to Home Loan Borrowers Who Are in a Difficult Financial Situation, since July 2022 the FSC-M has not been required to deliver quarterly opinions on the level of contributions to this Fund.

<sup>6</sup> Resolution No. 64/2022 of the Financial Stability Committee of 20 October 2022 on the opinion on reducing the target level of deposit guarantee scheme funds in banks.

<sup>7</sup> Global systemically important institution (G-SII).

<sup>8</sup> Pursuant to Article 9(2) of the Act of 5 August 2015 on Macroprudential Supervision (Journal of Laws of 2022, item 2536).

<sup>9</sup> [www.nbp.pl/nadzormakroostroznosciowy](http://www.nbp.pl/nadzormakroostroznosciowy). The website offers, among other things, press releases after the FSC-M meetings, information on the macroprudential instruments applied and analytical studies, including the annual report on the activities of FSC-M.

in an orderly manner, the WIBOR and WIBID benchmarks with WIRON benchmarks, i.e. interest rate benchmarks, with input data being information representing O/N transactions.<sup>10</sup>

NBP's cooperation with domestic financial safety net institutions also included the following:

- membership of an NBP Management Board member delegated by the Governor of NBP in the Polish Financial Supervision Authority (KNF)<sup>11</sup> and membership of two representatives delegated by the Governor of NBP in the Bank Guarantee Fund Council,<sup>12</sup>
- interaction with the Office of the Polish Financial Supervision Authority (UKNF) and the Bank Guarantee Fund (BFG) – under the statutory authorisations regarding the rules for submitting information.<sup>13</sup>

### 3.3. Financial system analytical and research activities

In 2022, NBP conducted research on numerous financial stability and financial system development issues. As NBP has the mandate to regulate the liquidity and refinancing of banks, it also analysed the position of individual banks. The results of key studies were made available to other financial safety net institutions. Some of the studies were released as regular reports.

- *Financial Stability Report* (June, December 2022). The analyses showed that uncertainty in the environment of the Polish financial system in 2022 increased considerably due to the unfavourable macroeconomic trends and the Russia's invasion of Ukraine, as the overall systemic risk assessment deteriorated. The reports focused on assessing the potential consequences of materialisation of legal risk associated with FX housing loans, the impacts of certain statutory changes (e.g. loan repayment holidays) on banks' earnings and the influence of changes in NBP interest rate and supervisory requirements on a decline in housing loan growth. The report pointed out that despite the increase in interest rates, the earnings of the banking sector deteriorated. This was mainly a consequence of the costs of legal risk of FX housing loans and the loan repayment holidays applied. This reduced the room for banks to raise equity capital by retaining their profits. Stress tests showed that the capital accumulated in Poland's banking sector is sufficient to absorb the economic impacts of even a few adverse scenarios combined. However, after the entry into force of the fully applicable MREL<sup>14</sup> towards the end of 2023, the level of excess capital in the Polish banking system may – for the first time in years – decrease substantially, which will reduce the propensity and capacity of banks to expand lending. The decline in contagion risk in the banking sector following the successful resolution of Getin Noble Bank SA was a positive development in 2022. The report also offered recommendations of desired actions aimed at mitigating risk to financial stability in Poland.

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<sup>10</sup> Information on the work of the group is posted on the website of the Polish Financial Supervision Authority.

<sup>11</sup> Pursuant to Article 5(2)(3) of the Act of 21 July 2006 on Financial Market Supervision (Journal of Laws of 2022, item 660, as amended).

<sup>12</sup> Pursuant to Article 7(4)(2) of the Act of 10 June 2016 on the Bank Guarantee Fund, Deposit Guarantee Scheme and Resolution (Journal of Laws of 2022, item 2253).

<sup>13</sup> Pursuant to Article 17(1) of the Act on Financial Market Supervision and Article 328(2) of the Act of 10 June 2016 on the Bank Guarantee Fund, Deposit Guarantee Scheme and Resolution.

<sup>14</sup> The minimum requirement for own funds and eligible liabilities (MREL) of financial institutions. The requirement was introduced to enable a resolution authority to apply a bail-in-able instrument to implement the resolution process. This requirement arises from Article 32(1) of the Act of 8 July 2021 on Amending the Act on the Bank Guarantee Fund, Deposit Guarantee Scheme and Resolution and Certain Other Acts.

- *Financial System in Poland 2021* (November 2022). The study discussed actions of institutions and financial markets in Poland. At the end of 2021, the assets of financial institutions amounted to PLN 3.5 trillion, which represented a 9.6% increase on the 2020 figure. The increase in the value of the Polish financial system assets in 2021 was lower than in the previous year, which amid high GDP growth led to a decrease in the ratio of financial system assets to GDP (from 136.6% in 2020 to 133.4% at the end of 2021). The increase in assets was mainly driven by the results of the banking sector and the open pension funds sector. The banking sector remained the largest component of the domestic financial system – at the end of 2021, banks' assets accounted for 73% of the whole financial system's assets. As in the past, loans – in particular loans to households – represented the largest portion of the banking sector's assets. In terms of value, Treasury securities and Treasury-guaranteed securities were the second largest item. Capitalisation of the domestic equity market in 2021 increased to PLN 1.33 trillion (by 22.4%), which primarily stemmed from rising prices of listed instruments. The year 2021 saw a sustained high demand in trading in shares among individual investors.
- *Senior loan officer opinion survey on bank lending practices and credit conditions*.<sup>15</sup> The quarterly analyses presented the status and forecasts of changes in banks' lending policy and developments in loan demand. The Russia's aggression against Ukraine, the UKNF's expectations of the banks' minimum income buffers increases for new borrowers, and interest rate hikes led to a tighter lending policy in the first half of 2022 and also to a fall in the demand for loans in all corporate loan segments and in the segment of loans to households. In the subsequent months, banks kept all their lending standards and terms unchanged due to the deteriorating economic outlook, stagnation on the real estate market and geopolitical risk. The banks also experienced a further drop in the demand for all types of loans (except for short-term corporate loans).
- *The level of the countercyclical capital buffer in Poland*. The quarterly analyses indicated that the pace of credit growth did not create an imbalance in the economy and in the financial system. The standard measure in the form of a credit gap (i.e. the deviation in the ratio of private non-financial sector debt to GDP from the long-term trend) remained negative. Therefore, there was no need to apply the countercyclical capital buffer.
- *Report on the situation in the housing and commercial real estate market in Poland*. (2021 report – September 2022; quarterly reports of 2022). The demand on the residential real estate market was growing until the first quarter of 2022, then it slackened mainly as a result of a rise of financing costs and a tighter bank lending policy. In nominal terms, housing prices were rising, and in real terms, they did not change considerably from the third quarter of 2022. Despite the marked fall in demand, housing prices did not fall due to supply constraints and the rapidly rising costs of production factors. A significant rise in the demand for rental housing was observed in the second and third quarters of 2022, which resulted in a rise in rental rates. The demand for warehouse and production space in the commercial real estate market continued to grow, while the demand for office space (except for top standard office space) and retail space was falling.

<sup>15</sup> The material is prepared based on a quarterly questionnaire survey addressed to senior loan officers of commercial banks.

Moreover, Narodowy Bank Polski conducted research on the selected aspects of systemic risk and macroprudential policy. The research projects focused, among others, on the diverse impacts of changes in the capital requirements on banks in Poland, determinants of credit supply and the methods for determining it, and the methods for determining the countercyclical capital buffer on the basis of econometric early warning models. Analyses were also carried out on technological innovation in the financial system, the development of new forms of consumer loan origination and European regulations with respect to crypto-assets.

### **3.4. International cooperation for financial stability**

In 2022, Narodowy Bank Polski cooperated with EU institutions responsible for the assessment of systemic risk and for counteracting against its build-up. The Governor of NBP is a member of the General Board of the European Systemic Risk Board (ESRB). NBP representatives actively participated in the work of the ESRB and ESCB structures. The work included: preparations for a review of the EU macroprudential policy framework, risk originating from the expansion of a crypto-asset market, risk reduction in the commercial real estate market, cybersecurity risk, the functioning of central counterparties (CCPs) and the development of stress testing methods.

Moreover, in 2022 NBP representatives participated in meetings of the Board of Supervisors of the European Banking Authority (EBA), the Regional Consultative Group for Europe at the Financial Stability Board (FSB), the European Bank Coordination (“Vienna”) Initiative.

NBP representatives also participated in the work of resolution colleges established for the European cross-border banking groups comprising banks active in Poland.

In 2022, NBP again joined the triennial central bank survey on the development of global and domestic foreign exchange and OTC derivatives markets. The survey is coordinated by Bank for International Settlements. The results of the 2022 survey are available on the NBP website.

### **3.5. NBP operational activities aimed at maintaining financial stability**

In 2022, no need arose to provide liquidity support to banks in the form of refinancing loans (pursuant to Article 3(2)(6a) and Article 42(1) of the Act on Narodowy Bank Polski).

In 2022, the NBP Management Board exempted one bank (under resolution proceedings) from the obligation to maintain the required reserve – the bank enjoyed the exemption until 2 October 2022.

**Highlights in 2022:**

- chairing the work of the FSC-M and FSC-C, including the extensive use of NBP-prepared analyses and studies in the decision-making of the FSC-M,
- analytical work conducted with the aim of increasing knowledge about financial processes and interdependencies of the financial system and the economy, and about the operationalisation of macroprudential policy,
- cooperation with European institutions to counteract the build-up of systemic risk.





Chapter 4

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# The issue of currency

## The issue of currency<sup>1</sup>

Narodowy Bank Polski holds the exclusive right to issue the currency of the Republic of Poland. Banknotes and coins issued by NBP are legal tender in the territory of Poland. By putting into circulation banknotes and coins in full denominational structure, NBP guarantees smooth cash settlements and the adequate quality of currency in circulation.

### 4.1. Currency in circulation

The value of currency in circulation (including bank vault cash), as at 31 December 2022, amounted to PLN 368.6 billion. Compared to the status as at 31 December 2021, it increased by PLN 13.1 billion, i.e. 3.7%.

2022 saw a significant increase in cash demand due to Russia's aggression against Ukraine on 24 February 2022. The value of cash in circulation reached its maximum level on 14 March 2022 and amounted to PLN 395.7 billion. Thereafter, the cash market situation stabilised, with a gradual decline in the value of cash in circulation from June 2022 onwards.

The largest denominations showed the highest growth rate: PLN 500 (an increase of 26.9%) and PLN 200 (12.4%). In the case of the denominations of PLN 100 and PLN 50, a decrease amounting to 7.0% and 2.2%, respectively, was recorded. For the lowest denominations, increases amounted to: 7.6% for PLN 20 and 3.3% for PLN 10.

In 2022, the supply of currency to banks and Poczta Polska SA proceeded uninterruptedly, despite the surge in demand in connection with Russia's aggression against Ukraine.

In 2022, manufacturers of legal tender delivered to NBP 542.8 million pieces of notes and 438.7 million pieces of coins. This means that in relation to the deliveries in 2021 (513.4 million pieces of notes and 803.7 million pieces of coins), the number of notes purchased by NBP increased by 5.7%, and the number of coins decreased by 45.4%.

### 4.2. Issue of collector coins and notes

Narodowy Bank Polski issues collector coins and notes, commemorating important historical anniversaries and famous Poles. The bank also aims to develop the interest of the public in Polish culture, science and tradition.

In 2022, in accordance with the *Schedule of Issue of Polish Collector Items and Commemorative Coins*, Narodowy Bank Polski issued 2,400 pieces of gold collector coins, 200,000 pieces of silver collector coins and 80,000 collector notes (in 2021, 10,800 gold coins, 252,000 silver coins and 80,000 collector notes).

In 2022, 28 collector coins and a collector note under 21 themes were issued.

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<sup>1</sup> Tasks in this field are performed pursuant to, among others, Article 4 and Articles 31–37 of the Act on Narodowy Bank Polski.

The issued collector items included, among others:

- *Protection of Poland's Eastern Border* – a collector banknote with a face value of 20 zł and a silver coin with a face value of 10 zł,
- *The Great Polish Economists* – in 2022, subsequent silver coins of the series with a face value of 10 zł were issued, commemorating Władysław Grabski, Leon Biegeleisen, Jan Stanisław Lewiński, Władysław Zawadzki and Michał Kalecki,
- *100th Anniversary of the Port of Gdynia* – a silver coin with a face value of 20 zł,
- *30th Anniversary of the Establishment of the Polish Border Guard* – a silver coin with a face value of 10 zł.

In 2022, Narodowy Bank Polski continued to issue gold bullion coins *White-tailed Eagle*, with a face value of 500 zł, 200 zł, 100 zł and 50 zł as well as circulation coins with commemorative images, with a face value of 5 zł.

In 2022, the banknote *Lech Kaczyński. It is Worth Being a Pole* was awarded by experts in the production of banknotes and secured prints during High Security Printing EMEA in Tallin (the award for the Best New Commemorative Banknote in 2021).

### 4.3. The functioning of cash transactions

In 2022, NBP carried out, among others, the following activities related to the functioning of currency circulation:

- Banks were supplied with notes and coins. In 2022, commercial banks and entities which are authorised by law to lodge and withdraw Polish currency notes and coins in/from NBP lodged PLN 190.0 billion (PLN 152.1 billion in 2021), and withdrew PLN 203.1 billion (PLN 185.9 billion in 2021), of which PLN 62.7 billion in the deposit system (PLN 69.7 billion in 2021), and PLN 140.4 billion in the main system (in 2021, PLN 116.2 billion).<sup>2</sup> Compared to 2021, 2022 saw an increase in the value of cash withdrawals from NBP by 9.3% and an increase in deposits to NBP by 24.9%. The difference in the value of withdrawals and deposits in 2022 amounted to PLN 13.1 billion (in 2021 – PLN 33.8 billion). During the initial period of Russia's aggression against Ukraine, in the end of February and beginning of March 2022, there was a periodic surge in demand for Polish currency, characterised by high daily withdrawals from NBP (a maximum of PLN 12.5 billion on 28 February 2022, with an average of PLN 0.7 billion per day the previous year). The situation then stabilised and a return of cash to NBP was recorded in later periods.
- A service was offered to exchange coins for banknotes or coins of adequately high denominations by means of self-service machines. A further eight devices were installed at NBP regional branches (a total of 29 devices are in operation), and customers of some banks

<sup>2</sup> In the main system, the Polish currency is collected from vaults of NBP regional branches after funds are transferred to NBP for this purpose. In the deposit system, NBP-owned Polish currency is kept in vaults of commercial banks' organisational units. It is collected after funds are transferred to NBP for this purpose.

were able to use the BLIK instant payment system when exchanging coins. The total number of exchange transactions amounted to 164,000; 224 million coins worth PLN 137 million were exchanged. The introduction of the service reduced the production of new coins and the estimated savings in 2022 amounted to approximately PLN 33 million. The service of coins exchange was awarded the prestigious Excellence in Currency award at the annual international Coin Conference organised by the International Association of Currency Affairs.

- In connection with Russia's aggression against Ukraine, Narodowy Bank Polski and the National Bank of Ukraine concluded an agreement on 18 March 2022 on the exchange of Ukrainian currency into Polish currency. This was aimed at facilitating the use of cash for refugees. The programme was conducted in 100 branches of the bank PKO BP SA.<sup>3</sup> Approximately 103,000 Ukrainian citizens benefited from it, cash worth UAH 728 million was exchanged (the equivalent of approximately PLN 98 million). All the hryvnias purchased by NBP from PKO BP SA were repurchased by the National Bank of Ukraine. In all settlements between the parties, the same exchange rate in force during the given period was applied, without commissions and fees. The conduct of the hryvnia exchange in Poland was considered exemplary by other countries.

#### 4.4. Activities aimed at streamlining cash transactions

In 2022, the Cash Circulation Council (a consultative and advisory body to the Management Board of Narodowy Bank Polski) continued working. The implementation of the National Strategy for Cash Circulation Security, adopted in 2021 by the NBP Management Board, began. The activities were of an analytical, legislative, self-regulatory and recommendatory nature and concerned: the universal acceptance and availability of cash, the undisturbed supply of the market with Polish currency, the physical security of banknotes and coins and the cyber security of IT systems used in cash circulation.

In addition, in 2022, NBP introduced improvements to the cash exchange process, including those for professional cash handlers.<sup>4</sup> Cooperation was also continued with cash handlers in terms of their implementation of the GS1 standard when depositing cash to NBP.

#### 4.5. Counterfeit of Polish currency

As at 31 December 2022, there were 2,974.44 million pieces of general circulation banknotes and 1,818.36 million pieces of 1-złoty, 2-złoty<sup>5</sup> and 5-złoty coins in circulation.

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<sup>3</sup> The programme lasted from 25 March to 9 September 2022.

<sup>4</sup> The amendment to Ordinance No. 31/2013 of the Governor of Narodowy Bank Polski of 17 December 2013 on detailed principles and procedures concerning the exchange of banknotes and coins which have ceased to be legal tender in the Republic of Poland as a result of wear and tear or damage (Official Journal of NBP of 2022, item 23).

<sup>5</sup> Excluding coins struck from the Nordic Gold alloy.

Compared to 2021, 2022 saw a decline in the number of disclosed counterfeit banknotes (from 6,035 pieces to 4,094 pieces) and a decline in the number of detected counterfeit coins (from 406 pieces to 230 pieces).<sup>6</sup>

The total number of counterfeit banknotes and coins per million banknotes and coins decreased when compared to the previous year and amounted to 1.07 pcs (1.37 pcs in 2021 and 2020, 1.91 pcs in 2019). Data on the number of counterfeit notes and coins detected in 2019–2022 are shown in Table 4.1.

**Table 4.1.** The number of counterfeit Polish notes and coins detected in the years 2019–2022

Counterfeits	2019	2020	2021	2022
Banknotes	6 467	4 697	6 035	4 094
Coins	718	429	406	230
Total	7 185	5 126	6 441	4 324

Source: NBP data.

In 2022, as part of the implementation of the National Strategy for Cash Circulation Security and in response to technological advances, the legal regulations on the protection of currency against counterfeiting were amended. As a result of arrangements made with the participation of NBP, on 7 April 2022 the Minister of Justice issued an ordinance on banknotes and coins suspected to be counterfeit and counterfeit banknotes and coins (replacing the Ordinance of the Governor of Narodowy Bank Polski of 31 August 1989 on the seizure of counterfeit coins and banknotes).

#### Highlights in 2022:

- maintaining an uninterrupted supply of currency notes and coins to banks despite a significant increase in cash demand due to Russia's aggression against Ukraine,
- implementation of the National Strategy for Cash Circulation Security,
- launching a service of the exchange of the Ukrainian hryvnia for the Polish zloty for refugees from Ukraine – on the basis of the agreement between Narodowy Bank Polski and the National Bank of Ukraine,
- streamlining the cash exchange process and cooperation with cash handlers in terms of their implementation of the GS1 standard when depositing cash to NBP,
- amending the legal regulations on the protection of currency against counterfeiting.

<sup>6</sup> In 2022, only counterfeit general circulation coins with face values of 2 zł and 5 zł were detected. As at 31 December 2022, the total number of general circulation coins (excluding coins struck from the Nordic Gold alloy) amounted to 21,679.86 million.



Chapter 5

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# Foreign exchange reserves management

# Foreign exchange reserves management<sup>1</sup>

Pursuant to Article 52(1) of the Act on Narodowy Bank Polski, the central bank holds and manages foreign exchange reserves as well as takes measures to ensure the safety of Poland's foreign exchange operations in terms of payment liquidity. In the context of a floating exchange rate, the role of foreign exchange reserves is primarily to enhance the country's financial credibility, thereby reducing the cost of financing in the global markets and the volatility of the zloty exchange rate, as well as mitigating the risk of a sudden outflow of capital. Incidentally, these reserves may be used to support the stability of financial markets or the banking sector in the event of significant disturbances in their functioning.

## 5.1. Level of the official reserve assets

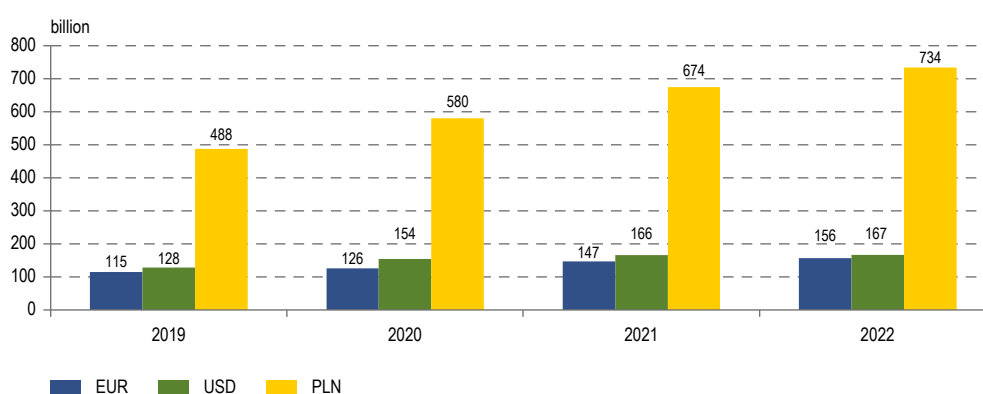
In 2022, the NBP official reserve assets<sup>2</sup> increased:

- in euro terms by EUR 9.9 billion (6.7%) to EUR 156.5 billion,
- in dollar terms by USD 0.6 billion (0.4%) to USD 166.7 billion,
- in zloty terms by PLN 59.6 billion (8.8%) to PLN 733.8 billion.

The increase in the official reserve assets was primarily driven by: a positive balance of external cash flows and increased use of simultaneous repo and reverse repo transactions, concluded to raise the yield on the foreign exchange reserves. The scale of the increase in the official reserve assets was limited by the negative income on reserves investment due to a decline in the prices of securities.

As at the end of 2022, NBP gold holdings amounted to 228.7 tonnes.

**Figure 5.1.** Official reserve assets in 2019–2022 (as at the end of the given year)



Source: NBP data.

<sup>1</sup> Tasks in this area are performed pursuant to Article 3(2)(2) and Article 52 of the Act on Narodowy Bank Polski.

<sup>2</sup> According to the definition of the International Monetary Fund (IMF), official reserve assets include readily available, liquid foreign assets held by the central bank. This category includes monetary gold, special drawing rights (SDRs), the reserve position in the IMF and foreign currency assets, mostly in the form of securities, deposits and cash.

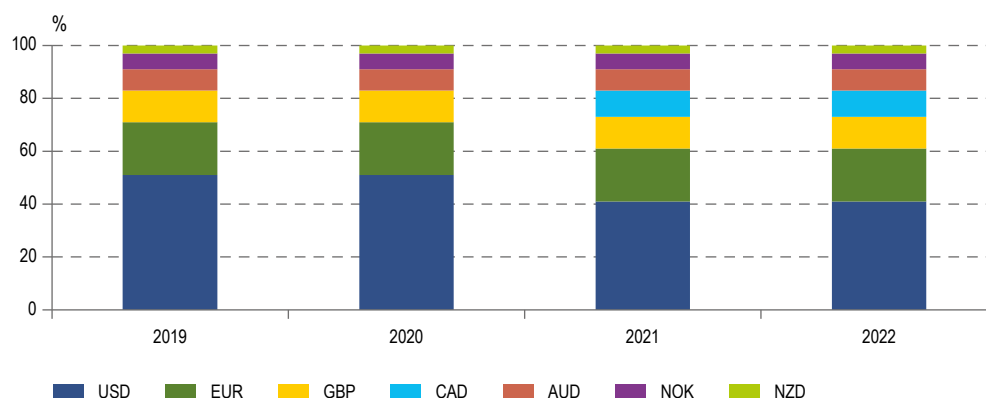


## 5.2. Foreign exchange reserves management strategy<sup>3</sup>

Ensuring the safety of the invested funds and their adequate liquidity is the priority in foreign exchange reserves management. While observing these criteria, Narodowy Bank Polski also undertakes measures to raise the yield on the reserves in the long-term horizon.

In 2022, the basic parameters of the foreign exchange reserves did not change substantially as compared to the previous year. At the end of 2022 the foreign exchange structure of the official reserves was as follows: 41% USD, 20% EUR, 12% GBP, 10% CAD, 8% AUD, 6% NOK and 3% NZD. The modified duration<sup>4</sup> of the reserves stood at 3.0. Exposure to US, euro and UK equity markets resulting from equity index futures contracts stood at 2.9% of the value of foreign currency reserves.

**Figure 5.2.** Currency composition of the official reserve assets in 2019–2022 (as at the end of the given year)



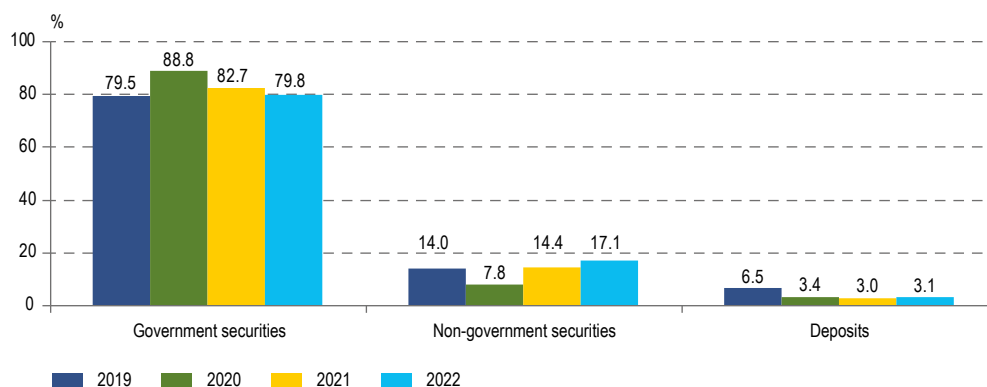
Source: NBP data.

In 2022, as in previous years, government securities characterised by the highest level of security and liquidity had a dominant share in NBP foreign currency reserves (Figure 5.3). Narodowy Bank Polski also invested in non-government securities, including in those issued by government agencies and non-financial corporations, and it held part of funds in short-term deposits at banks of high creditworthiness. Some of the securities held in the NBP portfolio (0.8% of the foreign currency reserves) are green bonds and sustainable development bonds. Bond futures transactions were also used in managing investment portfolios.

<sup>3</sup> Excluding funds held on the foreign currency accounts operated by NBP for the Ministry of Finance.

<sup>4</sup> Modified duration is a measure of interest rate risk, representing the sensitivity of investment portfolios to fluctuations in yields on financial instruments.

**Figure 5.3.** Share of investment instruments in NBP foreign exchange reserves, excluding gold, in 2019–2022 (as at the end of the given year)



Source: NBP data.

In 2022, Narodowy Bank Polski performed tasks related to the development of methods of forecasting long-term return on investment and conducted analyses of the possibilities of further diversification of foreign exchange reserves by, among others, expanding the set of instruments used.

### 5.3. Financial risk management in the process of foreign exchange reserves management

Investment risk management is one of the key elements in the management of foreign exchange reserves. It is based on a system of investment limits and restrictions.

**Table 5.1.** Investment limits and restrictions applicable at NBP in the financial risk management

Risk	Mitigation methods
Credit risk	Limited share of deposit transactions and non-government securities Counterparty selection criteria and ongoing monitoring of counterparty creditworthiness Limits for NBP counterparties Limited maturity of deposit transactions Minimum accepted rating of securities Limits for issuers of securities Collateral in reverse repo transactions
Market risk	Currency composition of the Strategic Asset Allocation along with fluctuation ranges determining the scope of active investment policy Level of modified duration of the Strategic Asset Allocation along with fluctuation ranges determining the scope of active investment policy Limited exposure to equity index futures
Liquidity risk	Investments in the most liquid financial markets Limited share of deposit transactions Securities selection criteria

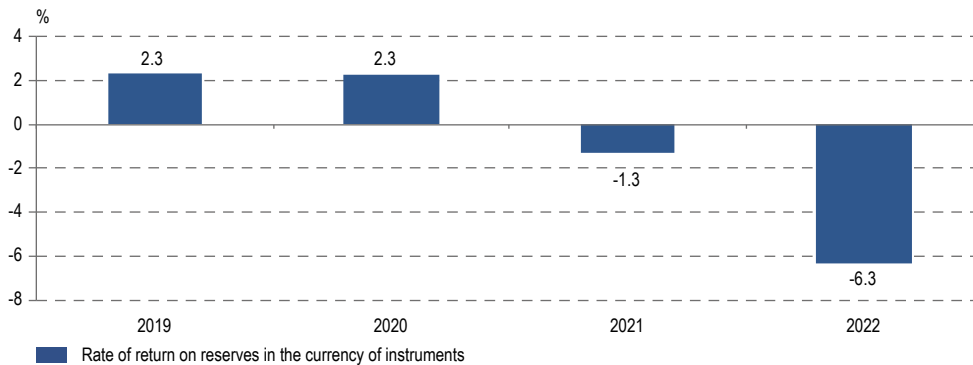
Source: NBP data.

### 5.4. Rate of return on foreign currency reserves

The rate of return on the invested foreign currency reserves<sup>5</sup> depends, most of all, on market conditions: changes in currency exchange rates, the level of yields and changes in investment instrument prices.

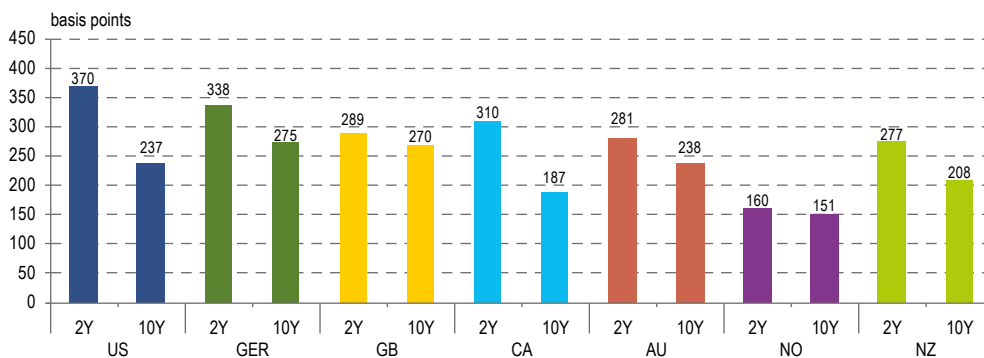
2022 saw a significant, unrecorded for decades, increase in the yields, or a decline in the prices of securities. It was due to a sharp rise in inflation associated with, among other things, a rise in commodity and food prices, leading to the tightening of monetary policy of the major central banks (above all the Federal Reserve). Amid such conditions, the rate of return on foreign currency reserves investment in the currency of the instrument<sup>6</sup> in 2022 amounted to -6.3% (Figure 5.4 and Figure 5.5).

**Figure 5.4.** Rate of return on the NBP foreign currency reserves excluding the impact of foreign exchange rate changes in 2019–2022



Source: NBP data.

**Figure 5.5.** Fluctuations in yields on 2-year and 10-year government securities in major markets in 2022



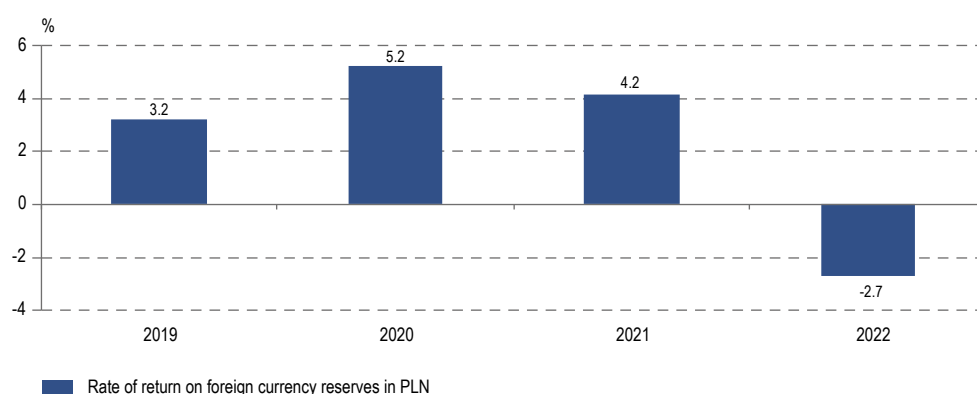
Source: NBP data.

<sup>5</sup> Foreign currency reserves correspond to foreign exchange reserves excluding gold.

<sup>6</sup> The rate of return on foreign currency reserves in the currency of individual investment portfolios is calculated on the basis of daily fluctuations in the market value of instruments (excluding the impact of the changes in foreign exchange rates).

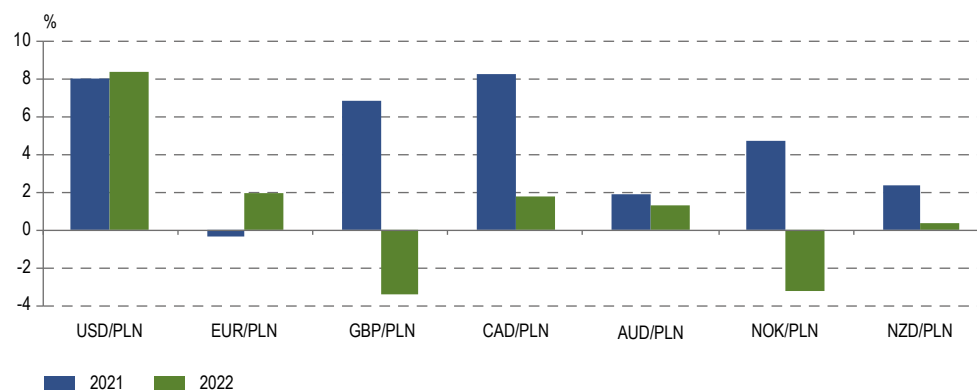
The negative impact of the decline in the prices of securities on the yield from reserves was partly offset by an appreciation of most of the reserve currencies against PLN<sup>7</sup> (Figure 5.7). In 2022, the rate of return on foreign currency reserves calculated in PLN<sup>8</sup> amounted to -2.7% (Figure 5.6) and remained above the rate of return calculated in the currency of the instrument.

**Figure 5.6.** Rate of return on NBP foreign currency reserves including the impact of foreign exchange rate changes in 2019–2022



Source: NBP data.

**Figure 5.7.** Fluctuations in the exchange rates of major reserve currencies in relation to PLN in 2021 and 2022



Source: NBP data.

<sup>7</sup> An increase in the exchange rates: USD/PLN by 8.4%, EUR/PLN by 2.0%, CAD/PLN by 1.8%, AUD/PLN by 1.3% and NZD/PLN by 0.4%; a decline in the exchange rate of GBP/PLN by 3.4% and NOK/PLN by 3.2% (NBP average exchange rates).

<sup>8</sup> The rate of return on foreign currency reserves in PLN additionally takes into account the impact of fluctuations in the exchange rates of reserve currencies in relation to PLN.

## 5.5. Investment income

In 2022, the income on investment related to foreign exchange reserves management, excluding realised and unrealised foreign exchange gains/losses, was negative and amounted to PLN -28.8 billion (compared to PLN -1.7 billion in 2021). This was mainly due to unrealised losses resulting from the price revaluation of debt securities (PLN -25.3 billion) and income on realised price differences on futures transactions and sale of securities (PLN -9.9 billion). In addition, investment income was affected by the positive interest income on deposits and debt securities (PLN 6.5 billion).

In 2022, income on realised exchange rate effects of foreign currencies and gold amounted to PLN 25.5 billion, while unrealised losses from currency revaluation of foreign currency holdings reached PLN -1.4 billion.<sup>9</sup>

### Highlights in 2022:

- increased exposure to so-called green bonds and sustainable development bonds,
- development of methods of forecasting long-term return on NBP investment,
- analyses of possibilities of further diversification of foreign exchange reserves.

<sup>9</sup> Pursuant to the accounting principles of NBP, currency revaluation gains (unrealised gains) do not affect the financial result of NBP, but are recognised in the balance sheet liabilities. On the other hand, unrealised currency revaluation losses are subtracted from the financial result of NBP in the same way as losses resulting from realised currency revaluation differences.



Chapter 6

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# Foreign exchange activity

## Foreign exchange activity<sup>1</sup>

Foreign exchange activity involves maintaining a register of bureaux de change, issuing decisions on foreign exchange matters and controlling the following: bureaux de change (including for the purposes of compliance with the obligations imposed on them under the Act on Counteracting Money Laundering and Terrorism Financing), use of granted individual foreign exchange authorisations and the performance of the reporting responsibilities by residents and operators of bureaux de change for the purposes of balance of payments and international investment position statistics. The purpose of this activity is to ensure the security of foreign exchange transactions.

### 6.1. Register of bureaux de change

In 2022, 745 entries were made to the register of bureaux de change (as compared to 687 in 2021), of which 147 entries concerned new entities (as compared to 117 in 2021). The remainder regarded the deletion of entities or data updates in the register.

As at 31 December 2022, 4,577 bureaux de change were active in Poland (in 2021 – 4,664).

### 6.2. Foreign exchange-related decisions

In 2022, a total of 24 decisions on foreign exchange operations were issued, including 14 authorisations and 10 other decisions (30 decisions on foreign exchange operations were issued in 2021). Authorisations were granted for the waiver of restrictions on foreign exchange transactions with non-residents from countries that are not members of the EU, the OECD and the EEA. Other decisions concerned, among others, prolongation of the validity of authorisations.

### 6.3. Control of foreign exchange turnover

The control of foreign exchange turnover by the Governor of NBP in 2022 included inspections of residents who were subject to the mandatory transfer to Narodowy Bank Polski of data necessary for the compilation of balance of payments and international investment position statistics, and inspections of operators of bureaux de change.

In 2022, a total of 751 inspections were carried out (in 2021 – 871), including:

- 203 inspections concerning the performance of the reporting obligation for compiling balance of payments statistics (in 2021 – 279),
- 547 inspections of bureau de change activity (in 2021 – 592),
- 1 inspection of the use of individual foreign exchange authorisations (in 2021 – 0).

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<sup>1</sup> Tasks in this field are performed pursuant to Article 3(2)(3) and Article 52(2) of the Act on Narodowy Bank Polski, Article 130(2)(1)(a) of the Act of 1 March 2018 on Counteracting Money Laundering and Terrorism Financing (Journal of Laws of 2022, item 593 as amended) and the provisions of the Act of 27 July 2002 – the Foreign Exchange Law (Journal of Laws of 2022, item 309).



Irregularities were reported in the course of 397 inspections, i.e. 53% of all the inspections (in 2021 – 52%), including during:

- 109 inspections of the performance of the reporting obligation for the purposes of balance of payments statistics (in 2021 – 138),
- 287 inspections of bureau de change activity (in 2021 – 318),
- 1 inspection of the use of individual foreign exchange authorisations (in 2021 – 0).

In five cases of a gross violation of the rules of conduct of bureau de change activity, five decisions were issued to prohibit the entrepreneur from pursuing currency exchange business and delete the entrepreneur from the register of bureaux de change (in 2021 – 1). Thirty decisions were also issued to impose a financial administrative penalty in connection with the non-fulfilment by the operators of the bureaux of responsibilities laid down by the Act on Counteracting Money Laundering and Terrorism Financing. Narodowy Bank Polski notified the competent financial authorities of 438 cases of violation of legal provisions. Having conducted the appropriate proceedings, tax offices and customs and tax offices informed NBP of penalties imposed on 86 bureaux de change, 127 cases of submission of the so-called active repentance and six cases of voluntary submission to liability. The results of all the inspections for compliance by entrepreneurs pursuing currency exchange business with responsibilities laid down in the Act on Counteracting Money Laundering and Terrorism Financing were delivered to the General Inspector of Financial Information.

Inspections carried out by NBP ensure that:

- foreign exchange trading in bureaux de change is compliant with the rules of conduct of regulated activity,
- responsibilities in the area of counteracting money laundering and terrorism financing are properly fulfilled,
- data provided by reporting entities for the purposes of BoP statistics are compliant with source documents.

#### Highlights in 2022:

- 751 foreign exchange inspections performed,
- 24 foreign exchange decisions issued and 35 decisions issued concerning the breach of rules of conduct of the currency exchange business or failure to comply with responsibilities attached to this business.



Chapter 7

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# Payment system-oriented activities

# Payment system-oriented activities<sup>1</sup>

The activities of Narodowy Bank Polski with respect to the payment system comprise operational tasks, including the operation of the payment systems and performance of interbank settlements, the activities relating to the payment system policy and development, including organising payment settlements and drafting relevant legal regulations and the oversight of the payment system.

The objective of Narodowy Bank Polski is to ensure efficient functioning of the payment system, enabling fast and safe flow of money between individuals, economic agents, public institutions or other entities that are parties to the payment transaction.

## 7.1. Performance of operational tasks

### 7.1.1. Operation of accounts in the SORBNET2 system

The SORBNET2 system is an RTGS (Real-Time Gross Settlement) payment system in which current accounts of banks are operated and the interbank settlement of zloty-denominated payments is performed. In an RTGS system, payment orders are executed in accordance with the gross settlement principle (processing of single orders, without their mutual offsetting) and the rule of real time settlement (processing of orders on an on-going basis during the day, instead of at pre-determined hours).

As at 31 December 2022, accounts operated in the SORBNET2 system included zloty current accounts of 47 banks (in 2021 – 46), the current account of Krajowa Spółdzielcza Kasa Oszczędnościowo-Kredytowa (National Association of Cooperative Savings and Credit Unions), as well as accounts for KIR SA, KDPW SA and KDPW\_CCP SA. In 2022, three current accounts in PLN were opened,<sup>2</sup> two were closed,<sup>3</sup> and one account was taken over during the bank resolution.<sup>4</sup>

In 2022, 5.4 million payment orders were executed in the SORBNET2 system (in 2021 – 4.6 million) totalling PLN 131.0 trillion (in 2021 – PLN 121.4 trillion). This represents an increase in the number of executed payment orders by 17.8% and a rise in their value by 7.9% compared to 2021. In 2022, the average value of a single payment order was PLN 24.0 million (in 2021 – PLN 26.2 million) and it decreased by 8.3% as compared to the previous year.

<sup>1</sup> Tasks in this area are performed pursuant to Article 3(2)(1), (6) and (6a) of the Act on Narodowy Bank Polski and the Act of 24 August 2001 on Settlement Finality in Payment and Securities Settlement Systems and the Rules of Oversight of these Systems (Journal of Laws of 2022, item 1581).

<sup>2</sup> On 30 June 2022, a current account was opened for Bank Nowy SA and Warmińsko-Mazurski Bank Spółdzielczy, and on 30 September 2022 a current account was opened for AS Inbank Spółka Akcyjna Branch in Poland.

<sup>3</sup> On 30 September 2022, a current account for MUFG Bank (Europe) N.V. Oddział w Polsce and for BNP Paribas Securities Services S.K.A. Oddział w Polsce were closed.

<sup>4</sup> On 3 October 2022, a current account of Getin Noble Bank SA was taken over by VeloBank SA.

### 7.1.2. Operation of accounts in EUR in the TARGET2-NBP system

The TARGET2-NBP system is a Polish component of the TARGET2 system – the Pan-European RTGS system used for settlements of euro-denominated payments. As at 31 December 2022, the TARGET2-NBP system operated accounts in euro for 19 entities: NBP, KIR SA, KDPW SA and KDPW\_CCP SA as well as for 15 commercial banks (no change compared to 2021).

In 2022, a total of 2.4 million transactions were carried out in the TARGET2-NBP system, totalling EUR 2.8 trillion. Compared to 2021, the number of completed operations increased by 15.8%, and their value rose by 41.7%. The average value of a single order was EUR 1.2 million and increased by 22.3% compared to 2021.

## 7.2. Policy measures and development of the payment system

### 7.2.1. Regulatory, standardisation and research activities

In 2022, as part of regulatory and research activities relating to the payment system, NBP:

- monitored the effects of the 2021 regulations that ensure acceptance of cash payments by consumers at points of sale,
- introduced changes to payments reporting which extend the scope of statistical data on payment system<sup>5</sup> transmitted to NBP, and submitted to the ECB annual data used for monitoring changes in the functioning of payment schemes,<sup>6</sup>
- executed tasks related to assigning numbers to banks and non-bank payment service providers with respect to entities which started their activity or changed ownership in 2022,
- published the results of *Postawy Polaków wobec obrotu bezgotówkowego* [Attitudes of Poles towards non-cash payments], the survey which concerned Poles' attitudes towards, among others, banks and money, non-cash payments and the possibility of obtaining cash,
- analysed the experience of other central banks in creating the concept of a central bank digital currency (CBDC) and implementing CBDCs, in particular the design of a digital euro,
- analysed proposed amendments to the European legislation concerning instant credit transfers in euro in the context of their potential impact on payments in Poland.<sup>7</sup>

Narodowy Bank Polski participated in legislative work relating to changes in the functioning of payment services offices, accountability of payment service providers in the case of fraudulent transactions, as well as in the work on amending the regulation of the Minister of Finance on model forms for cash deposit and payment order to the account of the tax authority.

<sup>5</sup> Regulation (EU) 2020/2011 of the European Central Bank of 1 December 2020 amending Regulation (EU) No. 1409/2013 on payments statistics (ECB/2013/43) (ECB/2020/59).

<sup>6</sup> See Chapter *Statistics*.

<sup>7</sup> Proposal for a Regulation of the European Parliament and of the Council amending Regulations (EU) No. 260/2012 and (EU) 2021/1230 as regards instant credit transfers in euro.

### 7.2.2. Development of domestic large-value payment systems

In 2022, the following activities were undertaken with the purpose of developing domestic large-value payment systems:

- Analytical work was carried out as part of the SORBNET3 project aimed at building a new RTGS system in PLN compliant with the ISO 20022 standard.
- Work continued on NBP's participation in the ECB-coordinated consolidation of the TARGET2 system with the TARGET2-Securities platform (T2S). The aim of the consolidation is to launch in 2023 a new RTGS system in euro. All central banks participating in the TARGET2 system and also participants in the national components of the TARGET2 system are involved in the work. In 2022, NBP took part in new system tests and introduced the changes from the tests to the in-house IT systems.

### 7.2.3. SEPA scheme

In 2020, NBP continued to provide intermediation services in accessing the EBA Clearing-run pan-European payment system STEP2-T for interested banks, enabling them to settle cross-border credit transfers in euro in the SEPA Credit Transfer (SCT) scheme.<sup>8</sup>

In 2022, NBP joined the continuous gross settlement (CGS) model within the STEP2\_T system. Since 12 July 2022, all orders within the STEP2-T system are processed exclusively in the CGS system.

### 7.2.4. Payment System Council activity

The Payment System Council, the advisory body to the NBP Management Board, deals with analysing and evaluating the Polish payment system on an on-going basis and promotes its development.

In 2022, the Council primarily discussed the following issues:

- the banking sector recommendations on business continuity of banks in the event of a military conflict or a hybrid war,
- the results of research and analyses, including: Poles' attitudes towards cashless payments, the transaction execution times of selected payment instruments in Poland and the functioning of the Cashless Poland programme.
- the construction of a new RTGS system in PLN (SORBNET3 project),
- creation of the industry support services centre for counteracting money laundering,
- development plans for the BLIK Mobile Payment System and BLIK-Euro System, as well as plans of KIR SA to launch the instant payment service in euro,
- adaptation of the selected accounting processes of KDPW SA to changes in the EU settlement systems,
- legislative changes at a country- and EU-level.

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<sup>8</sup> At the end of 2022, 17 banks used these intermediation services.

In 2022, the Working Group for Payment Security, established within the Council, prepared a list of recommendations for the reduction of fraudulent transactions in retail payments in Poland.

### 7.3. Oversight of the payment system

The oversight by NBP of the payment system seeks to minimise the risk associated with possible disruptions in the operation of payment systems, payment schemes, securities settlement and clearing systems and provision of acquiring services by domestic payment institutions. The oversight exercised by NBP contributes to ensuring financial stability.

The activities of the Governor of NBP related to the oversight of individual elements of the payment system in 2022 included the issuance of:

- 5 decisions authorising modifications to the rules of operation of payment systems,
- 2 decisions authorising modifications to the rules of operation of a payment scheme and a decision on deleting the Diners Club payment scheme from the list of payment schemes subject to oversight (for the discontinuation of the issue of payment cards by the payment organisation managing the scheme),
- 2 opinions on applications for authorisation by the Polish Financial Supervision Authority (KNF) to provide payment services as a national payment institution with regard to the acquiring service,
- 5 opinions – at the request of the KNF – on changes in the rules of procedure specifying the principles of operation of the securities settlement and clearing systems operated by KDPW SA and KDPW\_CCP SA.

Narodowy Bank Polski prepared and submitted to the KNF its position on the review and assessment of KDPW SA activity for the period from 2 May 2021 to 1 May 2022. The Bank also participated in the assessment of the proposed extension of the scope of payment services provided by KDPW\_CCP SA to include clearing of repo transactions in organised trading.

Moreover, in 2022 Narodowy Bank Polski:

- made an assessment of the SKARBNET4 system's compliance with the requirements of the Central Securities Depository Regulation (CSDR) and the CSDR-based delegated acts, and a review of the system's principles of operation in the years 2019–2021,
- completed the assessment of the BlueCash payment system with respect to its compliance with the *Principles for financial market infrastructures*,
- completed the assessment the compliance of the SORBNET2 payment system functioning with the oversight requirements stated in *Cyber resilience oversight expectations for financial market infrastructures* (CROE) developed by the ESCB.
- initiated an assessment of 3 payment systems operated by KIR SA (Elixir, Express Elixir and Euro Elixir), with respect of their compliance with the CROE requirements.
- completed the third edition of the ECB-coordinated survey on the cyber-resilience of selected payment systems, and provided the results of the payment systems evaluation to their operators,
- released the *Polish Payment System Oversight Report for 2021*.

## 7.4. NBP as the shareholder in domestic legal persons providing services for financial institutions

In 2022, NBP held shares and participating interests in the following domestic entities:<sup>9</sup>

- KDPW SA, with its registered office in Warsaw, which is the central institution responsible for operating the deposit and settlement system in the scope of financial instrument trading in Poland; KDWP SA holds 100% of the shares of KDPW\_CCP SA, which operates systems of clearing of transactions in financial instruments;
- Krajowa Izba Rozliczeniowa SA, with its registered office in Warsaw, which is the key institution on the domestic market of payments clearing;
- Bazy i Systemy Bankowe sp. z o.o. (Bank Databases and Systems, Ltd), with its registered office in Bydgoszcz, which is a producer and integrator of IT solutions addressed mainly to financial sector institutions, in particular, banks and insurance institutions as well as public administration.

**Table 7.1.** Specification of shares and participating interests held by NBP in Polish commercial law companies, as at 31 December 2022

Name of entity	Share capital (PLN)	Number of shares / participating interests held by NBP	NBP interest in share capital (%)
Krajowy Depozyt Papierów Wartościowych SA	21,000 000	7,000	33.33
Krajowa Izba Rozliczeniowa SA	5,445,000	3,750	34.44
Bazy i Systemy Bankowe sp. z o.o.	10,000,000	1,000	100.00

Source: NBP data.

### Highlights in 2022:

- continuation of work on a new RTGS system in PLN (SORBNET3) and on the consolidation of the TARGET2 system with the T2S platform,
- migration to a new settlement model in the STEP-2 system,
- completion of the assessment of the compliance of SORBNET2 payment system functioning with the European oversight requirements pertaining to the cyber resilience of financial market infrastructures.

<sup>9</sup> In accordance with Article 5(2) of the Act on Narodowy Bank Polski, NBP may hold shares or participating interests in other legal persons that provide services to financial institutions or the State Treasury or are relevant for NBP in terms of acting to sustain the stability of Poland's financial system.



Chapter 8

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# Services to the State Treasury

## Services to the State Treasury<sup>1</sup>

Tasks performed by NBP as part of services to the State Treasury include operating accounts of the State Budget, handling international liabilities and claims of the State Budget, trading in Treasury securities and activities to manage public debt, in particular, the State Treasury debt.

### 8.1 Bank accounts operated by NBP

In 2022, NBP operated bank accounts referred to in Article 196 of the Public Finances Act, including, in particular, the central current account of the State Budget, as well as current and auxiliary accounts of budgetary entities and offices providing services to tax authorities, including so-called joint accounts for collecting certain types of tax and non-tax revenues of the state budget. Moreover, pursuant to Article 51(1)(4) of the Act on Narodowy Bank Polski, NBP operated accounts of other legal persons.

NBP operates accounts in PLN and foreign currencies, including accounts used to handle funds coming from the EU budget. NBP also maintains term deposit accounts in PLN and foreign currencies. As at 31 December 2022, NBP provided services for 2,922 customers (in 2021 – 2,923), for whom NBP regional branches operated 27,849 accounts (in 2021 – 27,604), of which 4,520 accounts were handled under the third party substitution cash service (in 2021 – 4,457).

#### 8.1.1. Operating bank accounts

Narodowy Bank Polski performed operations on State Budget accounts – in non-cash form, mainly through the NBP electronic banking system and B2B cross-system interface, as well as in cash form. The B2B interface, which provides solutions adjusted to the account holder's needs (including micro-accounts and individual reports and ensures high security of transmitted data, was used in the handling of bank accounts of strategic importance for the State Budget (i.e. the central current account of the State Budget, the contribution payment account for the Social Insurance Institution, accounts for payments of taxes).

In 2022, the number of cash and cashless operations processed in the NBP IT system used for handling the State Budget's bank accounts stood at 138.0 million (135.8 million in 2021).

In 2022, the number of debit cards issued to account holders at NBP almost quadrupled, growing from 1,065 at the end of 2021 to 4,140 at the end of 2022. Furthermore, 2022 saw continued modernisation of the IT systems supporting banking service provided to the State Budget.

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<sup>1</sup> Tasks in this area are performed pursuant to Article 3(2)(4) and Articles 49, 51 and 52 of the Act on Narodowy Bank Polski, the Public Finances Act of 27 August 2009 (Journal of Laws of 2022, item 1634, as amended) and the Act of 29 August 1997 – the Banking Law (Journal of Laws of 2022, item 2324, as amended).

## 8.2. Handling international liabilities and claims of the State Budget

Pursuant to the agency agreement concluded with the Minister of Development and Finance on 18 November 2016, in 2022, Narodowy Bank Polski handled the State Budget liabilities and claims arising from:

- 49 loans granted by international financial institutions to the government of the Republic of Poland,
- 78 foreign loans granted to domestic entities and guaranteed by the government of the Republic of Poland,
- Poland's contributions to 9 international financial institutions and receivables from shares in a foreign financial institution.

While acting as a depository for the World Bank Group, NBP administered 16 promissory notes issued by the government of the Republic of Poland in connection with Poland's membership in institutions of that financial group.

## 8.3. Organisation of trade in Treasury securities

### 8.3.1. Treasury securities auctions

Narodowy Bank Polski acts as the issuing agent for Treasury securities. Therefore, it organises sale and redemption auctions of Treasury bills, as well as sale, redemption and swap auctions of Treasury bonds. In 2022, the following auctions were organised:

- 11 Treasury bond sale auctions,
- 11 Treasury bond swap auctions.

In 2022, 9 auctions were organised for the sale of Bank Gospodarstwa Krajowego bonds issued for the COVID-19 Prevention Fund (NBP plays the role of the organiser of the auctions of bonds backed or guaranteed by the State Treasury).

In 2022, no Treasury bill sale or redemption auction was held, nor any redemption auction of Treasury bonds.

### 8.3.2. Treasury Securities Dealer System

In 2022, as in previous years, NBP performed tasks associated with the Treasury Securities Dealer System (DSPW).<sup>2</sup> Under the agreement concluded with the Ministry of Finance, Narodowy Bank Polski:

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<sup>2</sup> The Treasury Securities Dealer System (DSPW) system was established in 2003 in order to ensure the security of financing of the State budget borrowing needs and improve the liquidity, transparency and effectiveness of the SPW market (SPW – skarbowe papiery wartościowe: Treasury securities). Domestic banks and foreign entities that comply with the requirements set out in the Regulations on fulfilling the DSPW function may apply for the status of the DSPW, which authorises them to, among other things, purchase SPW at auctions organised by the Ministry of Finance. More information on the functioning of the DSPW system can be found on the website of the Ministry of Finance.

- supplied the Ministry of Finance with data used for the preparation of assessments of the activities of the DSPW banks,
- acted as the organiser of Treasury securities fixing.<sup>3</sup>

#### **8.4. Co-operation with the Ministry of Finance within the Public Debt Management Committee**

In 2022, NBP co-operated with the Ministry of Finance within the Public Debt Management Committee. The objective of the co-operation is the exchange of the information used to harmonise the public debt management policy (of the Ministry of Finance) with NBP's monetary and foreign exchange policies.

##### **Highlights in 2022:**

- operating 27,849 accounts for 2,922 customers,
- organisation of a total of 22 Treasury securities sale and swap auctions and 9 auctions for the sale of Bank Gospodarstwa Krajowego bonds issued for the COVID-19 Prevention Fund.

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<sup>3</sup> Acting as an organiser of SPW fixing, NBP defines its rules, in agreement with the Minister of Finance (the issuer) and BondSpot SA (the proxy), and provides the general supervision of SPW fixing (para. 2 item 3 of the SPW fixing regulations).

Chapter 9

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# Analytical and research activities

## Analytical and research activities<sup>1</sup>

Actions of central banks, aimed at ensuring macroeconomic and financial stability, require a detailed knowledge of the developments in the economy and its external environment. While performing these tasks, NBP analyses the current and expected economic situation in Poland and worldwide, relying on a broad range of data, and analytical and prognostic tools. NBP also conducts scientific research whose findings support analytical activity and, among other things, verify the applied analytical tools. The findings of these analyses and research are used by the Management Board of NBP and the Monetary Policy Council in the decision-making process.

Below, we present the most important analytical and research works and activities performed in 2022 concerning macroeconomic stability,<sup>2</sup> including price stability, broken down into major thematic groups.

### 9.1. Analyses and research concerning monetary policy

- The monetary policy of foreign central banks was monitored and analysed.
- Research was conducted on the determinants of the equilibrium interest rate and the conduct of monetary policy under bounded rationality of economic entities.
- Research was started to assess in what time horizon the central bank should take measures to influence inflation.
- Research was conducted on the impact of monetary policy and inflationary processes on changes in remuneration levels.

### 9.2. Analyses and studies of price-setting processes, prices and inflation

- Research and analytical work was carried out on the developments in inflation indices and price-setting processes, price stickiness, the use of online shop data for inflation forecasting as well as the assessment of the impact on price formation in Poland of the following: the COVID-19 pandemic, global supply chain disruptions, energy shocks and Russia's aggression against Ukraine.
- Changes in inflationary expectations of consumers, enterprises, financial sector analysts and experts outside the financial sector were monitored.

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<sup>1</sup> Tasks in this area are performed under, among others, Article 59 of the Act on Narodowy Bank Polski.

<sup>2</sup> Analytical and research activities concerning the stability and development of the financial system were presented in Chapters 3 and 7 of this *Report*.

### 9.3. Macroeconomic forecasting and the development of prognostic models

- Economic situation in Poland was monitored and analysed with the use of a wide range of variables, including time series sampled at different frequencies; indicators and tools were developed to analyse and forecast business conditions amid volatile economic situation and strong disruptions caused by the Russian aggression against Ukraine.
- Regular inflation and GDP projections were drawn up, along with estimates of GDP and its components used for the assessment of macroeconomic stability and the stability of the financial sector, taking into account dynamic changes in the external environment of the Polish economy and implemented legislative changes.
- Forecasts of the consumer price index and its components were prepared.
- Four rounds of the NBP Survey of Professional Forecasters were completed.
- The specification of the dynamic stochastic general equilibrium model (DSGE SoePL-2022) was supplemented with non-standard monetary policy instruments.

### 9.4. Analyses and studies of the fiscal situation

- Forecasts were carried out of the following: the situation of the state budget and the general government sector, costs of fiscal measures mitigating the impact of high inflation on economic agents, the restrictiveness of fiscal policy and its impact on the economy, and financing of the borrowing needs of the State.
- Analyses and forecasts were carried out concerning the use of funds from the European Union budget and their impact on the main macroeconomic aggregates.
- Research on macroeconomic and fiscal consequences of the ageing of society in Poland was started.
- Research on the following were completed: the effectiveness of fiscal policy amid unequal distribution of income and wealth, and the impact of the free movement of labour force on fiscal policy in the European Union.

### 9.5. Analyses of the global economy and the impact of foreign countries on the Polish economy

- The economic situation and economic policies of selected countries were analysed, including those of major world economies and countries of Central and Eastern Europe (CEE), and research was conducted into capital flows to the emerging economies (including CEE economies).
- NBP analysed, on a regular basis, the external trade of the Polish economy, along with trade links in global value added chains, and Poland's price and cost competitiveness, as well as the impact of the COVID-19 pandemic and Russia's aggression against Ukraine.

- The economic situation worldwide and in Poland during the COVID-19 pandemic, the post-pandemic recovery, the energy crisis and Russia's aggression against Ukraine were monitored and analysed on an ongoing basis; the necessary instruments used for this purpose were developed.
- Medium- and short-term economic outlook was assessed for the countries where NBP invests foreign currency reserves.

### **9.6. Analyses and studies of the economic situation of households**

- Cyclical analyses of the financial situation of the household sector were conducted concerning the sources of income, consumer spending and savings as well as changes in assets and liabilities.
- Changes in retail sales and in the condition of households based on the findings of consumer sentiment surveys were monitored.

### **9.7. Analyses and studies of the economic situation of the labour market**

- The labour market situation was monitored and forecasts of basic economic indices describing changes in wages and employment in the economy were prepared.
- The impact of the inflow of refugees from Ukraine on the labour market and economic growth in Poland was studied and changes in their participation in the labour market were monitored.
- Potential strategies concerning adjustment of labour costs in firms to the economic slowdown, and rising commodity prices and operating expenses were analysed.

### **9.8. Analyses and research of the economic and financial situation of enterprises**

- Quarterly NBP Quick Monitoring Surveys were conducted, comprising detailed analyses and forecasts of economic conditions, including, among others, decisions on the size of output, employment, wages, investment, as well as the financial and pricing decisions of firms, and their impact on the banking system.
- The NBP Annual Survey was conducted, focusing on the development outlook for the non-financial enterprise sector and on price-formation processes.
- NBP conducted the annual Quick Monitoring Survey of micro-companies, studying in particular the price-formation, wage and efficiency mechanisms of enterprises employing up to 10 people.
- Cooperation with the World Economic Forum on the Global Competitiveness Report was continued.



- The impact of the COVID-19 pandemic on the productivity of Polish enterprises was analysed, as well as the resilience of the enterprise sector to the rise in their relevant operating expenses.

## 9.9. Inter-sectoral analyses and studies

- Analyses were conducted, examining the consequences of disruptions in the energy commodity markets and the influx of Ukrainian refugees on the Polish economy.
- Analysis was conducted concerning the structural sources of the rise in the energy effectiveness of the Polish economy against the background of selected EU economies.

## 9.10. Research papers by NBP staff

The publication of the results of research conducted by NBP staff enables a scientific verification of its quality and methodological correctness by making them available for the assessment by national and foreign experts, and the peer review process these publications are subject to.

Eight academic publications by NBP staff<sup>3</sup> were posted on the ISI Master Journal list in 2022.

## 9.11. Scientific conferences organised by NBP

In 2022, NBP organised 3 international scientific conferences:

- 3 June 2022: *Access to Cash across Countries – Current State and What for the Future*, a cyclical conference addressing the new conditions of the use of cash. The conference sessions presented the results of the research on the access to cash across countries and discussed changes in the function of cash.
- 22–23 September 2022: *Fourth Biennial Conference on New Dimensions of Monetary Policy*, the international biannual scientific conference organised by NBP and the Bank of Lithuania in cooperation with the Central Bank Research Association (CEBRA). The conference presented and discussed new research trends in monetary policy.
- 21 October 2022: *Central Europe's Convergence*, the 10th edition of the NBP annual international conference in the series of conferences on the future of the European economy. The discussions focused on the sources of and the outlook for economic convergence in Europe, with particular emphasis on Central Europe.

Moreover, in 2022 the following international scientific events took place at NBP:

- 13–14 June 2022: a meeting of the directors of statistics departments of central banks of Central and Eastern Europe. The meeting made it possible for the participants to

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<sup>3</sup> The list is included in the Appendix *List of selected NBP publications*.

exchange their experience and discuss important statistical issues from the point of view of the region, with particular focus on including Ukrainian refugees in the statistics.

- 1 September-31 October 2022: a scientific workshop on *Return enhancement strategies within foreign reserves management* – a series of seven online sessions. The workshop sessions presented and discussed the strategies of investing foreign exchange reserves.

## 9.12. Cooperation with the scientific community, central banks and international institutions

In 2022, as part of cooperation with the scientific community, central banks and international institutions, NBP representatives participated in the activities of the ESBC working groups, EU bodies and other national and international institutions on issues and projects related to the main areas of NBP research and analytical work. They also participated in international and national scientific conferences, presenting the results of analytical and research work conducted at NBP.

In 2022, as part of ECB research networks NBP carried out, among others, work: on the PRISMA (*Price Setting Microdata Analysis*) report on the method of price setting in the European economies, the use of online shop data in forecasting inflation and other analyses based on micro prices.

### Highlights in 2022:

- conducting analyses concerning the economic situation in Poland and its external environment for the needs of the NBP Management Board and the Monetary Policy Council,
- improvement of forecasting tools and completion of numerous modelling and analytical-research tasks,
- publication of eight research papers by NBP staff in journals from the ISI Master Journal list,
- organisation of three international scientific conferences and two other international scientific events.

Chapter 10

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# Statistics

## Statistics<sup>1</sup>

Narodowy Bank Polski is one of Poland's key institutions that conduct statistical research. NBP acquires data from entities in the financial sector (mainly banks) and from non-financial corporations. The Bank is improving the methods of data acquisition, processing and publication and systematically broadens their scope. In parallel, the Bank carries out work on the data processing methodology, its harmonisation with the changing international standards as well as on improving the IT solutions applied in the Bank. NBP also receives data from other institutions, such as Statistics Poland, the Office of the Polish Financial Supervision Authority (UKNF), the Ministry of Finance, the National Securities Depository (KDPW SA) and the Polish Development Fund (PFR SA). NBP uses the information to implement monetary and macroprudential policy, to monitor risk in the financial sector and conduct financial stability studies and other analyses.

Narodowy Bank Polski makes statistical data available to external entities on a regular basis (in the form of reports and publications). It also provides selected information to domestic institutions (the Sejm of the Republic of Poland, the Council of Ministers, Statistics Poland, the Bank Guarantee Fund (BFG), the UKNF, the Association of Polish Banks and academic institutions) as well as international institutions, primarily the ECB, Eurostat and the BIS.

The compliance of the statistical research methodology with applicable standards enables international comparisons, including the analysis of Poland's position vis-à-vis other European countries.

### 10.1. Core tasks with respect to statistics

The core tasks of NBP concerning statistics include collection of data from reporting entities, data validation, processing, storage and making them available in the form specified by their main users. Adequate IT systems are developed and improved to achieve these objectives. In parallel, work continues on the data processing methodology as well as on changing the scope of the data depending on the degree of development of financial institutions and financial market instruments as well as macroeconomic conditions. The changes introduced are compliant with international standards (of the Eurostat, the IMF and the ECB).

In 2022, NBP continued the regular provision of statistical compilations, analytical materials and publications addressed to both internal recipients at the Bank and to external audiences. The most important of these include:

- quarterly reports on the balance of payments and the *International Investment Position of Poland* annual report,
- quarterly data on Poland's external debt and international investment position,
- monthly balance of payments (BoP) data,
- annual data and the annual report on inward direct investment in Poland and Polish outward direct investment,

<sup>1</sup> Tasks in this area are performed pursuant to Article 3(2)(7), Article 17(4)(13) and Article 23 of the Act on Narodowy Bank Polski and the Act of 29 June 1995 on Public Statistics (Journal of Laws of 2022, item 459, as amended).

- the monthly consolidated balance sheet of monetary financial institutions, including key monetary aggregates (M3 money supply and its counterparts),
- monthly data on the average interest rate on bank deposits and on loans,
- monthly financial data on the banking sector (assets, liabilities, profit and loss account),
- quarterly data on the banking sector capital adequacy,
- quarterly data on domestic investment funds,
- quarterly and annual financial accounts, by institutional sectors.

## 10.2. Statistical tasks resulting from NBP's participation in the European System of Central Banks and in other international institutions

In 2022, NBP continued to cooperate with international institutions in the area of statistics, above all with the ECB, the European Commission (Eurostat), the Committee on Monetary, Financial and Balance of Payments Statistics, the European Banking Authority (EBA), the European Systemic Risk Board (ESRB) and the OECD.

The cooperation involves the participation of NBP representatives in committees that establish statistical standards.

### 10.2.1. Monetary and financial statistics

In 2022, NBP provided the ECB with: harmonised monthly and quarterly data on the aggregated balance sheet of monetary financial institutions (MFIs), monthly interest rate statistics, monthly and quarterly data on the assets and liabilities of investment funds, annual data on the statistics of insurance institutions, quarterly data on pension funds as well as data required by the RIAD.<sup>2</sup>

Following the 2021 conclusion of an agreement with PFR SA on the provision of data from Employee Capital Plans (PPK) to the central bank, IT solutions were developed to enable the importing of the data.

In 2022, Narodowy Bank Polski participated in the work of the following ECB working groups:

- the Working Group on Monetary and Financial Statistics. The work focused on amending ECB provisions on the investment fund statistics,<sup>3</sup> analysing the quality of data provided under an amended Regulation on monetary statistics<sup>4</sup> and payment statistics.<sup>5</sup>
- the Working Group on Analytical Credit Datasets (WG AnaCredit). The work included, among other things, the analysis of the reporting population, the reconciliation of

<sup>2</sup> Register of Institutions and Affiliates Data (RIAD).

<sup>3</sup> Regulation (EU) 1073/2013 of the European Central Bank of 18 October 2013 concerning statistics on the assets and liabilities of investment funds (recast) (ECB/2013/38).

<sup>4</sup> Regulation (EU) 2021/379 of the European Central Bank of 22 January 2021 on the balance sheet items of credit institutions and of the monetary financial institutions sector (ECB/2021/2).

<sup>5</sup> Regulation (EU) 2020/2011 of the European Central Bank of 1 December 2020 amending Regulation (EU) No. 1409/2013 on payment statistics (ECB/2013/43) (ECB/2020/59).

AnaCredit reporting data with other reports, updating the guidelines for reporting agents and instructions for data users.

- the NEWS1 Expert Group. It worked on methodological issues related to the definitions of loan categories at AnaCredit, methods of presenting them in reports and reconciliation with other reporting types.

Narodowy Bank Polski participated, as observer, in the work of the Expert Group on Integrated Reporting Framework<sup>6</sup> of the ESCB. Work continued on developing issues for consultations with banks and users, initial business processes, an integrated dictionary and a data model.

Narodowy Bank Polski also participated in the work of the RIAD Hub Network on information on investment funds in the context of the forthcoming amendment to Regulation on statistics of investment funds.<sup>7</sup>

### 10.2.2. Prudential statistics

In 2022, NBP continued to provide the UKNF with data used for the assessment of the financial and prudential situation of the banking sector. The UKNF then reported such data to the EBA.

The data were also shared with the BFG, the Ministry of Finance and Statistics Poland. Moreover, NBP submitted to the ECB reports on financial reporting, capital adequacy, liquidity and large exposures (consolidated banking data, CBD).

In 2022, as part of the reporting information system (SIS), Narodowy Bank Polski prepared reporting infrastructure for new EBA requirements concerning:

- financial reporting (FINREP on a consolidated level), stable funding (NSFR), the short-term liquidity ratio (LCR), the leverage ratio (LR), large exposures (LE)<sup>8</sup>, market risk reporting (FRTB)<sup>9</sup> and funding plans (FP),<sup>10</sup>
- remuneration benchmarking (REM BM), the gender pay gap (REM GAP), approved higher ratios (REM HR)<sup>11</sup>, data on high earners (REM HE)<sup>12</sup>,
- own funds requirement (COREP), additional liquidity monitoring metrics (ALMM) and asset encumbrance (AE).

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<sup>6</sup> NBP was also represented in High Level Task Force on ESCB's Integrated Reporting Framework (IReF), a group set up to advise the ECB Governing Council on the issue.

<sup>7</sup> Regulation (EU) 1073/2013 of the European Central Bank of 18 October 2013 concerning statistics on the assets and liabilities of investment funds (recast) (ECB/2013/38).

<sup>8</sup> Commission Implementing Regulation (EU) 2021/451 of 17 December 2020 laying down implementing technical standards for the application of Regulation (EU) No. 575/2013 of the European Parliament and of the Council with regard to supervisory reporting on institutions and repealing Implementing Regulation (EU) No. 680/2014.

<sup>9</sup> Commission Implementing Regulation (EU) 2021/453 of 15 March 2021 laying down implementing technical standards for the application of Regulation (EU) No. 575/2013 of the European Parliament and of the Council with regard to the specific reporting requirements for market risk.

<sup>10</sup> Guidelines of 9 December 2019 on harmonised definitions and templates for funding plans of credit institutions under Recommendation of the European Systemic Risk Board of 20 December 2012 (ESRB/2012/2) – EBA/GL/2019/05.

<sup>11</sup> Guidelines of 30 June 2022 on the benchmarking exercises on remuneration practices, the gender pay gap and approved higher ratios under Directive 2013/36/EU – EBA/GL/2022/06.

<sup>12</sup> Guidelines of 30 June 2022 on the data collection exercises regarding high earners under Directive 2013/36/EU and Directive (EU) 2019/2034 – EBA/GL/2022/08.

NBP representatives also participated in the work of the ECB and EBA working groups which deal with the issues of supervisory statistics, including data quality, liquidity and reporting.

### 10.2.3. Statistics of the balance of payments, the international investment position and direct investment

In 2022, as in previous years, NBP provided the ECB with harmonised monthly and quarterly data on the balance of payments, the international investment position, official reserve assets, liquid assets and liabilities denominated in foreign currency and external debt. Moreover, the Bank provided Eurostat with annual data on international trade in services and foreign direct investment.

Narodowy Bank Polski continued to carry out analytical work on migration processes. This analysis gained in importance in view of Russia's aggression against Ukraine. In the second quarter of 2022, NBP regional branches conducted an ad hoc study among Ukrainian refugees staying in Poland. The research helped to identify their economic condition. In the second half of 2022, the Bank also conducted a scheduled questionnaire survey among Ukraine's nationals.

Narodowy Bank Polski participated in the work of international working groups dealing with the following issues: external relations statistics (at the ECB), BoP statistics and direct investment statistics (at Eurostat) and foreign investment statistics (at the OECD). The Bank also took part in the work on updating manuals for international statistics (national accounts, balance of payments and the international investment position).

### 10.2.4. Other statistics and other activities

- Financial accounts statistics. NBP submitted quarterly and annual financial accounts to the ECB and Eurostat, respectively; participated in the work of, among others, the ECB Working Group on Financial Accounts<sup>13</sup> and cooperated with EU institutions to ensure the quality of data used in the Macroeconomic Imbalance Procedure in the EU.
- General government sector statistics. In 2022, NBP submitted to the ECB annual data on the statistics of the sector. It also participated in the work of working teams on this area of statistics, both domestically and at the ECB.<sup>14</sup>
- Real sector statistics. As part of the BACH (Bank for the Accounts of Companies Harmonised)<sup>15</sup> working group, NBP participated in a study of the impact of the COVID-19 pandemic on the financial position of enterprises, internationally. As part of NBP's participation in the Risk Assessment Working Group operating within the European

<sup>13</sup> Working Group on Financial Accounts and Government Finance Statistics.

<sup>14</sup> General Government Statistics Working Group established by the President of Statistics Poland and Working Group on Financial Accounts and Government Finance Statistics.

<sup>15</sup> BACH Working Group acts as part of the European Committee of Central Balance Sheet Data Offices (ECCBSO).

Commission,<sup>16</sup> a study was conducted to identify loss-making enterprises (the so-called zombies) and determine the impact of zombie companies' credit exposures on credit risk and financial system risk.

- Statistics on securities investments. NBP developed tools for managing the quality of data on securities and participated in the work of the ECB Working Group on Securities Statistics.

Also in 2022, NBP:

- fed the Erydan database with metadata and harmonised the rules for managing database content,
- signed an annex to the agreement with BFG on the exchange of information between the institutions following the entry into force of amended EU provisions,
- participated in the ECB work on the development of data analysis tools,<sup>17</sup>
- implemented new solutions for transferring payments statistics data to the ECB and broadened the scope and frequency of such data,
- analysed the condition of the domestic banking sector based on aggregated prudential data.

#### Highlights in 2022:

- adaptation of the reporting infrastructure to the new EBA reporting standards,
- conducting an ad hoc study on a sample of Ukrainian refugees staying in Poland and the scheduled questionnaire survey among Ukraine's nationals,
- feeding the Erydan database with metadata and harmonising the rules for managing database content.

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<sup>16</sup> Risk Assessment Working Group acts as part of the European Committee of Central Balance Sheet Data Offices (ECCBSO).

<sup>17</sup> Network of Experts on Machine Learning.



Chapter 11

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# Education and information

## Education and information

The educational activity of NBP relates to the tasks specified in Article 59 of the Act on Narodowy Bank Polski, according to which the central bank carries out publishing and promotional activities. As part of this activity, the bank runs numerous educational, communication and promotional projects which aim to communicate NBP activity and to raise public awareness about the operating principles of the central bank, the banking system and the market economy.

### 11.1. Education

#### 11.1.1. Economic Education Programme

As part of NBP's educational activity, projects are implemented which aim to popularise the operating principles of the financial market, develop attitudes that are conducive to its stability and growth, enhance knowledge of economic issues, including the knowledge of the role and mission of the central bank and the Polish currency. NBP also aims to promote entrepreneurship, counteract financial exclusion and popularise knowledge about economic heritage, the history of money and new trends in economics. Central bank activities are implemented in two forms. The first one is based on own economic education activities, the second one – on sponsoring external projects on the subject.

In 2022, NBP:

- Completed the second edition of the nationwide educational programme, *NBP Gold Schools*, addressed to primary school 7<sup>th</sup> and 8<sup>th</sup> formers and secondary school students. The theme of the second edition was *Security in personal finance*. One of the aims of the programme is to prepare young people so that they are able to navigate the world of finance safely and with confidence. Over 115,000 students took part and the title of NBP Gold School was awarded to 202 schools. December 2022 marked the beginning of the third edition of the programme, whose theme is *Learn about the central bank*.
- In response to the influx into Poland of a large group of school-age children from Ukraine, Narodowy Bank Polski, acting in cooperation with Agata Kornhauser-Duda, First Lady of the Republic of Poland, prepared 11,000 educational packages and distributed them among schools. The packages comprised handbooks for learning Polish, with elements of economic education as well as educational materials concerning economics.
- Announced the results of the fourth edition of the NBP Governor Award competition for outstanding books on banking, money and finance, in which 30 entries had been submitted. The Competition jury gave the award to the publication titled *Bankowe ryzyko systemowe. Źródła i instrumenty redukcji (Systemic Risk in Banking. Sources and Mitigation Instruments)*.
- Developed educational materials concerning, among other things, on the role of the central bank, the Polish currency, foreign exchange reserves and the wide availability of cash.

- Once again joined the Global Money Week, which is a global campaign for the financial education of children and young adults organized by the OECD's International Network on Financial Education. NBP's related educational activities involved nearly 2,500 students.
- Subsidised 81 economic education projects implemented all over Poland (19 projects endorsed by the Council for Economic Education and 62 projects endorsed by the NBP Commission for the Support of Social Educational Initiatives). The decisions to provide funding were preceded by a multi-stage verification process. Projects with a value exceeding PLN 30,000 were assessed by the Council for Economic Education, which is an opinion-providing and advisory body attached to the Management Board of NBP.<sup>1</sup> Projects with a value below PLN 30,000 were evaluated by the NBP Commission for the Support of Social Educational Initiatives. Conclusions drawn and recommendations given by these bodies are part of the evaluation of the projects.

In 2022, NBP's educational activities involved various target audiences, including more than 138,000 students and over 2,600 teachers.

NBP's educational activities were evaluated by NBP staff, the Council for Economic Education, the Commission for the Support of Social Educational Initiatives and by external research agencies selected under a tender procedure. The activities, and regular surveys of financial competence of Poles commissioned by NBP (e.g. a survey of children and young adults in 2022) are taken into account in the planning of NBP's educational activities for the coming years.

The educational activity of NBP is appreciated by entities operating in this field. A lot of beneficiaries – especially schools – publish information about the benefits of cooperation with NBP on their websites.

#### 11.1.2. Sławomir S. Skrzypek NBP Money Centre

The activity of the exhibition and educational facility, the Sławomir S. Skrzypek NBP Money Centre, aims to bring the history of money closer to the public, along with its role in the social and economic history of Poland and the world. Visiting the exposition and participating in the educational activity of the NBP Money Centre is free of charge.

In 2022, the exposition was seen by more than 83,000 visitors (i.e. about 225 a day on average).

In 2022, the activity of the NBP Money Centre included, among others:

- An expansion of the educational offering, including the updating and upgrading of scenarios of educational activities; an exposition guide was prepared for young schoolchildren with autism spectrum disorder and new multimedia content was added.
- The following exhibition and educational projects: a presentation titled *Money in Ancient Judaea in the time of Jesus Christ*; an exhibition of banknotes from the time of the Polish People's Republic: the E-71 series of banknotes prepared in case of a potential armed conflict

<sup>1</sup> It comprises representatives of social and professional communities associated with the educational and research activity, social communication and financial policy.

during the cold war and banknotes from the Polish Cities series (designed by Andrzej Heidrich), which was never put into circulation. In addition, activities for children and young adults were organised as part of the campaigns: Winter in the City, Summer in the City, St. Nicholas Day, as well as public lectures by experts on topics related to the subject matter of the exposition.

- Publication of a monograph about Fryderyk Florian Skarbek and the album *History of the Polish Zloty*, about the history of the Polish currency from the late 1400s to the 1930s.
- Presentation of a series of public lectures on economic history, numismatics and economics broadcast on NBP's YouTube channel and available on [cpnbp.pl](http://cpnbp.pl).
- The second round of the NBP Money Centre Prize Competition for the best Master's thesis about social and economic history.
- Addition of new exhibits,<sup>2</sup> conservation of paper objects and expert examinations of Chinese coins held by NBP.

### 11.1.3. Activity of the NBP Academy

The NBP Academy was established in 2022. The NBP Academy offers courses in economics, finance, banking, and monetary policy for professionals from the financial services sector.

In 2022, the NBP Academy conducted an inaugurating course entitled "Finance and Monetary Policy", organised in cooperation with the Lech Kaczyński National School of Public Administration (KSAP).

## 11.2. Communication activities

### 11.2.1. Communication campaigns and other promotion activities

In 2022, NBP continued its communication activities with the aim of informing the public about the central bank tasks, including those related to monetary policy.

In 2022, NBP informed the public about NBP's educational projects, issues of collector items, the activities of the Sławomir S. Skrzypek NBP Money Centre, the NBP Academy as well as NBP's publications.

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<sup>2</sup> The NBP Money Centre obtained, among other things, a 19<sup>th</sup> century Russian money box made from tea glass holders, a late 19<sup>th</sup> century coin holder with a spring loaded mechanism for inserting coins and a chatelaine – an ornamental set of accessories attached to the waist of a gown, including a set of watch keys, decorated with five European silver circulation coins.

### 11.2.2. Presentation of NBP's activity on the Internet

In 2022, NBP continued communicating with external recipients on the Internet, as a result of which:<sup>3</sup>

- NBP websites recorded a total of over 121 million views (an increase of 6% compared to 2021), the website *nbp.pl* had 117.6 million views (an increase of 7%, and the number of users grew by 37%).
- 141 video materials were uploaded on YouTube (including 38 live transmissions), which had a total of 8.2 million viewings (an increase of 269% compared to 2021). The total number of viewings since the channel's inception exceeded 15 million and the number of subscriptions exceeded 20,500.
- Live broadcasts were provided of the NBP Governor's press conferences, international conferences, lectures organised by the NBP Money Centre, award ceremonies for the winners of NBP competitions, as well as other events.
- NBP's Facebook profile was followed by 122,200 people (an increase of 14% compared to 2021), its Twitter profile was followed by over 35,000 people (an increase of 38%), the LinkedIn profile by 52,000 and Instagram profile by more than 1,700 people.

### 11.2.3. Liaising with the media and market analysts

While liaising with the media and market analysts in 2022, NBP:

- informed the public of its reports and analyses, including reports on monetary policy, the financial system (macroprudential supervision, in particular), the payment system and on the macroeconomic situation,
- presented the current activity of the central bank, among others, monetary policy implementation, issuance of the currency (including collector coins and banknotes) and educational activities,
- organised meetings with the media and press conferences.

## 11.3. Publishing and Library

NBP's publishing activity involves issuing documents related to central bank tasks, research and statistical and analytical papers, and documents aimed at spreading knowledge about economics and finance.

In 2022, several dozen publications were released, including among others: *Annual Report*, *Plan of Activity*, *Report on NBP Operations*, *Monetary Policy Guidelines*, *Report on Monetary Policy Implementation*, *Balance of Payments of the Republic of Poland*, *Inflation Report*, *Financial System in Poland*, *Financial Stability Report*, *Report on Banking Sector Liquidity and Monetary Policy Instruments*, *Information on home prices and the situation in the housing and commercial*

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<sup>3</sup> Data as at 31 December 2022.

*real estate market in Poland, International Investment Position, Report on Systemic Oversight of the Polish Payment System, Foreign Direct Investment in Poland and Polish Direct Investment Abroad, Report on Cash Circulation in Poland, The situation in local residential real estate markets in Poland, Information Bulletin* (a statistical monthly), *Bank i Kredyt* (Bank and Credit, a scientific journal), *Materiały i Studia* (published in Polish), *NBP Working Papers* (published in English),<sup>4</sup> *Review of European Issues*, quarterly summaries of the ECB Economic Bulletin in Polish. A separate group of publications were educational publications, including ones about Polish economists (such as a brochure about Fryderyk Skarbek), new modules of the NBP Money Centre exposition (a brochure titled *Money in Judaea in the time of Jesus Christ*) and temporary exhibitions: *E-71 Banknote Series – History Revealed*, *History of the Polish Zloty – an English version of the exhibition album*, as well as journalist publications – the *Obserwator Finansowy* monthly.

NBP runs the Central Library, which is a scientific library, in its Head Office building. It houses one of the biggest collections of publications in Poland relating to economic sciences, specifically banking, finance and management. In 2022, the NBP Central Library was visited by over 4,700 readers. The collection of the NBP Central Library comprises over 156,400 volumes (1,200 more than in 2021). The facility provides tools for effective searching of electronic sources and is adapted to the needs of people with disabilities (a computer station for visually impaired people). The most valuable library materials are preserved and stored in digital form.

#### 11.4. Petitions, complaints, requests and letters

In 2022, NBP handled a total of 2,024 queries (2,465 in 2021), including 1,862 letters, 94 complaints and requests, 66 requests for public information and 2 petitions.

Correspondence that did not relate to NBP activities was referred to other entities in accordance with their remit or the senders were informed of the authorities or institutions competent to handle the case.

Matters addressed to NBP referred to, among others, the monetary policy of NBP, the economic situation of the country, including inflationary processes, the situation of businesses and households as well as the situation in the labour, real estate, financial, credit and foreign exchange markets.

The information and queries concerned in particular:

- cash dealings and collector coins and banknotes,
- the liquidity of the financial sector and monetary policy instruments,
- the exchange of hryvnia into zlotys,
- the exchange of coins using self-service equipment,
- the exchange of mutilated or withdrawn foreign money,
- the provision of statistical data,
- information about foreign exchange reserves and exchange rates,
- interpretation of legislation,
- historical information about banks and financial institutions,

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<sup>4</sup> A detailed list of publications of *Materiały i Studia* and *NBP Working Papers* series issued in 2022 is presented in the Appendix entitled *List of selected academic publications of NBP*.

- dissemination of economic knowledge and new technologies,
- the use of images of banknotes, establishment of cooperation and the patronage of NBP.

NBP also received queries about the activity of commercial and cooperative banks as well as numerous reports of incidents of attempted fraud, including identity theft and phishing as well as financial fraud.

**Highlights in 2022:**

- the second edition of the *NBP Gold Schools* nationwide education programme,
- the provision of educational packages to state schools in Poland for children and teenagers from Ukraine,
- subsidising 81 economic education projects carried out all over the country,
- expanding the educational offer and exhibits of the NBP Money Centre,
- continuing NBP's communication activities on the Internet, in particular in social media.





Chapter 12

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# Legislative activity

# Legislative activity<sup>1</sup>

## 12.1. Legislation by the NBP governing bodies

In 2022, the governing bodies of NBP issued 177 legal acts, of which 40 were issued by the Governor of NBP, 16 by the Monetary Policy Council, and 121 by the Management Board of NBP.

Out of the legal acts issued by the governing bodies of NBP in 2022, 33 were promulgated in Monitor Polski (the Official Gazette of the Republic of Poland) and 24 in the Official Journal of Narodowy Bank Polski.

## 12.2. NBP contribution to legislative activity by state authorities with respect to draft normative acts

Pursuant to the Act on Narodowy Bank Polski, NBP cooperated with the state authorities by issuing opinions on draft normative acts regarding economic policy and with relevance to the banking system. Through these activities NBP sought to ensure the stability of the financial system and the safety and development of the banking system.

In 2022, NBP received:

- 1,376 documents sent as part of the work of the Standing Committee of the Council of Ministers, including 322 bills, for which five opinions (NBP positions) were drawn up,
- 35 draft legislative acts sent as part of the work of the Committee for European Affairs, for which one opinion (NBP position) was drawn up,
- 109 draft legal acts sent as part of inter-ministerial consultations, including 35 bills and 74 draft regulations, for which 56 opinions (NBP positions) were drawn up,
- 98 bills from the Chancellery of the Sejm, the Chancellery of the Senate and the Chancellery of the President of the Republic of Poland, for which NBP positions were drawn up.

In 2022, NBP representatives participated in five consultative conferences, two sessions of legal committees as well as in 17 meetings of Sejm and Senate committees and subcommittees.

In 2022, NBP participated in the work of the Committee for European Affairs. From the perspective of Narodowy Bank Polski, the most important acts this Committee worked on were:

- a bill amending the Bonds Act and certain other acts,
- a bill on the Protection of Whistleblowers Reporting Legal Offences,
- a bill amending the Act on Goods and Services Tax and the National Revenue Administration Act.

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<sup>1</sup> Tasks in this field are performed, among others, pursuant to Article 7, Article 12, Article 16(3), Article 17(3) (2) and 17(4), and Article 21 para. 3 and para. 4 of the Act on Narodowy Bank Polski and pursuant to the provisions of other acts in compliance with delegations included therein for the governing bodies of NBP to adopt legal acts.

Narodowy Bank Polski also contributed to developing solutions in the major areas of the functioning of the state, in particular, by participating in the activities of the following bodies:

- the Council of the Bank Guarantee Fund,
- the Polish Financial Supervision Authority,
- the Financial Stability Committee,
- the Polish Accounting Standards Committee,
- the Export Insurance Policy Committee,
- the Financial Market Development Council,
- the Social Dialogue Council.

### 12.2.1 Draft legislation related to the operation of the banking system

The most important draft legal acts related to the operation of the banking sector that NBP issued its opinion on in 2022 included:

- bills which subsequently became:
  - the Act of 7 April 2022 Amending the Act on Covered Bonds and Mortgage Banks and Certain Other Acts (Journal of Laws, item 872),
  - the Act of 13 April 2022 on Special Solutions to Prevent Support for the Aggression against Ukraine and Protect National Security (Journal of Laws of 2023, items 129 and 185),
  - the Act of 5 August 2022 Amending the Act on Mortgage Loan and Supervision of Mortgage Brokers and Agents and the Act Amending the Act on Personal Income Tax, the Act on Corporate Income Tax and Certain Other Acts (Journal of Laws, item 1719),
  - the Act of 6 October 2022 Amending the Acts on Counteracting Usury (Journal of Laws, item 2339).
- bills:
  - a parliamentary Bill amending the Act on State Aid in the Repayment of Some Housing Loans, Granting Guarantee Premiums and Refunding Paid Guarantee Premiums to Banks,
  - a parliamentary Bill on Protecting Borrowers Repaying Housing Loans against the Consequences of Interest Rate Increases,
  - a Senate Bill Amending the Consumer Loan Act.

### 12.2.2 Other bills

In 2022, Narodowy Bank Polski participated in issuing opinions on draft legal acts not related directly to the banking sector. The most important draft legal acts concerned homeland defence, the development of public ICT systems, crowdfunding of business projects and aid to borrowers, simplification of administrative procedures for citizens and entrepreneurs, pawn shop activity, e-administration and electronic communication.

### 12.3. Consulting the European Central Bank's draft opinions to draft Community laws and draft national legislation of the EU Member States by NBP

In 2022, NBP participated in delivering opinions on 46 proposals for legislative acts (Community laws and national legislation of the EU Member States) on which the ECB issued opinions.<sup>2</sup> The ECB opinions on draft Community laws related to:

- the Regulation on the prevention of the use of the financial system for money laundering or terrorist financing and on the Directive concerning the mechanisms to be put in place by the Member States for the prevention of the use of the financial system for the purposes of money laundering or terrorist financing,
- the Regulation establishing the Authority for Anti-Money Laundering and Countering the Financing of Terrorism,
- the Regulation establishing a European single access point providing centralised access to publicly available information of relevance to financial services, capital markets and sustainability,
- the Regulation establishing a market correction mechanism to protect citizens and the economy against excessively high prices,
- the Directive on measures for a high common level of cybersecurity across the Union,
- the Directive amending Directives 2011/61/EU and 2009/65/EC as regards delegation arrangements, liquidity risk management, supervisory reporting, provision of depositary and custody services and loan origination by alternative investment funds.

The consultations also covered numerous draft legal acts of the EU Member States, including the Polish draft act on building societies. The opinions concerned, among other issues, the programme of exchange of Ukrainian hryvnia for euro by refugees from Ukraine, the strengthening of financial stability, the exercise of financial supervision, cash payment limits and cash handling management, the competences of the governing bodies of central banks and the introduction of the euro in Croatia.

#### Highlights in 2022:

- participation in the work of the state authorities on draft legal acts with relevance to the banking system and the economy,
- participation in issuing the ECB opinions on proposals of EU legislation and draft legal acts of the EU Member States on, among others, financial supervision, financial stability strengthening, anti-money laundering and countering the financing of terrorism, cash payments and cybersecurity.

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<sup>2</sup> According to the provisions of the Treaty on the Functioning of the European Union and the Statutes of the ESCB and the ECB, the ECB is entrusted with the task of issuing opinions on Member State and Community level draft legislative acts concerning the issue of currency, legal tenders, the status and activities of national central banks, the monetary statistics, payment systems and financial institutions.

Chapter 13

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# International activity

# International activity<sup>1</sup>

## 13.1. Duties resulting from Poland's membership of the European Union

In 2022, NBP representatives participated in the activities of EU bodies, including the General Council of the ECB, the General Council of the ESRB, committees and working groups of the ESCB and ESRB, the Council of ECOFIN (informal meetings), and committees and working groups of the Council of the European Union and expert groups of the European Commission.

The key activities concerned further work on the amendment of the Capital Requirements Directive and Regulation (CRD VI, CRR III) as part of the implementation of the final provisions of the Basel III reform, and in order to strengthen the resilience of European banks and support the post-COVID-19 economic recovery in the EU.

The activities also covered:

- a legislative package related to the deepening of the capital markets union (establishing the European single access point and amendments to the following regulations: on European long-term investment funds, on alternative investment fund managers and on financial instrument markets),
- a package of legal acts concerning digital finance (crypto-asset markets and the digital resilience of the financial sector),
- a legislative package on a review of the Community insurance regulations (an amendment to the Solvency II Directive and a proposal for a new directive establishing a framework for the recovery and resolution of insurance and reinsurance undertakings),
- completing the banking union (including plans for strengthening the common emergency management framework and national deposit guarantee schemes),
- a review of the Community macroprudential regulations for the banking sector.

Moreover, in 2022 work was launched on a draft regulation on instant payments in euro and a new capital markets union legislative package.

Narodowy Bank Polski also participated in the work on the recommendation of the Council of the EU on the conversion of hryvnia into the currency of Member States hosting refugees from Ukraine. Additionally, during meetings of EU assemblies NBP shared its experience from the programme of hryvnia exchange into Polish złoty implemented in Poland.

### 13.1.1. Cooperation within the European System of Central Banks

NBP representatives participated in the work of the ESCB to the extent resulting from the status of the central bank of a Member State which remains outside the euro area. In particular, they took part in the meetings of the ECB General Council (one of the ECB's decision-making bodies), including the extraordinary meeting of this assembly devoted to Russia's aggression against Ukraine. They also participated in the work of the ESCB committees.

<sup>1</sup> Tasks in this field are performed, among others, pursuant to Article 5, Article 11(2) and (3), Article 23(7) of the Act on Narodowy Bank Polski and the Statutes of the ECB and the ESCB.

The sessions of the ECB General Council focused primarily on the economic situation in the EU Member States in the context of the COVID-19 pandemic and Russia's aggression against Ukraine, addressing in particular economic activity, developments in the labour market, inflation, exchange rate fluctuations, balance of payments, lending conditions and monetary policy. The General Council continued to monitor the activities of central banks with regard to the prohibition on monetary financing<sup>2</sup> of the public sector with central bank funds and the prohibition of privileged access.<sup>3</sup> It also discussed the advancement of the economic and legal convergence of the Member States of the EU which remain outside the euro area.<sup>4</sup>

During the meetings of the ESCB committees as well as the ESCB working groups and task forces the following issues were discussed, among others:

- the impact assessment of rising inflation on financial stability,
- work on a review of the PSD2 Directive,
- a digital euro,
- work related to the project of the banks' Integrated Reporting Framework (IReF).

### 13.1.2 Collaboration with other EU bodies

In 2022, NBP representatives participated, directly or indirectly, in the activities of the following EU bodies:

- the Economic and Financial Committee (EFC) of the Council of the EU,
- working groups of the Council of the EU and expert groups of the European Commission.

## 13.2. Collaboration with international economic and financial institutions

### 13.2.1. The World Bank Group (WBG)

As part of cooperation with the World Bank Group (WBG), representatives of NBP participated in:

- the Spring and Annual Meetings of the Boards of Governors of the World Bank and the IMF,
- two special donor meetings of the International Development Association (IDA),<sup>5</sup> including a meeting about providing support to Ukraine,
- a formal celebration of the 30<sup>th</sup> anniversary of the constituency in the World Bank Group and the International Monetary Fund<sup>6</sup> that Poland is a member of.

NBP continued to support the activities of the Polish executive director<sup>7</sup> representing the member states of the Polish-Swiss constituency in the WBG (his term of office ended on 31 October 2022; Poland's representative currently acts as alternate executive director).

<sup>2</sup> Laid down in Article 123 of the Treaty on the Functioning of the European Union.

<sup>3</sup> Laid down in Article 123 of the Treaty on the Functioning of the European Union.

<sup>4</sup> This applied to Bulgaria, the Czech Republic, Croatia, Hungary, Poland, Romania and Sweden.

<sup>5</sup> IDA is a unit of the WBG specialising in providing development assistance to the world's poorest countries.

<sup>6</sup> Besides Poland, the group includes the following members: Azerbaijan, Kazakhstan, Kyrgyzstan, Serbia, Switzerland, Tajikistan, Turkmenistan and Uzbekistan.

<sup>7</sup> The representative of Poland – for the first time in history – took up the position on 1 November 2020 (for two years).

The NBP representatives expressed their support for World Bank Group actions aimed at providing assistance for Ukraine.

### 13.2.2. The International Monetary Fund (IMF)

In 2022, as part of cooperation with the IMF, NBP participated in meetings with IMF representatives under Article IV of the IMF Agreement and provided professional support to the Polish representatives at the Fund.<sup>8</sup>

In 2022, NBP continued the following activities under the temporary increase of the IMF financial resources:

- standing ready to extend to the IMF an interest-bearing loan up to the amount corresponding to SDR 2.57 billion – as a member of New Arrangements to Borrow (NAB),
- acting as a signatory of the bilateral loan agreement with the IMF for the amount of up to EUR 2.7 billion.

The funds made available by Narodowy Bank Polski to the IMF both under NAB and the bilateral loan agreement will retain their status as foreign currency reserves. So far, the IMF has not used the funds made available under the bilateral loan. Under NAB, as at the end of 2022, the IMF had used the amount corresponding to SDR 12.3 million.

### 13.2.3. The European Bank for Reconstruction and Development (EBRD)

In 2022:

- NBP representatives participated in the 31<sup>st</sup> Annual Meeting of the EBRD Board of Governors in Morocco, and NBP hosted visits of high-ranking representatives of the EBRD (Vice President and a delegation of the Board of Directors).
- NBP – in cooperation with the public administration – participated in consultations concerning investment documents and projects considered at the meetings of the EBRD Board of Directors,<sup>9</sup> in particular supporting the EBRD's initiatives aimed at funding projects in Ukraine.

### 13.2.4. The Bank for International Settlements (BIS)

NBP representatives participated in six meetings of the Governors of the Bank for International Settlements. The General Meeting of Shareholders of BIS held in 2022 passed the 92<sup>nd</sup> Annual Report, approved the balance sheet as at 31 March 2022 (net profit in the amount of SDR 341 million) and resolved to pay the dividend. NBP received a dividend of about USD 2.9 million, i.e. the equivalent of SDR 2.2 million.

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<sup>8</sup> The Polish Minister of Finance acts in the capacity of the Governor of the Republic of Poland at the IMF, and the NBP representative is the Alternate Governor.

<sup>9</sup> The Governor of NBP acts in the capacity of the Governor of the Republic of Poland at the EBRD.



### 13.2.5. The Organisation for Economic Co-operation and Development (OECD)

In 2022, NBP experts participated in meetings of thematic committees and working groups of the OECD and in the activities under the OECD International Network on Financial Education.

In 2022, two meetings were held between NBP representatives and the mission of the OECD Secretariat preparing the 17<sup>th</sup> Economic Survey of Poland. They discussed such issues as monetary policy and financial stability in Poland. An NBP representative also participated in the meeting of the OECD Economic and Development Review Committee to discuss the survey results.

### 13.2.6. The International Bank for Economic Cooperation (IBEC) and the Asian Infrastructure Investment Bank (AIIB)

In 2022, the Ministry of Finance submitted a notice of termination of the Agreement Concerning Multilateral Settlements in Transferable Roubles and the Establishment of the International Bank for Economic Cooperation. As a result of this decision, Poland ceased to be a member of the bank as of 29 January 2023.

In 2022, NBP representatives participated in the Annual Meeting of the Board of Governors of the AIIB, which addressed the issues of funding of sustainable infrastructure, also during a crisis, and supporting energy transition.

### 13.2.6 Other activities on the international arena

In 2022, NBP organised or co-organised – in cooperation with other international and domestic financial institutions – four international conferences and meetings (in addition to scientific conferences and other scientific events):

- 18–20 May 2022: the 21<sup>st</sup> edition of a conference organised in cooperation with the Bank of International Settlements entitled “BIS Working Party on Monetary Policy in Central and Eastern Europe”. The discussions focused on monetary policy in Central and Eastern Europe, including current issues (e.g. the impact of the COVID-19 pandemic on the real economy and the role of economic policy) and selected long-term issues.
- 10 June 2022: the first international conference for the central banks of the Three Seas Initiative member countries entitled “Monetary Policy in a New European Reality”, held under the honorary patronage of the President of the Republic of Poland. The aim of the conference was to exchange views and experiences between the central banks of 12 countries of the region regarding the factors influencing monetary policy in a new global reality (the COVID-19 pandemic, Russia’s aggression against Ukraine).
- 21 September 2022: Polish-Swiss consultations relating to Poland’s and Switzerland’s membership in a single constituency within the International Monetary Fund and the World Bank.

- 29–30 September 2022: the fourth international conference organised by NBP and the Magyar Nemzeti Bank entitled “Competitiveness and Sustainable Economic Growth in the CEE Region”.

In 2022, a total of 840 persons, of whom 700 in person, participated in the above events, international conferences and other scientific events.

Narodowy Bank Polski, as other European central banks, provides technical assistance to central banks from non-EU countries in economic transition. In 2022, in the framework of the technical cooperation programme, NBP implemented 107 projects, including:

- 19 study visits (including 9 online),
- 12 webinars on inflation forecasting models, public procurement, financial risk management, Bayesian econometrics, foreign reserves management, cash transactions, the payment system, economic education, human resources management and credit risk management,
- 2 internships,
- 4 video conferences,
- 11 expert visits,
- 59 expert missions for the National Bank of Ukraine.

Most undertakings were held online. They were attended by a total of 455 persons from 29 central banks.

Moreover, in 2022 NBP continued the implementation of the twinning project for the National Bank of Ukraine. In addition, following Russia’s aggression against Ukraine, Narodowy Bank Polski provided in-kind and financial assistance to the NBU, taking numerous actions to ensure the business continuity of the Ukrainian central bank as well as financial and payment system stability in the region.

#### Highlights in 2022:

- participation in the work of EU bodies on legislation regulating the functioning of the financial system (concerning capital requirements and instant payments in euro) as well as work on deepening the capital markets union and completing the banking union,
- continuation of Poland’s participation in a temporary increase of the IMF’s financial resources under NAB and a bilateral loan,
- assistance to the Ukrainian central bank in maintaining its business continuity and actions for the financial and payment system stability in the region as well as support for Ukraine on the international arena.

Chapter 14

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# Internal development of NBP

# Internal development of NBP

## 14.1. Human resources management

### 14.1.1. NBP headcount

In 2022, the average headcount at NBP amounted to 3,344 full-time posts and was 16 posts lower than in 2021.

Expenses related to the remuneration of employees, along with the related social contributions, were 8% higher in 2022 than in 2021 and, including provisions for future liabilities to employees, they went up by 5.1%.

The change in the NBP average headcount in 2019–2022 is presented in Table 14.1.

**Table 14.1.** Change in the NBP average headcount in 2019–2022

Specification	2019	2020	2021	2022	2022–2021
Total	3,312	3,355	3,360	3,344	-16
Head office	1,983	2,008	2,025	2,024	-1
Regional branches	1,329	1,347	1,335	1,320	-15

Source: NBP data.

### 14.1.2. Developing NBP staff qualifications

The purpose of the NBP training activity is to ensure the competence and reliability of the staff.

In 2022, every employee participated, on average, in 3 training events (2.7 in 2021). The training activities focused on the development of professional expertise of employees. Also training courses were continued as part of the development programme for the managerial staff of NBP. The induction of newly recruited staff was also supported.

Internships for 23 students of Polish and foreign universities preparing their theses in finance and banking were organised.

## 14.2. Organisational changes

In 2022, the following organisational changes were introduced:

- as of 1 January 2022:
  - the Payment Systems Department was assigned a new task to conduct research into and analytical work on digital money,

- the Communications Department was given a new task consisting in the running of the NBP Academy as a project building the brand of NBP, addressed to experts and professionals from the field,
- as of 1 June 2022, the Controlling and Operational Risk Department was closed and its tasks were appropriately divided and distributed among selected departments,
- as of 1 October 2022, the International Department was tasked with coordinating the observance by NBP of international and Polish sanctions, which thus far had been done on a decentralised basis.

### 14.3. Operational risk management

In 2022, NBP took measures aimed at minimising the probability of the materialisation of events disrupting the implementation of the Bank's tasks, resulting in financial losses or deteriorating NBP's reputation. Current and future threats to the Bank were monitored and identified, including the risk associated with the hostilities in Ukraine.

The promotion of standards included in the *Code of Ethics for Employees of Narodowy Bank Polski* was also continued.

### 14.4. Investment activity

In 2022, expenditure on investment purchases of NBP amounted to PLN 70.7 million (PLN 83.4 million in 2021). The main areas of investment activities in NBP included ICT and construction infrastructure.

The ICT investment involved the technological exchange and upgrading of the network and server infrastructure, the purchase of hardware, the expansion of cybersecurity systems and the implementation of new systems and applications. The construction investments mainly focused on the modernisation and reconstruction of infrastructure at the NBP Head Office and Regional Branches.

### 14.5. IT support for the banking system and NBP

The most important activities related to IT systems performed in 2022 included:

- the migration of the format of SWIFT messages exchanged in correspondent dealings and settlements in the TARGET system from MT to MX (ISO20022),
- the launch of a new analytical and reporting platform (MAR) for the systems of banking services provided to the State Budget,
- analytical and programming work in preparation for the implementation of the digital invoice (KSeF),
- continuation of the development of the new RTGS system in the Polish zloty (SORBNET3) and the ECB-coordinated consolidation of the TARGET2 system with the TARGET2-Securities (T2S) platform,
- further development of the New Branch System (NSO).

With regard to the ICT infrastructure:

- upgrading of the servers hosting NBP’s key applications in order to boost their performance,
- optimization of the licences held,
- replacement of network equipment (including routers and security systems),
- installation of the latest versions of system software (for the EGERIA, PEGAZ, SIS, MONREP, INTERFIN, SAP analytical and reporting systems, etc.),
- enhancement of the performance and throughput of the infrastructure in NBP data centres for the users of business applications (such as NBE, EXE, Pegaz, SESCO, SIS2, EWIB),
- enhancement of the security of authentication for SWIFT users.

ICT support was also improved, and in this respect a mobile application for contacting IT help desk was implemented, the SharePoint systems were updated and a help line for the Kolekcjoner online shop was launched.

## 14.6. Internal audit

In 2022, 34 audits were conducted. The audits covered, in particular, issues related to IT activity, cash-and-issue activity, monetary policy, management of foreign exchange reserves, statistics and security. The audits also covered education, information and administration activities.

The audits covered 20 departments of the NBP Head Office and 6 NBP regional branches. They resulted in 65 instructions and 63 recommendations aimed at eliminating the irregularities found, implementing appropriate controls, increasing the efficiency of operations and improving the organisational solutions applied.

In 2022, representatives of NBP participated in the work of ESBC’s Internal Audit Committee. As part of this cooperation, 2 audits were conducted in the area of information technology and statistics.

## 14.7. Activity of NBP regional branches

Narodowy Bank Polski carries out its activity in the field through 16 regional branches located in each voivodeship capital.

In 2022, the regional branches:

- in the framework of banking services provided to the State Budget – participated in efforts aimed at optimising the servicing of account holders, and continued implementing new services for NBP account holders, such as payment cards, orders for cash withdrawals in the third-party substitution cash service and ATM withdrawals using a mobile phone,
- in the cash and treasury area, supported the programme of exchange of hryvnia for Polish zloty for Ukrainian nationals, continued the implementation of barcodes in the GS1 standard with regard to collector items and provided the service of exchanging coins for banknotes or coins of higher denominations using self-service devices.

As in previous years, the regional branches also carried out other tasks related to issuing, foreign exchange, analytical and research activities, as well as education and communication.

## 14.8 Safety and security

In 2022, activities aimed at ensuring and maintaining an adequate level of security at NBP were carried out, including:

- the updating of the rules of guarding the NBP Head Office buildings in connection with the emergence of new risks,
- the implementation of modern equipment to effectively check luggage and parcels for explosives,
- the implementation of tools for the verification, during the coming 20 years, of electronic signatures made in NBP,
- the obtaining of ECB accreditation for trust services provided by NBP,
- the extension of NBP's cybersecurity systems, including those that harden NBP against cyber threats for IT systems used in cash dealings, information sharing about current threats and about cyber-incident-preventing measures, and participation in efforts by the ESBC concerning the preparation and popularisation of new ways of performing tasks related to cybersecurity.

### Highlights in 2022:

- efforts to increase NBP's security in connection with the emergence of new risks,
- expansion of cybersecurity systems,
- participation of NBP regional branches in the provision of banking services to the State Budget as well as cash and treasury services.





Chapter 15

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# **Financial and equity position and financial result of NBP for 2022**

# Financial and equity position and financial result of NBP for 2022

## 15.1. Introduction

The aim of this chapter is to present summarised information on financial and equity position and financial result of NBP for 2022.<sup>1</sup> It describes, from the financial perspective, the areas of activity of the central bank, primarily the management of foreign exchange reserves, the conduct of monetary policy, the issuing activity as well as operating expenses and depreciation and amortisation expenses.

In particular, the chapter includes information concerning the Balance Sheet and the Profit and Loss Account in 2022 compared to previous year. The following items are presented in the Balance Sheet: change in the balance sheet total, change in the structure of assets and liabilities, major items of assets and liabilities broken down by foreign currencies and domestic currency. In the Profit and Loss Account, items comprising the net result are presented (e.g. net result on interest, net result on financial operations, net result on commissions and fees) and its main areas (net result on the management of foreign exchange reserves, net result on foreign exchange gains/losses, net result on monetary policy, operating expenses and depreciation and amortisation expenses).

In addition to financial data for 2022 and 2021, in order to show the information presented over a broader time horizon, historical data are also included, i.e. the developments in the financial and equity position on a five-year basis (2018–2022).

The information contained in this chapter is complementary to the *Financial Statements of Narodowy Bank Polski as at 31 December 2022*, available on the NBP website together with the *Independent Auditor's Report*.

### NBP Balance Sheet

As at the end of 2022, the NBP balance sheet total amounted to PLN 876.2 billion.

The increase in the balance sheet total in 2022 by PLN 50.9 billion (6.2%) was mainly driven by transactions of account holders with NBP, changes in currency exchange rates and prices of gold and increased exposure to simultaneous reverse repo and repo transactions amid a decline in the prices of securities denominated in foreign currency and the balance of securities denominated in zloty, purchased in previous years for monetary policy purposes.

The main changes in assets were related to:

- claims denominated in foreign currency – a total increase of PLN 56.1 billion (9.1%),
- securities denominated in domestic currency – a decrease of PLN 8.6 billion (5.8%).

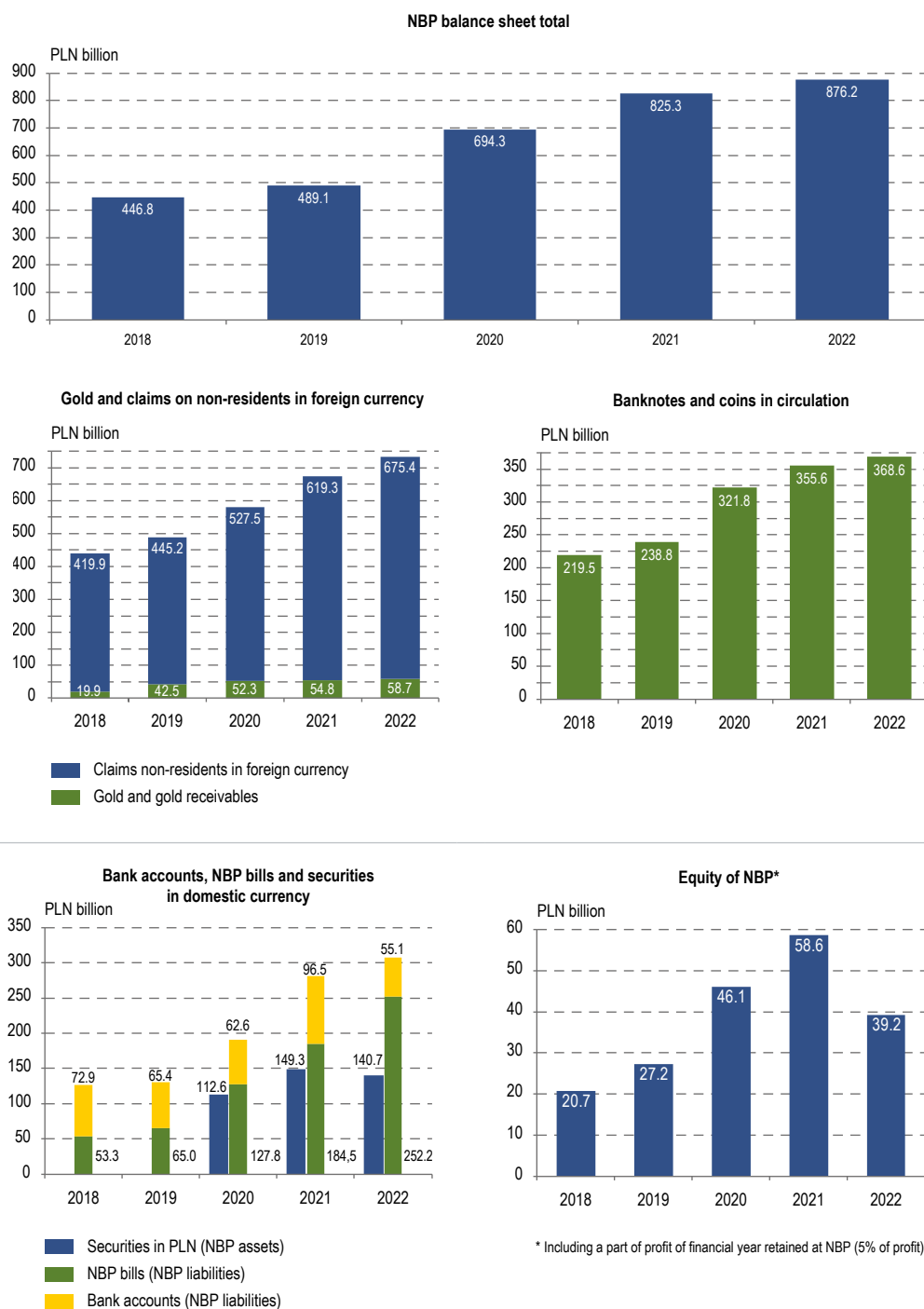
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<sup>1</sup> All data included in this chapter are NBP data, including the data from the accounting books of NBP. The figures may not add up to totals due to rounding.

The major changes in liabilities involved:

- liabilities related to monetary policy – a total increase of PLN 26.2 billion (9.3%),
- banknotes and coins in circulation – an increase of PLN 13.1 billion (3.7%),
- equity of NBP – a decrease of PLN 19.3 billion (32.9%).

**Figure 15.1.** Overview of changes in the NBP Balance Sheet in 2018–2022 (as at 31 December of the financial year)



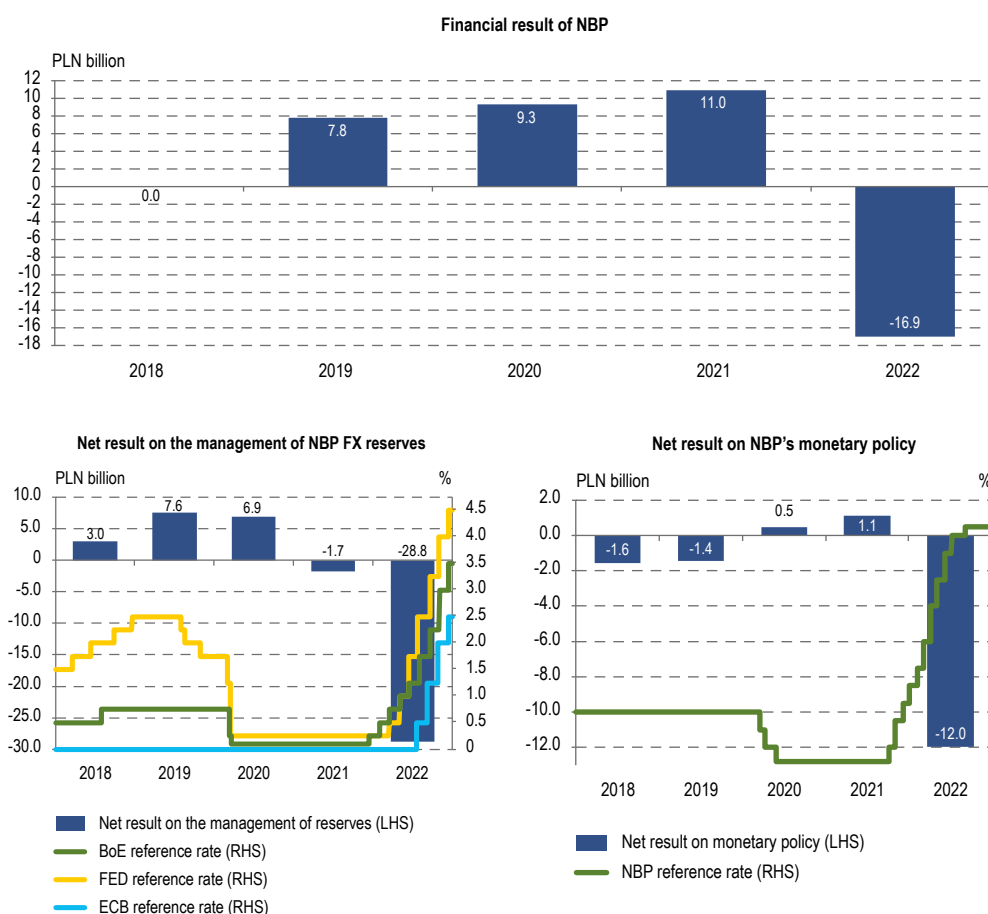
## NBP Profit and Loss Account

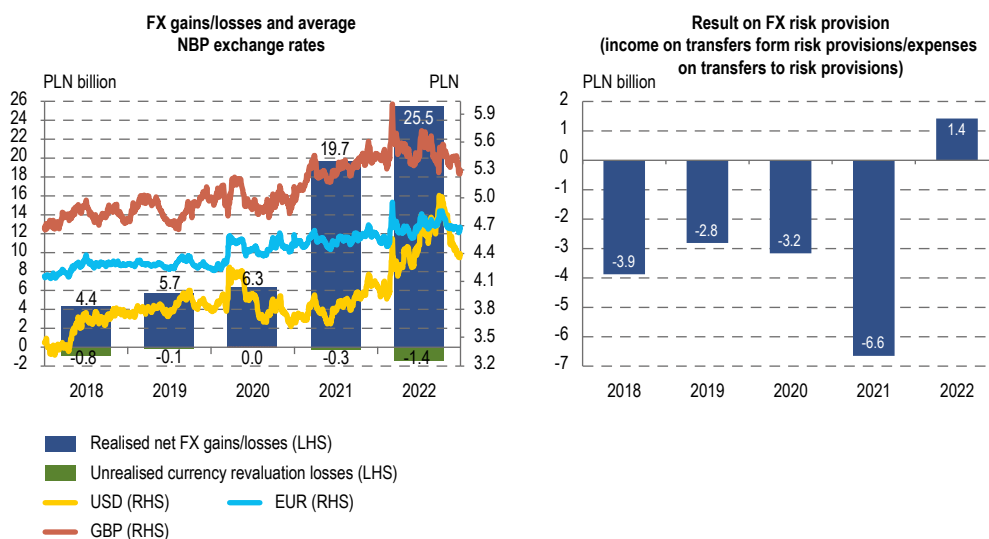
Narodowy Bank Polski recorded a loss of PLN -16.9 billion for 2022. The main elements of the NBP's loss were:

- a negative net result on the management of foreign exchange reserves (in the currency of an instrument) in the amount of PLN -28.8 billion, caused mainly by a negative net result on realised price gains/losses on transactions in securities denominated in foreign currency and on unrealised price revaluation losses as at 31 December 2022 (see Chapter 15.3.1),
- a negative net result on monetary policy in the amount of PLN -12.0 billion,
- operating expenses and depreciation and amortisation expenses amounting to PLN -1.5 billion.

At the same time, the net result on realised foreign exchange gains/losses was positive and amounted to PLN 25.5 billion.

**Figure 15.2.** Overview of changes in the NBP Profit and Loss Account in 2018–2022 (for the relevant financial year)



**Figure 15.2.** Overview of changes in the NBP Profit and Loss Account in 2018–2022 (for the relevant financial year), cont'd


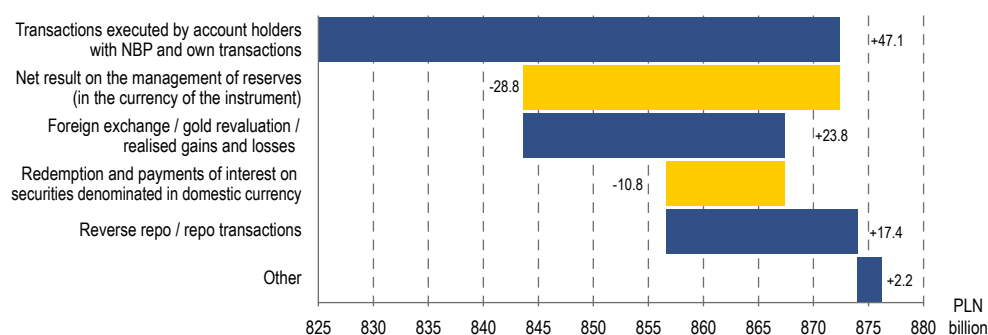
### Characteristics of the NBP Balance Sheet

As at the end of 2022, NBP recorded an increase in the balance sheet total of PLN 50.9 billion. The increase mainly resulted from a net inflow of foreign funds in the amount of PLN 47.1 billion due to transactions of holders of accounts with NBP and the NBP's own transactions. The increase was also driven by changes in foreign exchange rates and the price of gold (PLN 23.8 billion) and an increase in exposure to simultaneous repo and reverse repo transactions used in the management of foreign exchange reserves (PLN 17.4 billion). On the other hand, a negative net result on the management of foreign exchange reserves (PLN -28.8 billion, calculated in the currency of the instruments, i.e. excluding FX gains/losses) and settlements on account of interest payments and redemption of securities denominated in domestic currency at maturity (PLN -10.8 billion) led to a drop in the NBP balance sheet total.

The year 2022 did not see major changes in the balance sheet structure compared to 2021. Receivables from non-residents increased in NBP's assets – mainly related to the higher level of exposure to simultaneous reverse repo and repo transactions at the end of the year and higher balances on term deposit accounts and on the NBP's current account with the ECB for settlements in TARGET2. At the same time, the share of assets denominated in domestic currency diminished – primarily on the back of the issuer's redemption of a portion of Treasury securities at maturity. On the liabilities side, liabilities denominated in foreign currency increased – mainly in connection with the higher balances on the foreign currency accounts of residents (including on the accounts of the State budget and on bank accounts for settlements in TARGET2) with the higher level of exposure to simultaneous repo and reverse repo transactions.

**Table 15.1.** NBP assets and liabilities at the end of 2022 and 2021 (PLN billion)

Assets	2022	2021	Change
A.1. Gold and gold receivables	58.7	54.8	3.8
A.2. Claims on non-residents denominated in foreign currency	675.4	619.3	56.1
2.1. Receivables from the IMF	31.4	30.0	1.4
2.2. Balances with foreign institutions, securities, loans granted and other foreign assets	644.0	589.3	54.7
A.7. Securities of residents denominated in domestic currency	140.7	149.3	-8.6
A.10. Other assets	1.5	1.8	-0.3
<b>Total assets</b>	<b>876.2</b>	<b>825.3</b>	<b>50.9</b>
Liabilities	2022	2021	Change
L.1. Banknotes and coins in circulation	368.6	355.6	13.1
L.2. Liabilities to credit institutions related to monetary policy operations denominated in domestic currency	55.1	96.5	-41.4
L.3. Other liabilities to credit institutions denominated in domestic currency	0.9	0.8	0.2
L.4. Liabilities due to issued securities denominated in domestic currency	252.2	184.5	67.7
L.5. Liabilities to other residents denominated in domestic currency	11.9	15.3	-3.4
L.6. Liabilities to non-residents denominated in domestic currency	4.1	4.0	0.2
L.7. Liabilities to residents denominated in foreign currency	59.0	32.6	26.4
L.8. Liabilities to non-residents denominated in foreign currency	53.6	36.0	17.6
L.9. SDR allocation	30.9	29.8	1.1
L.11. Other liabilities	0.4	1.1	-0.7
L.12. Provisions	15.3	16.7	-1.4
L.13. Revaluation accounts	50.1	51.0	-1.0
L.14. Capital	1.5	1.5	0.0
L.15. Financial result	-27.4	0.0	-27.4
15.1. Financial result for the financial year	-16.9	11.0	-27.9
15.2. Loss of previous years	-10.5	-11.0	0.5
<b>Total liabilities</b>	<b>876.2</b>	<b>825.3</b>	<b>50.9</b>

**Figure 15.3.** Main factors contributing to a change in the NBP balance sheet total in 2022 compared to 2021

Foreign currency flows to NBP due to transactions carried out by account holders are mostly exchanged into domestic currency and increase NBP's liabilities denominated in domestic currency. As a consequence, the NBP balance sheet is characterised by currency asymmetry. This means that assets denominated in foreign currency and gold form the prevailing part of assets, while liabilities denominated in domestic currency (related to monetary policy, issue of banknotes and coins) prevail on the liabilities side. This asymmetry results in an open

FX position of NBP, i.e. a surplus of assets over liabilities denominated in foreign currency, which exposes the Bank to FX risk.

Figure 15.4. Structure of assets

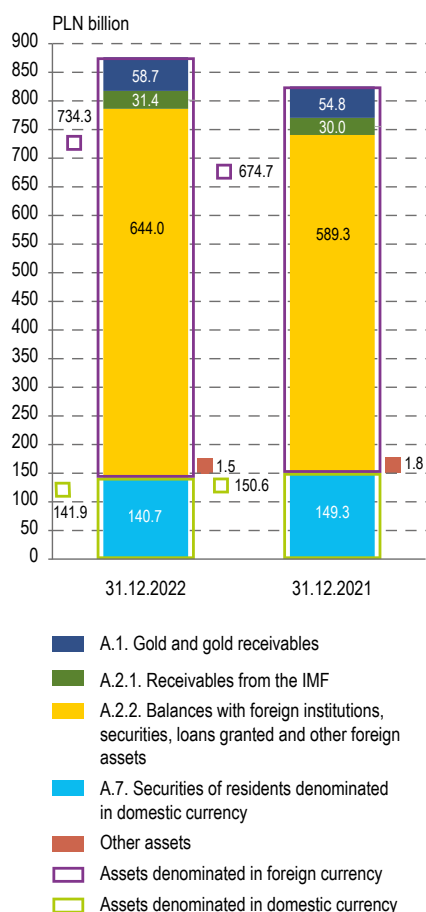
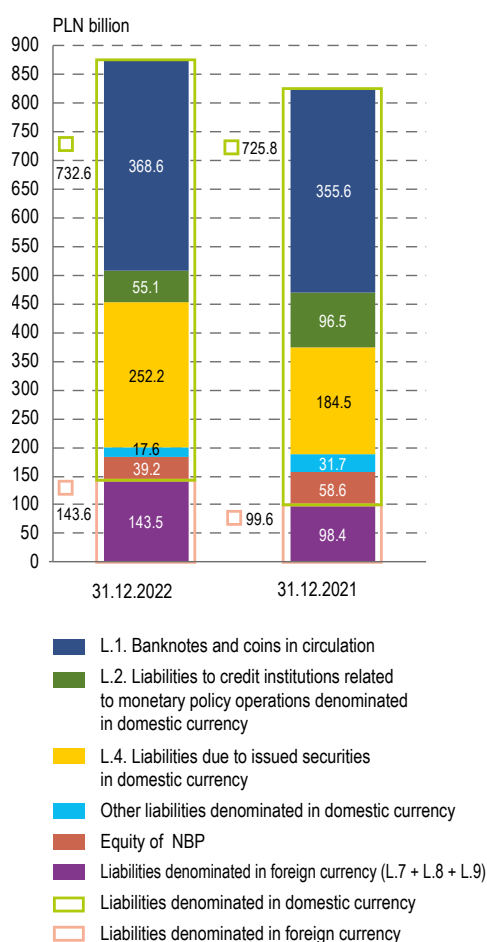


Figure 15.5. Structure of liabilities



### 15.1.1. Assets and liabilities in foreign currency and in gold

The items of NBP assets and liabilities in foreign currency and in gold are primarily related to the accumulation and management of foreign exchange reserves (see Chapter 5), the Bank's role of an agent of the government of the Republic of Poland in relations with the IMF (see Chapter 8.4) and NBP acting as an operator of the Polish component of the pan-European settlement system for euro-denominated payments (TARGET2-NBP, see Chapter 7).<sup>2</sup> In addition, NBP also operates bank accounts in foreign currencies as part of its services provided to the State budget (see Chapter 8).

<sup>2</sup> Under the TARGET2 system, Narodowy Bank Polski operates the accounts of participants of this system, mainly domestic banks (presented under liabilities of the Balance Sheet) and also maintains the balance on the current account with the ECB (presented under assets of the Balance Sheet).

**Table 15.2.** NBP assets and liabilities in gold and in foreign currency by selected areas of activity at the end of 2022 and 2021 (PLN billion)

	Management of foreign exchange reserves		MF		Settlements in TARGET2		Services to government sector		Other		Total		
	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	Change
A.1. Gold and gold receivables	31.8*	29.9*							26.9**	24.9**	58.7	54.8	3.8
A.2. Claims on non-residents denominated in foreign currency	628.6	586.5	31.4	30.0	15.0	2.6			0.3	0.2	675.4	619.3	56.1
A.10. Other assets									0.2	0.6	0.2	0.6	-0.4
<b>Total assets</b>	<b>660.4</b>	<b>616.4</b>	<b>31.4</b>	<b>30.0</b>	<b>15.0</b>	<b>2.6</b>	<b>0.0</b>	<b>0.0</b>	<b>27.5</b>	<b>25.7</b>	<b>734.3</b>	<b>674.8</b>	<b>59.5</b>
L.7. Liabilities to residents denominated in foreign currency					15.0	2.6	43.7	29.8	0.4	0.2	59.0	32.6	26.4
L.8. Liabilities to non-residents denominated in foreign currency	53.5	35.9							0.1	0.2	53.6	36.0	17.6
L.9. SDR allocation			30.9	29.8							30.9	29.8	1.1
L.11. Other liabilities									0.0	0.7	0.0	0.7	-0.7
L.13. Revaluation accounts									0.0	0.4	0.0	0.4	-0.4
<b>Total liabilities</b>	<b>53.5</b>	<b>35.9</b>	<b>30.9</b>	<b>29.8</b>	<b>15.0</b>	<b>2.6</b>	<b>43.7</b>	<b>29.8</b>	<b>0.5</b>	<b>1.5</b>	<b>143.6</b>	<b>99.5</b>	<b>44.1</b>
<b>Net balance sheet item</b>	<b>606.9</b>	<b>580.5</b>	<b>0.5</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>-43.7</b>	<b>-29.8</b>	<b>26.9</b>	<b>24.2</b>	<b>590.7</b>	<b>575.3</b>	<b>15.4</b>

\* Gold on current accounts and term deposits.

\*\* Gold in NBP vaults.

The differences between assets and liabilities in foreign currency and in gold represented foreign currency holdings and gold holdings. In addition to its gold holding, NBP maintained foreign currency reserves – mainly denominated in the US dollar (USD), the euro (EUR), the British pound (GBP), the Canadian dollar (CAD), the Australian dollar (AUD), the Norwegian krone (NOK) and the New Zealand dollar (NZD). Moreover, NBP also had a holding of IMF's special drawing rights (SDRs).

**Table 15.3.** Holdings of gold and main foreign currencies at the end of 2022 and 2021 (PLN billion)

	2022			2021		
	Holdings at the average cost of holding	Holdings at the average NBP exchange rate	Unrealised gains (+) / losses (-)	Holdings at the average cost of holding	Holdings at the average NBP exchange rate	Unrealised gains (+) / losses (-)
Gold	31.1	58.7	27.5	31.4	54.8	23.5
USD	203.7	222.6	18.9	197.4	212.3	14.9
EUR	103.0	104.6	1.5	103.8	106.0	2.3
GBP	63.2	63.3	0.0	58.4	62.7	4.3
CAD	54.2	53.2	-1.0	53.6	53.4	-0.3
AUD	43.2	43.5	0.3	40.7	42.6	1.9
CHF	0.0	0.0	0.0	3.7	3.9	0.3
NOK	29.7	29.4	-0.3	27.4	29.0	1.7
NZD	14.9	14.8	-0.1	14.1	14.3	0.3
IMF (SDR)	0.6	0.6	0.0	0.3	0.3	0.0
Unrealised gains (balance sheet)			48.4	Unrealised gains (balance sheet)		49.0
Unrealised losses (financial result)			-1.4	Unrealised losses (financial result)		-0.3

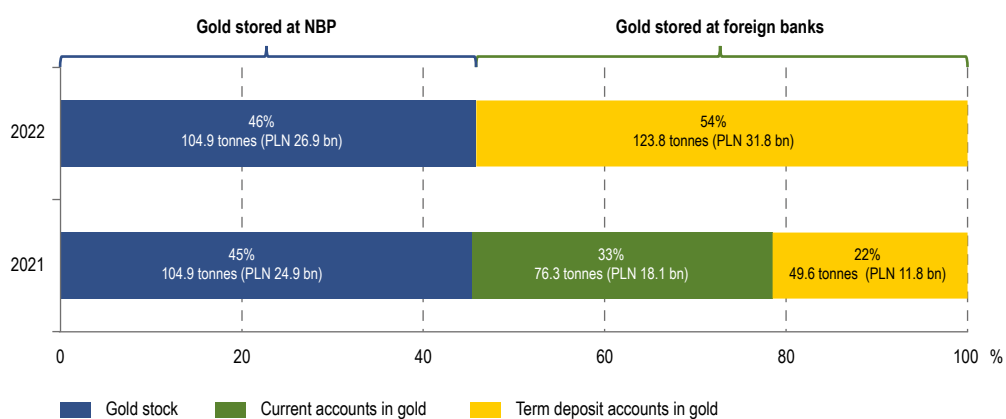


The difference between the value of foreign currency holdings and gold holdings at the average NBP exchange rate and the value of these holdings at the average cost of the holding (i.e. the averaged purchase price) represents unrealised currency/gold revaluation gains or losses. Unrealised gains increase liabilities in the balance sheet (as part of the equity of NBP under the item of revaluation accounts – see Table 15.8), while unrealised losses reduce the financial result (net result on financial operations, see Table 15.12).

### 15.1.1.1. Gold

Narodowy Bank Polski holds gold conforming to international standards of purity, stored at foreign banks (on current accounts or on term deposit accounts) and in NBP vaults. As at 31 December 2022, the gold holding of NBP amounted to 228.7 tonnes (PLN 58.7 billion), representing 6.7% of NBP's assets (230.8 tonnes and 6.6% at the end of 2021).

Figure 15.6. Gold and gold receivables as at the end of 2022 and 2021



### 15.1.1.2. Management of foreign exchange reserves (other than gold)

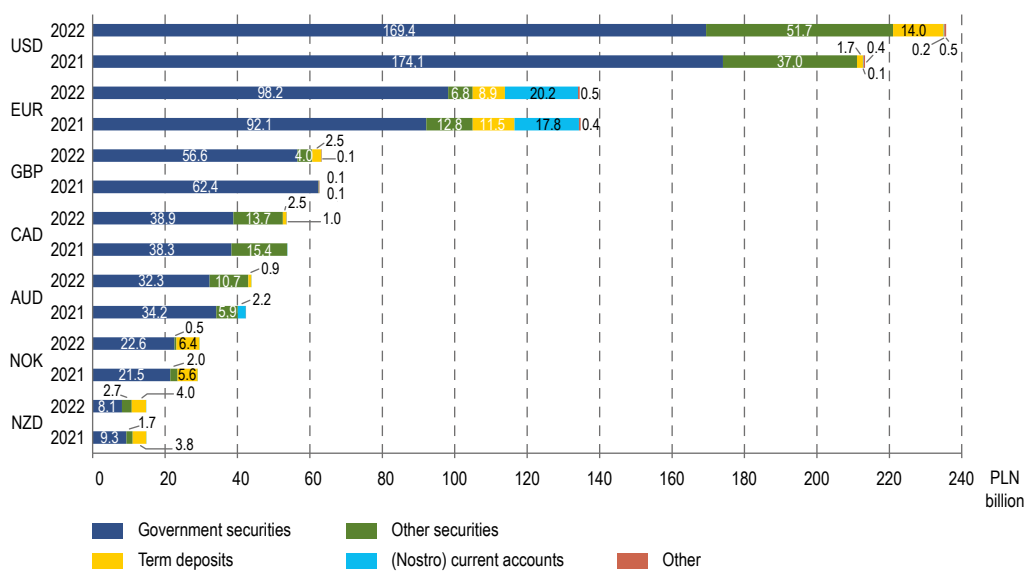
Investment instruments used in the management of foreign exchange reserves account for the largest share of NBP assets. They include primarily securities issued by governments, government agencies and international institutions and, to a lesser extent, term deposits and bonds of non-financial corporations. A part (around 1%) of securities held by NBP is classified as green bonds and sustainable bonds.<sup>3</sup> In addition, a minor portion of foreign currency reserves is held in current accounts, mainly with foreign central banks. In order to gain additional income, NBP concludes reverse repo transactions (presented under assets of the balance sheet), usually simultaneously to repo transactions (presented under liabilities of the balance sheet) and invests in futures contracts (including equity index futures).

<sup>3</sup> Green bonds or sustainable bonds are issues whose proceeds are used to finance or re-finance green projects or – in the case of the latter – social projects. These may include projects linked to energy efficiency, renewable energy, prevention of environment pollution, sustainable management of natural resources, biodiversity, provision of essential infrastructure and services or food security, and support for socio-economic progress.

**Table 15.4.** Main investment instruments of foreign exchange reserves at the end of 2022 and 2021

	2022	2021	Change
A.2.2. (Nostro) current accounts	20.3	20.2	0.1
A.2.2. Term deposits	37.6	22.6	14.9
A.2.2. Reverse repo transactions	53.6	35.9	17.7
L.8. Repo transactions	-53.5	-35.9	-17.7
A.2.2. Securities	516.1	506.8	9.3
A.2.2. Other	1.1	1.0	0.1
<b>Total</b>	<b>575.1</b>	<b>550.6</b>	<b>24.5</b>

Note: assets (+), liabilities (-) (PLN billion).

**Figure 15.7.** Currency composition of foreign exchange reserves (excluding gold) as the end of 2022 and 2021

The volume of foreign exchange reserves under management was mainly affected by the inflow of foreign currencies to holders of accounts with NBP, as well as the currency revaluation and the price revaluation of securities held. The currency composition and investment structure of the reserves did not change significantly in 2022. Since 2021, NBP has held a portfolio of held-to-maturity (HTM) securities denominated in the US dollar.

### 15.1.1.3. Receivables from and liabilities to the IMF

Narodowy Bank Polski presents in its balance sheet receivables and liabilities related to Poland's participation in the IMF. Items recognised in assets include the member quota in the IMF paid in foreign currency (the so-called reserve tranche), the current account in SDR used for settlements with the IMF and loans extended to the IMF. On the other hand, liabilities due to the SDR allocation granted to Poland are presented under liabilities.

**Table 15.5.** Receivables (+) from and liabilities (-) to the IMF denominated in SDR as at the end of 2022 and 2021 (PLN billion)

	2022	2021	Change
A.2.1. Reserve tranche	6.3	5.7	0.5
A.2.1. Current account with the IMF	25.0	24.1	1.0
A.2.1. Term deposit with the IMF	0.0	0.0	0.0
A.2.1. Loans extended to the IMF	0.1	0.2	-0.1
L.9. SDR allocation	-30.9	-29.8	-1.1
<b>Total</b>	<b>0.5</b>	<b>0.2</b>	<b>0.3</b>

The FX position in SDR<sup>4</sup> of NBP is mainly the result of operations conducted with the IMF on the basis of concluded loan agreements and borrowing agreements. The change in the item was mainly affected by funds transferred by NBP to IMF borrowers, related to meeting the IMF's borrowing needs (increasing the reserve tranche), and repayments to NBP by IMF borrowers (decreasing loans extended to the IMF).

#### 15.1.2. Assets and liabilities denominated in domestic currency

**Table 15.6.** NBP assets and liabilities in foreign currency by selected areas of activity at the end of 2022 and 2021 (PLN billion)

	Issue of banknotes and coins		Monetary policy		Services to government sector		Other		Total		
	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	Change
A.6. Other claims on credit institutions denominated in domestic currency							0.0	0.0	0.0	0.0	0.0
A.7. Securities of residents denominated in domestic currency			140.7	149.3					140.7	149.3	-8.6
A.10. Other assets							1.3	1.2	1.3	1.2	0.1
<b>Total assets</b>	<b>0.0</b>	<b>0.0</b>	<b>140.7</b>	<b>149.3</b>	<b>0.0</b>	<b>0.0</b>	<b>1.3</b>	<b>1.2</b>	<b>141.9</b>	<b>150.5</b>	<b>-8.6</b>
L.1. Banknotes and coins in circulation	368.6	355.6							368.6	355.6	13.1
L.2. Liabilities to credit institutions related to monetary policy operations denominated in domestic currency			55.1	96.5					55.1	96.5	-41.4
L.3. Other liabilities to credit institutions denominated in domestic currency							0.9	0.8	0.9	0.8	0.2
L.4. Liabilities due to issued securities in domestic currency			252.2	184.5					252.2	184.5	67.7
L.5. Liabilities to other residents denominated in domestic currency					10.8	15.2	1.1	0.1	11.9	15.3	-3.4
L.6. Liabilities to non-residents denominated in domestic currency							4.1	4.0	4.1	4.0	0.2
L.11. Other liabilities							0.4	0.4	0.4	0.4	0.0
L.12. Provisions							15.3	16.7	15.3	16.7	-1.4
L.13. Revaluation accounts							50.0	50.6	50.0	50.6	-0.6
L.14. Capital							1.5	1.5	1.5	1.5	0.0
L.15. Financial result							-27.4	0.0	-27.4	0.0	-27.4
<b>Total liabilities</b>	<b>368.6</b>	<b>355.6</b>	<b>307.3</b>	<b>281.0</b>	<b>10.8</b>	<b>15.2</b>	<b>45.9</b>	<b>74.0</b>	<b>732.6</b>	<b>725.8</b>	<b>6.8</b>
<b>Net balance sheet item</b>	<b>-368.6</b>	<b>-355.6</b>	<b>-166.6</b>	<b>-131.7</b>	<b>-10.8</b>	<b>-15.2</b>	<b>-44.7</b>	<b>-72.9</b>	<b>-590.7</b>	<b>-575.3</b>	<b>-15.4</b>

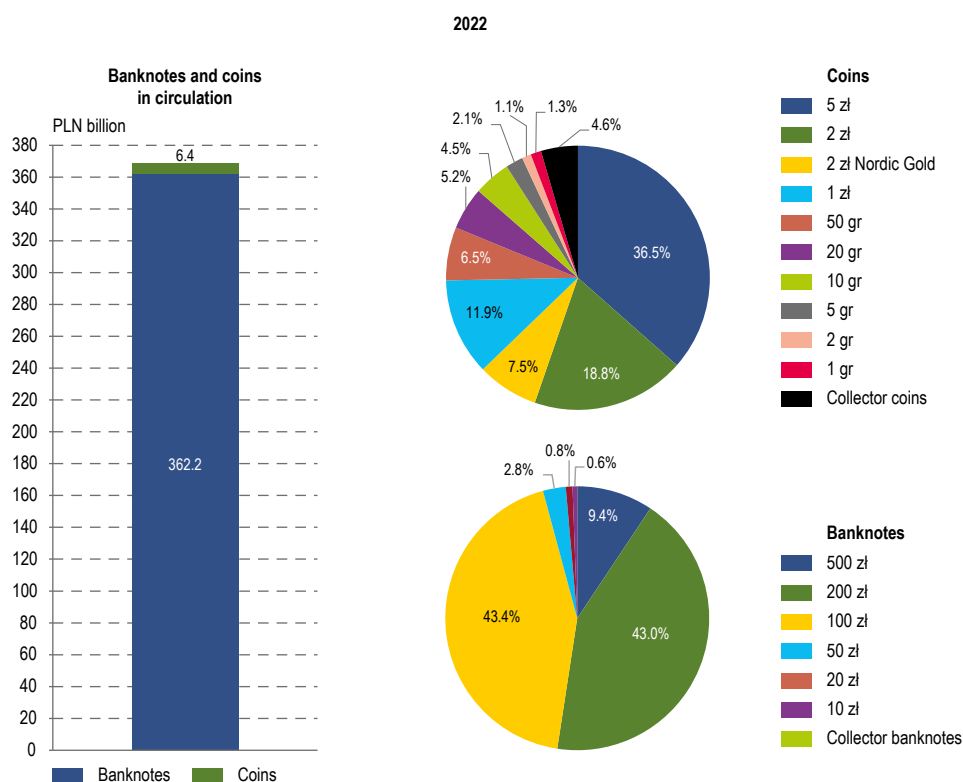
<sup>4</sup> NBP also holds SDR-denominated shares in the Bank for International Settlements (PLN 58.8 million as at the end of 2022).

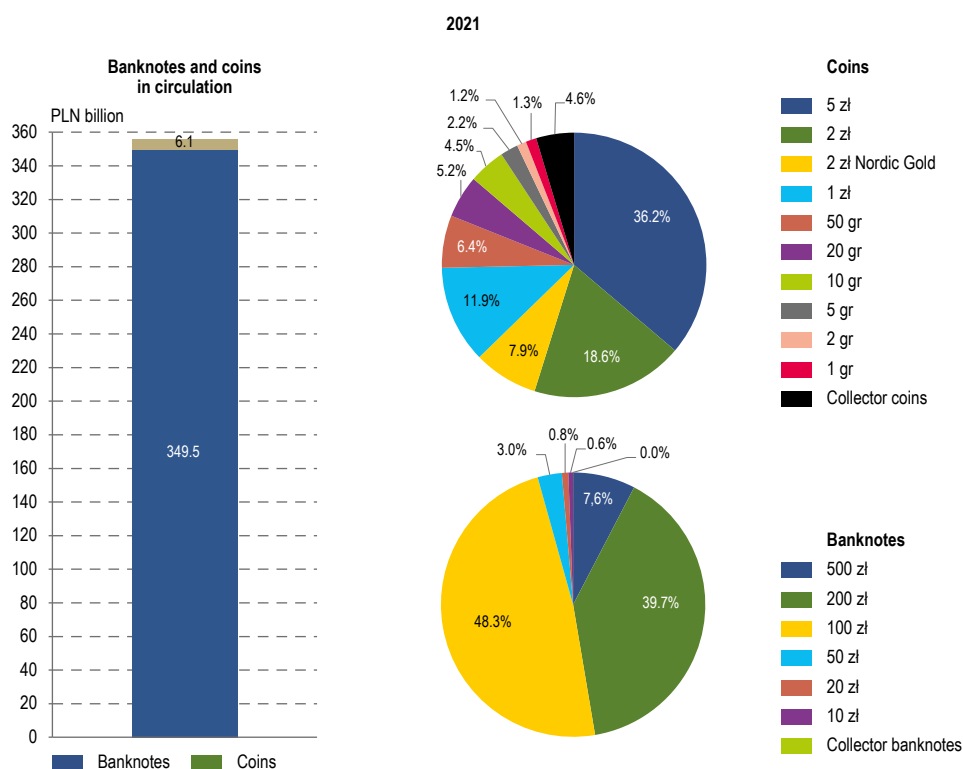
Assets and liabilities denominated in domestic currency are primarily linked to the issuance of cash by NBP, the conduct of monetary policy and the maintenance of bank accounts for the government sector, including the State budget. As most of the financial instruments used for the performance of these functions are liabilities, there is a surplus of liabilities over assets denominated in domestic currency. The increase in this surplus in 2022 mainly resulted from the conversion into the zloty of foreign currencies transferred for the benefit of account holders with NBP.

### 15.1.2.1. The issue of currency

The issue of currency is based on the exercise by NBP of its constitutional right to issue currency of the Republic of Poland. NBP issues banknotes and coins of general circulation as well as collector banknotes and coins of various denominations (see Chapter 4). Banknotes and coins issued represent, together with liabilities related to monetary policy, the most significant liability item on the Balance Sheet of NBP. The volume of money issue depends on exogenous factors, in particular on the development of the demand for cash in the economy. The year 2022, immediately after Russia invaded Ukraine on 24 February 2022, was marked by a major rise in demand for cash, and on 14 March 2022 the value of cash in circulation was at its all-year high of PLN 395.7 billion. Later on, the value of cash in circulation was steadily decreasing and at the end of 2022 the rise in cash money compared to 2021 amounted to PLN 13.1 billion (3.7%).

**Figure 15.8.** The denomination breakdown of currency in circulation as at the end of 2022 and 2021



**Figure 15.8.** The denomination breakdown of currency in circulation as at the end of 2022 and 2021, cont'd


### 15.1.2.2. Monetary policy

Narodowy Bank Polski implements monetary policy using a set of instruments adopted by the Monetary Policy Council (see Chapter 2). In 2022, monetary policy was conducted amid a liquidity surplus prevailing in the banking sector. In order to implement the operational objective of the monetary policy, NBP used selected instruments, in particular open market operations based on the issue of NBP bills (presented under liabilities). The reserve requirement was also a monetary policy instrument of NBP. The obligation to maintain the required minimum reserve (presented under liabilities) limits the scale of open market operations performed to absorb the excess liquidity from the banking sector.<sup>5</sup> NBP provided standing facilities to domestic banks and enabled them to place liquidity surpluses in NBP in the form of deposit facility (presented under liabilities) or to supplement liquidity needs with the use of Lombard credit (presented under assets). In the years 2020–2021, NBP took additional sector liquidity-increasing measures to mitigate the negative effects of the COVID-19 pandemic. In particular, it purchased Treasury bonds and securities guaranteed by the Treasury on the secondary market as part of structural open market operations. The securities are held in NBP assets, while funds from the redemption of the instruments at maturity were not reinvested.

<sup>5</sup> In October 2021 and February 2022, the Monetary Policy Council decided to raise the required reserve ratio (from 0.5% to 3.5% in total).

**Table 15.7.** Assets (+) and liabilities (–) related to monetary policy as at the end of 2022 and 2021 (PLN billion)

	2022	2021	Change
A.7. Securities denominated in domestic currency	140.7	149.3	-8.6
L.2. Current accounts (including reserve requirement accounts)	-34.9	-66.1	31.1
L.2. Deposit facilities	-20.2	-30.5	10.3
L.4. NBP bills	-252.2	-184.5	-67.7
<b>Total</b>	<b>-166.6</b>	<b>-131.7</b>	<b>-34.9</b>

In 2022, the increase in net liabilities to the banking sector was mainly driven by: the purchase of foreign currency incoming to NBP due to transactions by holders of accounts with NBP, a contribution from NBP's profit for 2021 and cash flows related to NBP's net result on monetary policy (see Section 15.3.3 and Section 15.3.5). The factor contributing to the decrease in net liabilities was mostly an increase in banknotes and coins in circulation (see Chapter 4). Excess liquidity in the banking sector was absorbed through the issue of NBP bills. Moreover, banks left part of the funds in current accounts as a deposit facility.

#### 15.1.2.3. Equity of NBP

As the central bank of the state, Narodowy Bank Polski is not subject to the capital adequacy regulations applicable to the banking sector. In accordance with the practice adopted among ESCB central banks, in addition to the (statutory and reserve) funds, NBP recognises the following items as components of equity: the FX risk provision,<sup>6</sup> gold revaluation account, gold holding revaluation gains, currency and securities revaluation gains, a balance sheet loss (of previous years) and a portion of profit for the financial year retained at NBP (i.e. 5%), which is allocated to increase the reserve fund.

The most volatile components of the equity of NBP include revaluation gains/losses on gold, revaluation gains/losses on foreign currencies and revaluation gains/losses on securities (unrealised gains) and the FX risk provision. Changes in revaluation gains/losses are mainly affected by the trends in market exchange rates and prices.

The aforementioned currency asymmetry generates the risk of a loss arising from exchange rate volatility, while the probability of its occurrence increases parallel to the scale of appreciation of the zloty against foreign currencies. The creation of the FX risk provision decreases the financial result of NBP, and simultaneously protects against potential future losses. The release of the provision increases the financial result of NBP, thereby limiting a potential loss resulting from currency revaluation. In 2022, NBP released the FX risk provision to cover unrealised foreign exchange losses in the amount of PLN 1.4 billion. As at the end of 2022, the balance of the FX risk provision amounted to PLN 15.1 billion.

<sup>6</sup> In order to counteract the negative impact of volatility in the zloty exchange rate on the NBP financial result, the Act on NBP requires the Bank to create a provision against the foreign exchange rate risk of the zloty (referred to as FX risk provision). The principles for creating and releasing the provision are determined by the Monetary Policy Council (Resolution No. 6/2019 of the Monetary Policy Council of 5 November 2019 on the principles for creating and releasing the provision against the foreign exchange rate risk of the zloty at Narodowy Bank Polski; NBP Official Journal, item 14).

**Table 15.8.** Equity of NBP as at the end of 2022 and 2021 (PLN billion)

	2022	2021	Change
L.12. FX risk provision	15.1	16.5	-1.4
L.14. Statutory fund	1.5	1.5	0.0
L.14. Reserve fund	0.0	0.0	0.0
L.13. Gold revaluation account	1.6	1.6	0.0
L.13. Gold holding revaluation gains	27.5	23.5	4.0
L.13. Currency revaluation gains	20.9	25.5	-4.7
L.13. Price revaluation gains	0.0	0.4	-0.4
L.15. Loss of previous years	-10.5	-11.0	0.5
L.15. Financial result for the financial year retained at NBP*	-16.9	0.5	-17.5
<b>Total</b>	<b>39.2</b>	<b>58.6</b>	<b>-19.3</b>
% of NBP balance sheet total	4.5%	7.1%	-2.6 basis points
Sensitivity of the equity of NBP to:			
– appreciation of the zloty exchange rate against foreign currencies by 1%**	-5.3	-5.2	-0.1
– increase in interest rates by 100 basis points***	-14.1	-14.9	0.8

\* The financial result for 2021, after the approval of the NBP financial statements by the Council of Ministers, is allocated as a contribution from profit to NBP's reserve fund (5%) and as a contribution from profit to the State budget (95%).

\*\* The figures represent the total decrease in unrealised currency revaluation gains or increase in unrealised currency revaluation losses in the case of an even 1% decrease in the average NBP exchange rates of the main reserve currencies as at the balance sheet date.

\*\*\* For foreign currencies – based on the MD (modified duration) ratio, the cumulative decrease in unrealised price revaluation gains or increase in unrealised price revaluation losses in the case of an even increase in the yield curves of 100 basis points as at the balance sheet date.

Moreover, in 2022 NBP used the reserve fund (previously increased by the contribution of PLN 0.5 billion from the profit for 2021) to cover the loss of previous years.<sup>7</sup>

### 15.1.3. NBP Balance Sheet – five-year statement

Changes in the NBP balance sheet total are mainly the result of external foreign currency flows stemming from the transactions of account holders with NBP, fluctuations in the revaluation of financial instruments denominated in foreign currency and in gold, exposure to simultaneous repo and reverse repo transactions, as well as one-off operations (such as the SDR allocation carried out in 2021). In addition, in the years 2020–2021, the level of the NBP balance sheet total was affected by NBP's purchase of securities in domestic currency. This operation also had an influence on the change in the structure of the NBP balance sheet, increasing the share of domestic currency in NBP assets, previously dominated by foreign currencies and gold.

<sup>7</sup> In accordance with the Act on NBP, the reserve fund is created until it has reached the amount the equivalent of the statutory fund and may only be used to cover NBP's balance sheet losses.

**Table 15.9. NBP Balance Sheet in 2018–2022 as at the balance sheet date (PLN billion)**

<b>Assets</b>	<b>2022</b>	<b>2021</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>
A.1. Gold and gold receivables	58.7	54.8	52.3	42.5	19.9
A.2. Claims on non-residents denominated in foreign currency	675.4	619.3	527.5	445.2	419.9
2.1. Receivables from the IMF	31.4	30.0	6.9	5.3	4.8
2.2. Balances with foreign institutions, securities, loans granted and other foreign assets	644.0	589.3	520.6	439.9	415.0
A.5. Claims on credit institutions related to monetary policy operations denominated in domestic currency	0.0	0.0	0.1	0.0	0.0
A.6. Other claims on credit institutions denominated in domestic currency	0.0	0.0	0.0	0.0	5.6
A.7. Securities of residents denominated in domestic currency	140.7	149.3	112.6	0.0	0.0
A.10. Other assets	1.5	1.8	2.0	1.4	1.4
<b>Total assets</b>	<b>876.2</b>	<b>825.3</b>	<b>694.3</b>	<b>489.1</b>	<b>446.8</b>
<b>Liabilities</b>	<b>2022</b>	<b>2021</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>
L.1. Banknotes and coins in circulation	368.6	355.6	321.8	238.8	219.5
L.2. Liabilities to credit institutions related to monetary policy operations denominated in domestic currency	55.1	96.5	62.6	65.4	72.9
L.3. Other liabilities to credit institutions denominated in domestic currency	0.9	0.8	0.4	0.4	0.4
L.4. Liabilities due to issued securities in domestic currency	252.2	184.5	127.8	65.0	53.3
L.5. Liabilities to other residents denominated in domestic currency	11.9	15.3	24.9	9.3	7.3
L.6. Liabilities to non-residents denominated in domestic currency	4.1	4.0	2.2	2.3	2.6
L.7. Liabilities to residents denominated in foreign currency	59.0	32.6	46.3	22.4	25.1
L.8. Liabilities to non-residents denominated in foreign currency	53.6	36.0	45.4	43.7	37.9
L.9. SDR allocation	30.9	29.8	7.1	6.9	6.8
L.11. Other liabilities	0.4	1.1	0.7	0.2	0.2
L.12. Provisions	15.3	16.7	10.0	6.9	4.0
12.1. FX risk provision	15.1	16.5	9.9	6.7	3.9
12.2. Provisions for liabilities	0.2	0.2	0.2	0.2	0.1
L.13. Revaluation accounts	50.1	51.0	45.7	30.5	27.2
L.14. Capital	1.5	1.5	1.9	1.5	1.5
14.1. Statutory fund	1.5	1.5	1.5	1.5	1.5
14.2. Reserve fund	0.0	0.0	0.4	0.0	0.0
L.15. Financial result	-27.4	0.0	-2.5	-4.0	-11.9
15.1. Financial result for the financial year	-16.9	11.0	9.3	7.8	0.0
15.2. Loss of previous years	-10.5	-11.0	-11.9	-11.9	-11.9
<b>Total liabilities</b>	<b>876.2</b>	<b>825.3</b>	<b>694.3</b>	<b>489.1</b>	<b>446.8</b>



## 15.2. Characteristics of the NBP Profit and Loss Account

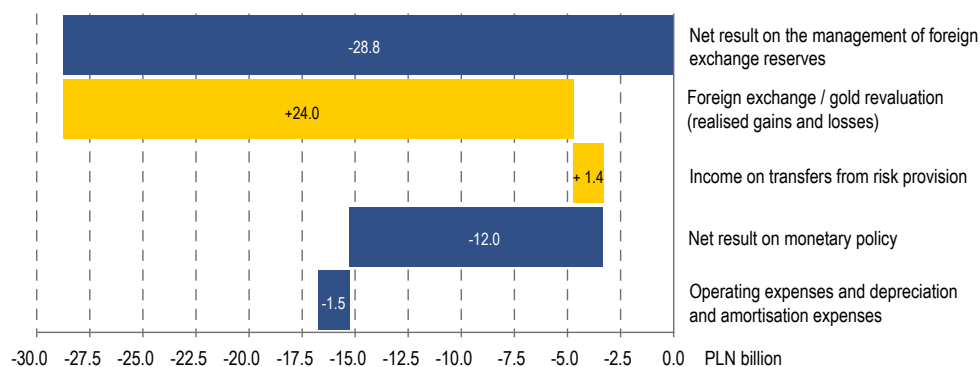
The financial result of NBP in 2022 was negative and amounted to PLN -16.9 billion.

The financial result of NBP is derived from the functions it performs as well as from market conditions. The loss primarily stemmed from the increase in yields on securities on foreign markets. This translated into a negative result realised on the back of transactions involving the securities and into higher unrealised price revaluation losses, and – consequently – into a negative net result on the management of foreign exchange reserves.<sup>8</sup> In addition, as a result of the rise in expenses on bills issued by NBP and expenses on interest on the required minimum reserve NBP recorded a negative net result on monetary policy. The loss of NBP was reduced by a positive net result on realised foreign exchange gains/losses in operations carried out under the management of reserves denominated in foreign currency. Unrealised currency revaluation losses at the end of 2022 were covered from the FX risk provision. In 2022, the operating expenses of the Bank as well as depreciation and amortisation expenses were at a similar level as in 2021.

**Table 15.10.** Financial result of NBP for 2022 and 2021 (PLN billion)

	2022	2021
P&L.1. Net result on interest	-5.8	2.3
1.1. Interest income	9.4	3.1
1.2. Interest expenses	-15.2	-0.9
P&L.2. Net result on financial operations	-9.8	9.9
2.1. Realised net result	15.5	20.3
2.2. Unrealised losses	-26.7	-3.7
2.3. Net result on impairment of financial assets	0.0	0.0
2.4. Transfer to/from FX risk provision	1.4	-6.6
P&L.3. Net result on commission and fees	0.0	0.0
P&L.4. Income on shares and participating interests	0.0	0.0
P&L.5. Other income	0.1	0.2
<b>P&amp;L.A. Total net income</b>	<b>-15.4</b>	<b>12.4</b>
P&L.6. Salaries	-0.7	-0.6
P&L.7. Administrative expenses	-0.3	-0.3
P&L.8. Depreciation and amortisation costs	-0.1	-0.1
P&L.9. Expenses on issue of banknotes and coins	-0.4	-0.4
P&L.10. Other expenses	0.0	0.0
<b>P&amp;L.B. Financial result for the financial year</b>	<b>-16.9</b>	<b>11.0</b>

<sup>8</sup> Culated in the currency of financial instruments.

**Figure 15.9.** Financial result of NBP for 2022 by areas

As a result of the prevailing role of financial instruments in the NBP Balance Sheet, the most important elements of the Bank's Profit and Loss Account relate to interest, discount and premium (net result on interest) and foreign exchange gains/losses and price revaluation gains related to the trading in investment instruments of foreign exchange reserves (net result on financial operations) as well as the net interest result on monetary policy instruments. In addition, the Bank costs associated with its operations (salaries, administrative costs, expenses on the issue of banknotes and coins and depreciation and amortisation expenses). In 2022, compared to the previous year, a decrease in the net result on interest was recorded, related among others to a substantial rise in expenses related to the conduct of monetary policy of NBP amid a parallel higher net result on interest earned on foreign markets where foreign exchange reserves are invested. On the other hand, the rise in the yields of securities on foreign markets contributed to a decline in net result on financial operations through a negative net result on prices of the transactions involving the securities, and unrealised price revaluation losses on the securities at the end of 2022.

### 15.2.1. Net result on the management of foreign exchange reserves

Income and expenses related to investment instruments of foreign exchange reserves mainly involve interest on securities and deposits (presented under the net result on interest), result on the sale transactions in securities and price revaluation of securities (only revaluation losses)<sup>9</sup> and the net result on off-balance sheet financial instruments (presented under the net result on financial operations<sup>10</sup>). The net result on the management of foreign exchange reserves is largely determined by the trends in factors beyond the control of NBP. These factors include mainly: a volume of inflows of foreign currency from abroad and the developments in financial markets – mutual relationships of the exchange rates of reserve currencies and their exchange rates against the zloty, interest rates in foreign markets, and values of equity

<sup>9</sup> Securities denominated in foreign currency, excluding the portfolio of securities held to maturity, are valued according to the average market price or based on yield curve rates (if market prices are not available). In accordance with the principle of prudence, revaluation gains are recognised under liabilities in the NBP Balance Sheet (as an element of the equity of NBP) and therefore they do not increase the financial result of NBP.

Securities denominated in foreign currency held to maturity are valued at their clean price adjusted for calculated discount and premium, less impairment.

<sup>10</sup> Refers to the valuation of derivatives used to manage foreign currency reserves.

indices. The net result on the management of foreign exchange reserves is also affected by the adopted investment structure of foreign exchange reserves and the type of financial instruments used.

**Table 15.11.** Net result on the management of foreign exchange reserves in 2022 and 2021 by currency and instrument (PLN billion)

2022	USD*	EUR	GBP	CAD	AUD	NOK	NZD	Total
<b>P&amp;L.1. Net result on interest</b>	<b>3.3</b>	<b>-0.1</b>	<b>0.8</b>	<b>0.9</b>	<b>0.8</b>	<b>0.5</b>	<b>0.4</b>	<b>6.5</b>
Term deposits	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.3
Reverse repos	0.1	0.0	0.2	0.0	0.1	0.0	0.0	0.4
Repos	-0.1	0.0	-0.1	0.0	-0.1	0.0	0.0	-0.3
Securities	3.2	-0.2	0.7	0.9	0.8	0.4	0.3	6.1
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>P&amp;L.2. Net result on financial operations</b>	<b>-14.2</b>	<b>-8.1</b>	<b>-4.5</b>	<b>-2.7</b>	<b>-3.6</b>	<b>-1.3</b>	<b>-0.9</b>	<b>-35.2</b>
Realised price gains/losses	-4.2	-1.6	-1.3	-0.8	-1.5	-0.3	-0.2	-9.9
Price revaluation losses	-9.9	-6.6	-3.2	-1.9	-2.1	-1.0	-0.7	-25.3
<b>Financial result for the current year</b>	<b>-10.9</b>	<b>-8.3</b>	<b>-3.8</b>	<b>-1.8</b>	<b>-2.8</b>	<b>-0.8</b>	<b>-0.5</b>	<b>-28.8</b>
2021	USD*	EUR	GBP	CAD	AUD	NOK	NZD	Total
<b>P&amp;L.1. Net result on interest</b>	<b>1.4</b>	<b>-0.9</b>	<b>0.1</b>	<b>0.0</b>	<b>0.2</b>	<b>0.2</b>	<b>0.1</b>	<b>1.2</b>
Term deposits	0.0	-0.3	0.0	0.0	0.0	0.0	0.0	-0.2
Reverse repos	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Repos	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Securities	1.4	-0.6	0.1	0.0	0.2	0.2	0.1	1.4
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>P&amp;L.2. Net result on financial operations</b>	<b>-0.4</b>	<b>-0.1</b>	<b>-0.7</b>	<b>0.0</b>	<b>-0.7</b>	<b>-0.7</b>	<b>-0.4</b>	<b>-2.9</b>
Realised price gains/losses	0.5	0.3	0.0	0.0	-0.2	-0.1	0.0	0.5
Price revaluation losses	-0.9	-0.4	-0.7	0.0	-0.5	-0.5	-0.4	-3.4
<b>Financial result for the financial year</b>	<b>1.0</b>	<b>-1.0</b>	<b>-0.6</b>	<b>0.0</b>	<b>-0.5</b>	<b>-0.5</b>	<b>-0.2</b>	<b>-1.7</b>
<b>Change of financial result for the current year</b>	<b>-11.9</b>	<b>-7.3</b>	<b>-3.1</b>	<b>-1.8</b>	<b>-2.3</b>	<b>-0.3</b>	<b>-0.3</b>	<b>-27.0</b>

\* Interest on term deposits in gold is also included, which is accrued and paid in the US dollar.

The main reason for the decrease in the net result on the management of foreign exchange reserves in 2022 compared to 2021 was a strong increase in yields on securities (a fall in prices) in foreign markets that accompanied a tightening of monetary policy by major central banks amid inflation and the decline of foreign stock exchange indices. Market conditions translated into expenses on price revaluation of securities held by NBP and a negative result of the investment in equity index futures.

#### 15.2.2. Foreign exchange/gold revaluation gains/losses and transfer to/from FX risk provision

The impact of changes in foreign exchange rates and gold prices on the NBP financial result depends on the trends in the exchange rate of the zloty against foreign currencies and the price of gold both in the course of the year (realised FX gains/losses) and as at the balance sheet date (unrealised gains/losses on valuation of foreign currency holdings and gold holdings). Realised foreign exchange gains/losses are presented under the net result on financial operations.

However, at the end of the year the impact on the NBP financial result due to foreign currency holdings is asymmetrical, as in the case of revaluation of securities. Currency revaluation losses and gold revaluation losses (unrealised losses) decrease the net result on financial operations. On the other hand, currency revaluation gains (unrealised gains) increase the equity of NBP and are not recognised in the NBP financial result.

Foreign exchange gains/losses represent the most volatile element of the NBP financial result. The net result on realised foreign exchange/gold revaluation gains/losses in 2022 mainly related to the sale transactions of USD, EUR, GBP, CAD, AUD and NOK. The net result grew by PLN 5.8 billion (29%), compared to the previous year, mainly as a result of an increase in the average annual positive difference between the average NBP exchange rate and the average cost of the holding for USD, CAD and AUD, as well as a result of the rise in the sale volume of CAD, EUR, NOK and GBP.

**Table 15.12.** Foreign exchange/gold revaluation gains/losses and transfer to/from FX risk provision in 2022 and 2021 (PLN billion)

2022	USD	EUR	GBP	CAD	AUD	NOK	NZD	Gold	Other	Total
<b>P&amp;L.2. Result on financial operations</b>	<b>14.5</b>	<b>2.2</b>	<b>1.9</b>	<b>0.9</b>	<b>2.2</b>	<b>0.8</b>	<b>0.3</b>	<b>0.3</b>	<b>0.9</b>	<b>25.5</b>
Foreign exchange gains/losses	14.5	2.2	1.9	0.9	2.2	0.8	0.3	0.3	0.9	24.0
– realised foreign exchange gains/losses	14.5	2.2	1.9	1.9	2.2	1.2	0.5	0.3	0.9	25.5
– currency revaluation losses	0.0	0.0	0.0	-1.0	0.0	-0.3	-0.1	0.0	0.0	-1.4
Transfer to FX risk provision										1.4
2021	USD	EUR	GBP	CAD	AUD	NOK	NZD	Gold	Other	Total
<b>P&amp;L.2. Result on financial operations</b>	<b>6.6</b>	<b>1.7</b>	<b>1.6</b>	<b>-0.3</b>	<b>1.5</b>	<b>1.2</b>	<b>0.8</b>	<b>6.1</b>	<b>0.0</b>	<b>12.8</b>
Foreign exchange gains/losses	6.6	1.7	1.6	-0.3	1.5	1.2	0.8	6.1	0.0	19.4
– realised foreign exchange gains/losses	6.6	1.7	1.6	0.0	1.5	1.2	0.8	6.1	0.0	19.7
– currency revaluation losses	0.0	0.0	0.0	-0.3	0.0	0.0	0.0	0.0	0.0	-0.3
Transfer to FX risk provision										-6.6
<b>Change in net result on financial operations</b>	<b>7.9</b>	<b>0.5</b>	<b>0.3</b>	<b>1.2</b>	<b>0.7</b>	<b>-0.4</b>	<b>-0.5</b>	<b>-5.9</b>	<b>0.8</b>	<b>12.7</b>

The FX risk provision protects the central bank against the materialisation of FX risk and its adverse impact on the financial result (the value of foreign currency assets is negatively affected by the appreciation of the zloty). In 2022, NBP released the FX risk provision to cover unrealised currency losses from foreign exchange gains/losses in the amount of PLN 1.4 billion. The FX risk provision as at the end of 2022 amounted to PLN 15.1 billion.

### 15.2.3. Net result on monetary policy

NBP bills were the main instrument of monetary policy conducted amid a liquidity surplus prevailing in the domestic banking sector. In connection with the issue of bills, NBP incurs discount expenses (presented under the net result on interest). The level of expenses of monetary policy mainly depends on surplus liquidity in the banking sector and the level of interest rates, the required minimum reserve rate and its interest rate, set by the Monetary Policy Council. On the other hand, the NBP measures taken in the years 2020–2021 and

aimed at reducing the negative impact of the COVID-19 pandemic resulted in a positive net result on interest on purchased securities denominated in domestic currency (interest, discount and premium).

**Table 15.13.** Net result on monetary policy conducted in 2022 and 2021 (PLN billion)

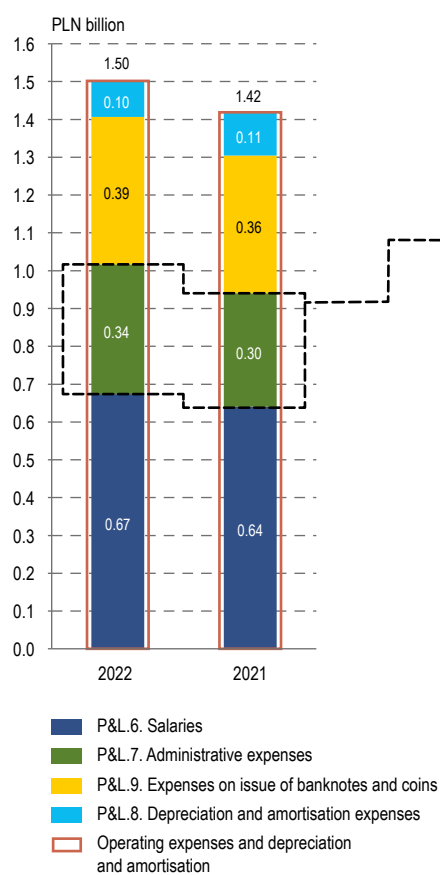
	2022	2021	Change
<b>P&amp;L.1. Net result on interest</b>	<b>-12.0</b>	<b>1.1</b>	<b>-13.1</b>
NBP bills	-10.4	-0.8	-9.6
Required minimum reserve	-3.2	-0.1	-3.1
Deposit facility	-0.4	-0.1	-0.4
Securities denominated in domestic currency	2.2	2.0	0.2
Other	-0.1	0.0	-0.1

In 2022, NBP posted a negative net result on its monetary policy. The decrease in the net result (compared to the previous year) was primarily linked to the rising expenses of discount on bills issued by NBP and interest expenses on required minimum reserve funds (due to a rise in NBP interest rates and the required minimum reserve rate in 2022).

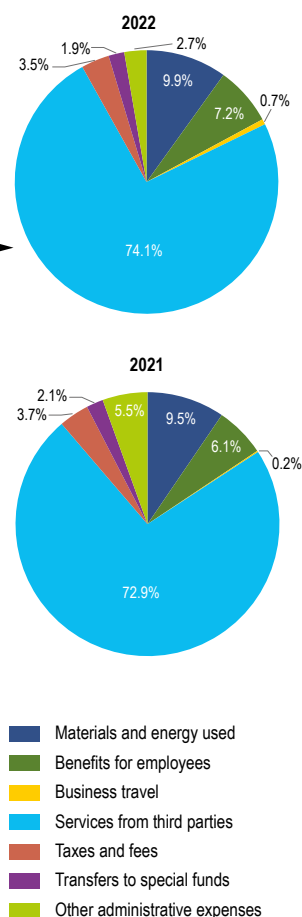
#### 15.2.4. Operating expenses and depreciation and amortisation expenses

In 2022, NBP recorded an increase in operating expenses and depreciation and amortisation expenses by PLN 0.1 billion (5.9%) compared to 2021. This was linked, among others, to an increase in salaries in line with the adopted HR and payroll policy, administrative expenses and expenses on the issue of banknotes and coins (i.e. the cost of producing banknotes and coins). Expenses on the issue of banknotes and coins depend primarily on the number of banknotes and coins ordered and their purchase prices as well as the cost of purchasing bullion for coin production.

**Figure 15.10.** Structure of operating expenses and depreciation and amortisation expenses in 2022 and 2021

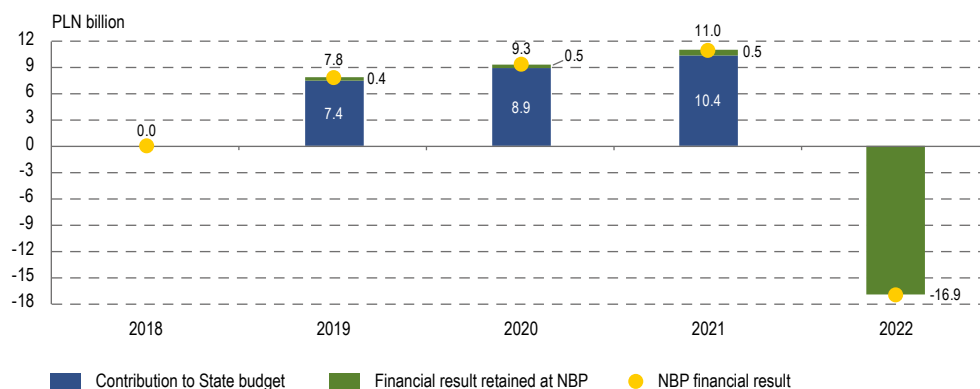


**Figure 15.11.** Structure of administrative expenses in 2022 and 2021



### 15.2.5. Allocation of the financial result and contribution from profit to the State budget

The financial result of NBP for 2022 was negative and amounted to PLN -16.9 billion. Following the Council of Minister's approval of the Financial Statements of NBP for 2022, a 2022 loss will increase the uncovered loss of previous years shown in the item *Loss of previous years* in the equity of NBP.

**Figure 15.12.** Financial result and contribution from profit to the State budget in 2018–2022

Note: The result provided for a given year; a contribution to the State budget is made in the following year after the approval of the annual financial statements of NBP by the Council of Ministers.

### Seigniorage

The issue of cash involves the cost of purchasing banknotes and coins. Unlike other NBP liabilities, the liability due to the issue of banknotes and coins does not bear interest and therefore does not generate interest expenses for NBP. On the other hand, financial assets acquired in return generate certain income for NBP.

Income earned on assets whose source of financing is the liability due to the issue of banknotes and coins, less expenses on the issue, is referred to as seigniorage. It represents income from the issue of money.

The main assets of NBP are foreign exchange reserves (including gold) and – since 2020 – also securities denominated in domestic currency held for monetary policy purposes. For this reason, in simple terms it can be assumed that what constitutes income on the issue of money is the net result on the management of foreign exchange reserves, including the net result on foreign exchange gains/losses and net result on securities denominated in domestic currency, in a part respectively corresponding to the share of liabilities due to the issue of money in the total assets of NBP less expenses on the issue of banknotes and coins. In 2022, the estimated seigniorage amounted to PLN -1.2 billion (PLN 8.4 billion in 2021).

## 15.2.6. NBP Profit and Loss Account – five-year statement

Foreign exchange reserves and the rates of return on their investment (taking into account FX rates), as well as the volume of monetary policy operations and domestic interest rates have the greatest influence on the amount of the NBP financial result. Changes in the financial result are most often caused by the volatility of FX rates against the Polish zloty. Moreover, they are affected by changes in yields on securities in foreign markets and on the level of domestic interest rates.

**Table 15.14.** NBP Profit and Loss Account in 2018–2022 (PLN billion)

	2022	2021	2020	2019	2018
P&L.1. Net result on interest	-5.8	2.3	3.1	3.3	2.6
P&L.2. Net result on financial operations	-9.8	9.9	7.3	5.6	-1.5
P&L.3. Net result on commissions and fees	0.0	0.0	0.0	0.0	0.0
P&L.4. Income on shares and participating interests	0.0	0.0	0.0	0.0	0.0
P&L.5. Other income	0.1	0.2	0.1	0.1	0.1
<b>P&amp;L.A. Total net income</b>	<b>-15.4</b>	<b>12.4</b>	<b>10.6</b>	<b>9.0</b>	<b>1.2</b>
P&L.6. Salaries	-0.7	-0.6	-0.6	-0.6	-0.5
P&L.7. Administrative expenses	-0.3	-0.3	-0.2	-0.3	-0.3
P&L.8. Depreciation and amortisation expenses	-0.1	-0.1	-0.1	-0.1	-0.1
P&L.9. Expenses on issue of banknotes and coins	-0.4	-0.4	-0.3	-0.3	-0.3
P&L.10. Other expenses	0.0	0.0	0.0	0.0	0.0
<b>P&amp;L.B. Financial result for the financial year</b>	<b>-16.9</b>	<b>11.0</b>	<b>9.3</b>	<b>7.8</b>	<b>0.0</b>



Appendix 1

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# **Selected macroeconomic and financial data**

## Selected macroeconomic and financial data

Table A1. GDP and its components in 2014–2022

	2022		2014	2015	2016	2017	2018	2019	2020	2021	2022	2022				
	Current prices (PLN bn)	Per cent of GDP	Annual growth at previous year's prices (in %)										Q1	Q2	Q3	Q4
GDP	3 078.3	100.0	3.8	4.4	3.0	5.1	5.9	4.4	-2.0	6.9	5.1	8.8	6.1	3.9	2.3	
Domestic demand	3 032.1	98.5	5.6	3.9	2.2	5.4	6.3	3.3	-2.7	8.5	5.1	10.8	7.2	3.1	0.6	
Consumption	2 297.4	74.6	3.4	3.5	3.3	5.4	4.4	4.1	-1.5	5.8	2.0	5.4	5.3	0.9	-3.3	
Household consumption	1 720.9	55.9	3.4	3.8	3.6	6.3	4.4	3.5	-3.6	6.2	3.3	6.8	6.7	1.1	-1.1	
Capital formation	734.7	23.9	14.5	5.6	-1.7	5.6	13.8	0.5	-7.5	19.4	15.9	36.9	14.6	10.5	10.4	
Gross fixed capital formation	513.2	16.7	11.7	6.9	-7.6	1.6	12.6	6.2	-2.3	1.2	5.0	5.4	7.1	2.5	5.4	
Exports	1 914.8	62.2	5.5	6.6	9.0	9.0	6.8	5.3	-1.1	12.3	6.2	5.6	6.4	9.0	3.9	
Imports	1 868.6	60.7	9.4	5.6	7.7	9.9	7.5	3.2	-2.4	16.1	6.2	8.7	8.2	7.7	0.7	
Value added	2 736.1	88.9	3.7	4.5	2.8	5.0	5.9	4.3	-2.0	6.6	5.0	8.6	5.9	3.6	2.7	
Industry	755.0	24.5	7.0	4.2	4.5	1.9	5.0	4.7	-3.5	0.0	7.5	13.7	8.1	5.8	3.5	
Construction	166.0	5.4	8.7	11.6	-5.0	-1.2	8.5	-0.8	-8.0	8.7	4.3	16.9	4.8	0.5	0.9	
Market services and agriculture	1 416.3	46.0	1.6	5.0	3.8	8.2	6.1	5.4	-2.0	9.0	4.9	7.6	6.1	3.6	2.7	
Non-market services	398.8	13.0	3.1	-0.4	1.0	2.8	5.6	2.7	3.5	8.3	2.0	2.1	2.3	2.0	1.8	
<b>Contribution to GDP growth at previous year's prices (in percentage points)</b>																
Domestic demand	-	-	5.4	3.9	2.2	5.2	6.1	3.2	-2.6	8.0	4.9	10.2	6.8	3.1	0.6	
Consumption	-	-	2.7	2.7	2.6	4.1	3.3	3.1	-1.1	4.4	1.4	4.2	4.0	0.7	-2.3	
Household consumption	-	-	2.0	2.3	2.1	3.6	2.5	2.0	-2.0	3.4	1.8	4.0	3.8	0.6	-0.5	
Capital formation	-	-	2.8	1.2	-0.4	1.1	2.7	0.1	-1.5	3.6	3.5	6.0	2.8	2.4	2.9	
Gross fixed capital formation	-	-	2.2	1.4	-1.6	0.3	2.2	1.2	-0.4	0.2	0.9	0.7	1.1	0.4	1.2	
Net exports	-	-	-1.6	0.5	0.8	-0.1	-0.2	1.2	0.6	-1.1	0.2	-1.4	-0.7	0.8	1.7	
<b>Contribution to value added growth at previous year's prices (in percentage points)</b>																
Industry	-	-	1.7	1.1	1.2	0.5	1.3	1.2	-0.9	0.0	1.9	3.7	1.9	1.3	1.1	
Construction	-	-	0.7	0.9	-0.4	-0.1	0.6	-0.1	-0.6	0.6	0.3	0.7	0.4	0.0	0.1	
Market services and agriculture	-	-	0.9	2.5	1.9	4.2	3.2	2.8	-1.1	4.7	2.5	3.8	3.3	1.9	1.3	
Non-market services	-	-	0.5	-0.1	0.2	0.4	0.8	0.4	0.5	1.3	0.3	0.4	0.4	0.3	0.3	

Notes: Market services and agriculture are covered by sections A, G–N and R–U of the PKD classification [Polish Classification of Economic Activity]: agriculture, trade, transportation, accommodation and catering, information and communication, financial and insurance activity, real estate activities, professional, scientific and technical activities, administration and support service activities, arts, entertainment and recreation, other service activity, activities of households and extraterritorial organisations and bodies. Non-market services comprise categories O, P and Q of the PKD classification: public administration and defence, compulsory social security, education, human health and social work activities. Contributions to GDP and value-added growth may not add up to total GDP and value added growth due to rounding.

Source: Statistics Poland data, NBP calculations.

**Table A2. Annual growth in consumer goods and services prices and the contribution of the main price categories to CPI**

	Weights 2022, per cent	Change (y/y, per cent)													
		2022												2022 average	2021 average
		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII		
CPI	100.0	9.4	8.5	11.0	12.4	13.9	15.5	15.6	16.1	17.2	17.9	17.5	16.6	14.4	5.1
Core inflation	56.3	6.1	6.7	6.9	7.7	8.5	9.1	9.3	9.9	10.7	11.0	11.4	11.5	9.1	4.1
Non-food products	31.8	4.4	4.8	5.3	5.9	6.7	7.4	7.4	8.5	9.3	9.5	10.0	10.1	7.5	2.1
Services	24.5	8.3	9.1	9.1	10.1	10.8	11.5	11.7	11.8	12.5	13.0	13.2	13.4	11.2	6.8
Food and non-alcoholic beverages	26.6	9.3	7.6	9.2	12.7	13.5	14.2	15.3	17.5	19.3	22.0	22.3	21.5	15.4	3.2
Processed	14.4	9.7	8.5	9.0	11.5	13.6	15.2	17.0	19.7	21.0	22.6	23.2	22.8	16.3	4.1
Unprocessed	12.1	8.7	6.5	9.5	14.0	13.3	12.9	13.3	14.8	17.3	21.3	21.2	19.9	14.4	2.1
Energy	17.1	21.2	16.3	27.4	27.5	32.8	39.1	36.9	34.3	35.0	33.8	29.3	24.9	29.9	12.1
Energy carriers	11.2	20.0	18.8	24.3	27.3	31.4	35.1	37.0	40.3	44.3	41.6	36.8	31.1	32.5	7.1
Electrical energy	4.5	3.2	5.0	5.0	5.0	5.0	5.1	5.1	5.1	5.1	5.1	5.1	5.1	4.9	9.9
Gas	2.3	51.3	39.9	49.2	49.2	46.4	46.2	44.9	36.6	35.6	27.9	26.4	24.8	39.3	4.1
Liquid and solid fuels	2.0	41.6	41.2	61.3	76.5	101.5	122.0	131.2	156.9	172.2	147.0	109.1	83.1	104.1	10.2
Heat energy	2.4	7.3	8.1	9.1	10.8	11.9	12.3	14.3	16.5	21.0	27.0	29.6	29.6	16.5	2.7
Fuels	5.9	23.8	11.1	33.5	27.8	35.4	46.7	36.8	23.3	18.3	19.5	15.5	13.5	25.2	22.1
<b>According to 12 COICOP groups</b>															
Food and non-alcoholic beverages	26.6	9.3	7.6	9.2	12.7	13.5	14.2	15.3	17.5	19.3	22.0	22.3	21.5	15.4	3.2
Alcoholic beverages and tobacco products	6.3	3.7	4.6	5.3	5.9	6.5	7.0	7.7	8.3	9.0	9.9	10.3	10.4	7.4	2.1
Clothing and footwear	4.5	4.2	3.5	3.3	3.7	4.3	4.4	4.7	5.2	7.0	7.0	6.8	7.6	5.2	-0.2
Home maintenance and energy carriers	19.3	14.9	14.3	17.7	19.5	22.0	24.2	25.3	27.4	29.9	28.7	26.0	22.6	22.8	7.4
Home equipment and household maintenance	5.7	6.7	7.3	7.8	8.6	9.7	10.9	10.2	12.2	13.0	12.4	13.6	13.8	10.5	3.4
Health	5.7	3.7	4.6	6.0	6.5	7.2	7.5	7.2	7.4	7.8	8.5	9.1	9.3	7.1	3.3
Transport	9.5	17.2	9.9	24.1	21.1	25.8	33.4	27.7	19.5	16.4	17.3	14.4	13.3	19.9	14.4
Communication	4.9	4.0	5.4	3.0	2.6	3.6	4.6	5.1	4.3	2.9	3.3	5.0	4.9	4.1	5.5
Recreation and culture	6.1	7.1	8.6	7.4	9.3	10.3	11.5	11.3	12.6	13.9	14.8	14.2	14.7	11.3	5.1
Education	1.2	5.2	5.6	6.0	6.3	6.6	6.7	6.8	6.9	12.5	13.5	13.6	13.8	8.7	5.0
Restaurants and hotels	4.8	10.3	11.5	12.7	14.1	15.7	15.9	16.4	16.7	17.8	18.5	18.6	18.7	15.6	6.1
Miscellaneous goods and services	5.4	5.7	5.3	6.2	7.9	8.5	8.9	8.8	10.6	11.9	11.9	12.8	12.2	9.3	2.2

**Table A2.** Annual growth in consumer goods and services prices and the contribution of the main price categories to CPI, cont'd

	Weights 2022, per cent	Contribution to CPI growth (in percentage points)													
		2022												2022 average	2021 average
		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII		
CPI	100.0	9.4	8.5	11.0	12.4	13.9	15.5	15.6	16.1	17.2	17.9	17.5	16.6	14.4	5.1
Core inflation	56.3	3.5	3.8	3.9	4.4	4.8	5.2	5.2	5.6	6.0	6.2	6.3	6.4	5.1	2.3
Goods	31.8	1.4	1.6	1.7	1.9	2.2	2.4	2.4	2.7	2.9	3.0	3.1	3.2	2.4	0.7
Services	24.5	2.0	2.2	2.2	2.5	2.6	2.8	2.9	2.9	3.1	3.2	3.2	3.2	2.7	1.6
Food and non-alcoholic beverages	26.6	2.5	2.0	2.5	3.4	3.6	3.8	4.1	4.6	5.1	5.8	5.9	5.7	4.1	0.9
Processed	14.4	1.4	1.2	1.3	1.7	2.0	2.2	2.5	2.8	3.0	3.3	3.3	3.3	2.3	0.6
Unprocessed	12.1	1.1	0.8	1.2	1.7	1.7	1.6	1.6	1.8	2.1	2.5	2.5	2.4	1.8	0.3
Energy	17.1	3.5	2.7	4.6	4.6	5.5	6.6	6.3	5.9	6.1	6.0	5.3	4.5	5.1	1.9
Energy carriers	11.2	2.3	2.1	2.7	3.0	3.5	3.9	4.1	4.5	4.9	4.7	4.3	3.6	3.6	0.7
Electricity	4.5	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4
Gas	2.3	1.1	0.9	1.1	1.1	1.0	1.0	1.0	0.9	0.8	0.7	0.6	0.6	0.9	0.1
Liquid and solid fuels	2.0	0.8	0.8	1.2	1.5	1.9	2.3	2.5	3.0	3.4	3.2	2.7	2.1	2.1	0.1
Heat energy	2.4	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.5	0.6	0.7	0.7	0.4	0.1
Fuels	5.9	1.2	0.6	1.9	1.6	2.0	2.7	2.2	1.4	1.1	1.2	1.0	0.9	1.5	1.2
<b>According to 12 COICOP groups</b>															
Food and non-alcoholic beverages	26.6	2.5	2.0	2.5	3.4	3.6	3.8	4.1	4.6	5.1	5.8	5.9	5.7	4.1	0.9
Alcoholic beverages and tobacco products	6.3	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.1
Clothing and footwear	4.5	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.0
Home maintenance and energy carriers	19.3	2.9	2.8	3.4	3.7	4.2	4.6	4.8	5.3	5.8	5.6	5.1	4.5	4.4	1.4
Home equipment and household maintenance	5.7	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.6	0.2
Health	5.7	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.2
Transportation	9.5	1.5	0.9	2.2	2.0	2.4	3.1	2.7	1.9	1.6	1.7	1.4	1.3	1.9	1.3
Telecommunications	4.9	0.2	0.3	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3
Recreation and culture	6.1	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.9	0.9	0.7	0.3
Education	1.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1
Restaurants and hotels	4.8	0.5	0.5	0.6	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.7	0.3
Other goods and services	5.4	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.5	0.1

Note: core inflation quoted in the table denotes CPI inflation excluding prices of food and energy.

Source: Statistics Poland data and NBP calculations based on Statistics Poland data.

**Table A3.** Balance of payments in 2014–2022 (PLN million)

Balance of payments	2014	2015	2016	2017	2018	2019	2020	2020	2022
Current account	-48 898	-22 796	-18 603	-22 366	-41 151	-5 447	57 451	-38 016	-91 330
Balance of trade in goods	-33 101	-8 766	-5 812	-20 464	-47 990	-18 733	31 444	-35 158	-113 656
Balance of services	40 052	46 177	60 792	76 745	91 420	103 444	101 991	122 324	171 090
Balance of primary income	-64 861	-67 310	-71 884	-84 041	-89 638	-95 598	-88 791	-123 432	-139 034
Balance of secondary income	9 012	7 103	-1 699	5 394	5 057	5 440	12 807	-1 750	-9 730
Capital account	31 857	47 758	18 338	20 701	33 956	35 292	32 711	18 338	9 335
Financial account	-26 897	8 610	14 216	-9 509	-1 455	22 707	80 099	-17 475	-74 362
Balance of direct investment	-43 111	-40 303	-14 092	-29 796	-60 293	-46 818	-55 076	-106 868	-121 318
Balance of portfolio investment	6 557	16 752	-14 247	-17 162	15 998	46 508	29 424	43 599	-12 890
Balance of other investment	7 771	32 709	-47 479	72 257	21 038	-11 177	37 794	-12 986	-1 733
Derivative financial instruments	-54	-3 664	766	-4 256	-4 760	-5 364	-4 253	-13 713	373
Official reserve assets	1 940	3 116	89 268	-30 552	26 562	39 558	72 210	72 493	61 206
Errors and omissions	-9 856	-16 352	14 481	-7 844	5 740	-7 138	-10 063	2 203	7 633

Source: NBP data.

**Table A4.** Selected external stability indicators in 2014–2022

	2014	2015	2016	2017	2018	2019	2020	2021	2022
Current account balance/GDP (per cent)	-2.9	-1.3	-1.0	-1.1	-1.9	-0.2	2.5	-1.4	-3.0
Current and capital account balance/GDP (per cent)	-1.0	1.4	0.0	-0.1	-0.3	1.3	3.9	-0.7	-2.7
Balance of trade in goods and services/GDP (per cent)	0.4	2.1	3.0	2.8	2.0	3.7	5.7	3.3	1.9
Official reserve assets in terms of monthly imports of goods and services	5.4	5.4	6.5	4.8	4.9	5.2	6.3	5.7	4.7
Gross external debt/GDP (per cent)	73.6	72.0	76.7	67.3	64.2	58.9	60.7	56.4	52.8
Net international investment position/GDP (per cent)	-68.7	-60.6	-66.2	-60.3	-54.7	-48.8	-43.9	-39.4	-33.8

Source: NBP and Statistics Poland data, NBP calculations.

Table A5. M3 monetary aggregate (as at the end of the year, PLN million)

	2014	2015	2016	2017	2018	2019	2020	2021	2022
M3	1 059 015	1 154 993	1 265 662	1 324 369	1 446 093	1 565 575	1 822 728	1 984 816	2 091 315
Repos	10 350	7 267	6 239	6 478	11 240	6 809	2 836	5 821	4 920
Debt securities issued with maturity up to 2 years	4 112	2 467	3 211	5 043	6 620	6 117	5 143	4 498	8 178
Money market fund shares/units	0	0	0	0	0	0	0	0	0
M2	1 044 553	1 145 259	1 256 212	1 312 847	1 428 233	1 552 648	1 814 749	1 974 497	2 078 217
Deposits and other liabilities with agreed maturity up to 2 years	438 270	453 134	440 908	406 473	415 880	397 776	283 035	249 710	493 334
Households	290 770	304 874	302 917	279 207	282 755	277 564	190 210	147 790	302 447
Other financial corporations	33 350	30 516	23 244	22 190	24 489	26 225	19 600	18 283	30 796
Non-financial corporations	101 639	103 365	99 234	88 269	87 586	82 830	65 214	74 747	138 263
Non-profit institutions serving households	6 800	7 022	7 251	7 515	7 779	7 373	3 886	3 178	7 321
Local government	4 526	5 633	5 887	6 046	4 562	3 244	3 272	4 332	9 190
Social security funds	1 184	1 724	2 375	3 245	8 710	540	853	1 380	5 317
M1	606 283	692 124	815 304	906 375	1 012 353	1 154 872	1 531 714	1 724 787	1 584 882
Cash in circulation (excluding MFI vault cash)	130 030	149 716	174 401	184 486	203 212	224 073	306 809	340 406	353 700
Overnight deposits and other liabilities	476 253	542 409	640 903	721 888	809 141	930 799	1 224 904	1 384 380	1 231 182
Households	300 786	341 115	402 001	453 227	523 307	603 824	786 844	898 211	776 518
Other financial corporations	18 574	20 302	25 899	31 589	32 800	26 065	31 196	37 769	33 554
Non-financial corporations	124 239	145 975	169 753	187 139	199 722	233 409	311 223	340 367	325 015
Non-profit institutions serving households	11 305	12 518	14 912	16 426	18 290	19 471	25 717	28 311	28 174
Local government	19 494	18 868	25 255	26 744	27 722	33 936	50 999	67 733	57 903
Social security funds	1 853	3 630	3 084	6 764	7 299	14 093	18 926	11 990	10 018

MFIs – Monetary Financial Institutions.

Source: NBP data.

Selected macroeconomic and financial data

Table A6. M3 counterparts (stock at the end of each year, PLN million)

	2014	2015	2016	2017	2018	2019	2020	2021	2022
External assets, net	172 947	187 103	234 209	232 528	290 278	344 825	428 689	525 127	639 029
External assets	437 358	451 322	572 727	483 804	544 419	590 795	700 775	816 705	971 149
External liabilities	264 411	264 219	338 519	251 276	254 141	245 969	272 087	291 579	332 120
Credit to other residents	1 017 017	1 089 011	1 137 243	1 175 789	1 264 010	1 324 871	1 385 186	1 452 454	1 470 373
Loans and other claims	963 655	1 029 145	1 076 440	1 113 993	1 197 892	1 259 552	1 262 829	1 327 636	1 346 078
Households	593 273	632 523	665 062	676 362	723 233	766 334	789 087	826 552	794 284
Other financial corporations	53 346	58 344	58 546	65 782	74 182	83 732	81 788	96 150	113 397
Non-financial corporations	275 774	297 950	314 533	333 362	358 589	366 114	348 096	362 898	398 067
Non-profit institutions serving households	5 683	6 068	6 485	6 946	7 296	7 621	7 995	8 359	8 496
Local government	35 579	34 260	31 814	31 541	34 592	35 750	35 863	33 676	31 835
Social security funds	0	0	0	0	0	0	0	0	0
Debt securities	41 985	47 229	48 020	47 502	47 610	46 910	103 687	108 951	110 138
Other financial corporations	1 713	2 359	3 959	3 496	3 500	3 164	61 781	66 655	65 692
Non-financial corporations	22 588	26 100	25 423	24 941	22 584	19 637	16 529	17 090	16 432
Local government	17 684	18 770	18 638	19 064	21 526	24 109	25 377	25 206	28 014
Equity and non-MMF investment fund shares or units	11 377	12 637	12 783	14 294	18 508	18 409	18 669	15 867	14 157
Other financial corporations	8 971	10 381	10 601	12 070	15 676	15 882	16 252	13 702	12 307
Non-financial corporations	2 406	2 256	2 182	2 222	2 831	2 526	2 416	2 158	1 849
Credit to central government, net	168 872	201 343	253 371	268 824	275 697	310 283	411 635	388 064	351 593
Credit to central government	224 409	239 787	311 159	321 398	346 352	383 746	533 733	536 411	514 056
Loans	701	1 142	961	1 011	1 043	1 127	1 287	1 614	1 625
Debt securities	180 804	193 333	259 586	267 216	293 297	331 138	475 229	475 925	438 982
Deposits of central government	55 536	38 444	57 788	52 574	70 655	73 464	122 099	148 347	162 464
Longer-term financial liabilities	336 409	359 605	389 984	374 963	407 306	438 021	505 957	501 988	488 218
Deposits and other liabilities with agreed maturity over 2 years	20 512	22 001	25 189	25 784	25 676	28 812	28 956	26 039	26 771
Households	13 756	16 552	19 839	21 344	21 836	25 362	25 549	23 334	24 605
Other financial corporations	5 851	4 624	4 452	3 483	2 939	2 541	2 312	1 243	630
Non-financial corporations	813	733	777	789	772	784	948	1 311	1 376
Non-profit institutions serving households	64	68	102	144	100	100	118	126	137
Local government	27	25	19	24	29	26	28	25	23
Social security funds	0	0	0	0	0	0	0	0	0
Debt securities issued with maturity over 2 years	40 422	43 879	53 782	69 762	72 267	78 530	106 207	117 215	124 315
Capital and reserves	275 475	293 725	311 013	279 417	309 363	330 679	370 794	358 733	337 131
Fixed assets (excluding fixed financial assets)	50 382	51 475	52 610	53 221	54 777	61 958	65 391	65 037	66 950
Other items, net	-13 794	-14 334	-21 788	-31 031	-31 364	-38 341	37 785	56 121	51 587

Source: NBP data.





Appendix 2

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# List of selected publications of NBP

## List of selected publications of NBP

In 2022, the following publications by NBP staff were included in the ISI Master Journal List:

- Paweł Strzelecki, Jakub Growiec, Robert Wyszynski (2022), *The contribution of immigration from Ukraine to economic growth in Poland*, “Review of World Economics”, vol. 158, issue 2, 365–399.
- Michał Ledóchowski, Piotr Żuk (2022), *What drives portfolio capital inflows into emerging market economies? The role of the Fed’s and ECB’s balance sheet policies*, “Emerging Markets Review”, vol. 51, Part B.
- Paweł Kopiec (2022), *The government spending multiplier in the Heterogeneous Agent New Keynesian model*, “European Economic Review”, vol. 145.
- Sergii Kiiashko, Paweł Kopiec (2022), *Labor Market Integration and Fiscal Competition*, “Journal of Money, Credit and Banking”, vol. 54, issue S1, 157–185.
- Marcin Bielecki, Michał Brzoza-Brzezina, Marcin Kolasa (2022), *Intergenerational Redistributive Effects of Monetary Policy*, “Journal of the European Economic Association”, vol. 20, issue 2, 549–580.
- Aarti Singh, Jacek Suda, Anastasia Zervou (2022), *Monetary policy, labor market, and sectoral heterogeneity*, “AEA Papers and Proceedings”, vol. 112, 491–495.
- Paweł Macias, Damian Stelmasiak, Karol Szafranek (2022), *Nowcasting food inflation with a massive amount of online prices*, “International Journal of Forecasting”, online publication, DOI: 10.1016/j.ijforecast.2022.02.007.
- Tomasz Łyziak, Xuguang Simon Sheng (2022), *Disagreement in consumer inflation expectations*, “Journal of Money, Credit and Banking”, online publication, DOI: 10.1111/jmcb.12981.

In the series *Materiały i Studia*, the following papers were published in 2022:

- Michał Ledóchowski, Piotr Żuk, *Przepływy kapitału do gospodarek Europy Środkowo-Wschodniej na tle trendów światowych w latach 2000–2019* [Capital flows to the economies of Central and Eastern Europe against the background of global trends in the years 2000–2019].
- Krzysztof Kruszewski, Mikołaj Szadkowski, *W poszukiwaniu zasad rachunkowości banku centralnego* [In search of central bank accounting principles].
- Ireneusz Dąbrowski, Paweł Frącz, Dariusz Zmarzły, Łukasz Mach, Daria Wotzka, *Analiza wahań sezonowych i cyklicznych budowy mieszkań w Polsce z podziałem na rynek indywidualny i deweloperski* [Analysis of seasonal and cyclical fluctuations in housing construction in Poland, broken down into individual and developer markets].

- Anna Wojtyniak, Wojciech Bogdanowicz, Piotr Szczerba, *Porównanie uwarunkowań instytucjonalnych prowadzenia polityki pieniężnej w krajach uczestniczących w Inicjatywie Trójmorza* [Comparison of institutional conditions for conducting monetary policy in countries participating in the Three Seas Initiative].

In 2022, the following papers were published in the *NBP Working Papers* series:

- Katarzyna Hertel, Marcin Humanicki, Marcin Kitala, Tomasz Kleszcz, Kamila Kuziemska-Pawlak, Jakub Mućk, Bartosz Rybaczyk, Maciej Stefański, *The impact on the Polish economy of the Structural Open Market Operations programme conducted by NBP*.
- Michał Gradzewicz, *How do firms respond to demand and supply shocks?*
- Andrzej Kocięcki, Tomasz Łyziak, Ewa Stanisławska, *Subjective expectations and uncertainty*.
- Mariusz Kapuściński, *The consequences of the bank levy in Poland*.
- Tomasz Łyziak, Michael Pedersen, Ewa Stanisławska, *Consumer inflation expectations and regional price changes*.
- Zbigniew Polański, Mikołaj Szadkowski, *Monetary policy normalization, central bank profits, and seigniorage*.
- Anna Marszał, *What news can really tell us? Evidence from a news-based sentiment index for financial markets analysis*.
- Mariusz Kapuściński, *The short-term effects of changes in capital regulations in Poland*.
- Radosław Kotkowski, *National culture and the demand for physical money during the first year of the COVID-19 pandemic*.
- Ewa Wróbel, *What drives bank lending policy? The evidence from a bank lending survey for Poland*.
- Michał Brzoza-Brzezina, Paweł Galiński, Krzysztof Makarski, *Monetary policy in a two-country model with behavioral expectations*.
- Kamila Kuziemska-Pawlak, Jakub Mućk, *Global value chains and equilibrium exchange rate: evidence from Central European economies*.



Appendix 3

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# **Voting records of the Monetary Policy Council members on motions and resolutions**

## Voting records of the Monetary Policy Council members on motions and resolutions

The voting records of the Monetary Policy Council members on motions and resolutions in 2022 are presented below.

Date	Subject matter of motion or resolution	Voting of the MPC members	
		For	Against
4 January 2022	Resolution No. 1/2022 amending the resolution on the regulations of the Monetary Policy Council	A. Glapiński G.M. Ancyparowicz C. Kochalski J.J. Kropiwnicki E.M. Łon R. Sura J. Żyżyński	E. Gatnar Ł.J. Hardt K. Zubelewicz
4 January 2022	Motion to raise the NBP reference rate by 0.50 percentage points, i.e. to 2.25%, and to simultaneously raise the remaining interest rates to the following levels: – lombard rate to 2.75%, – deposit rate to 1.75%, – rediscount rate to 2.30%, – discount rate to 2.35%  Motion passed	A. Glapiński G.M. Ancyparowicz E. Gatnar Ł.J. Hardt C. Kochalski J.J. Kropiwnicki R. Sura K. Zubelewicz	E.M. Łon J. Żyżyński
4 January 2022	Resolution No. 2/2022 on the reference rate, refinancing credit rate, deposit rate as well as the rediscount and discount rates at NBP	A. Glapiński G.M. Ancyparowicz E. Gatnar Ł.J. Hardt C. Kochalski J.J. Kropiwnicki R. Sura K. Zubelewicz	E.M. Łon J. Żyżyński
4 January 2022	Motion to raise the required reserve ratio to 3.50%  Motion did not pass	E. Gatnar Ł.J. Hardt K. Zubelewicz	A. Glapiński G.M. Ancyparowicz C. Kochalski J.J. Kropiwnicki E.M. Łon R. Sura J. Żyżyński
4 January 2022	Motion to set the interest rate on the required reserve funds at the level of the NBP deposit rate  Motion did not pass	E. Gatnar Ł.J. Hardt J.J. Kropiwnicki K. Zubelewicz	A. Glapiński G.M. Ancyparowicz C. Kochalski E.M. Łon R. Sura J. Żyżyński
8 February 2022	Motion to raise the NBP reference rate by 0.50 percentage points, i.e. to 2.75%, and to simultaneously raise the remaining interest rates to the following levels: – lombard rate to 3.25%, – deposit rate to 2.25%, – rediscount rate to 2.80%, – discount rate to 2.85%  Motion passed	A. Glapiński G.M. Ancyparowicz Ł.J. Hardt C. Kochalski L. Kotecki P. Litwiniuk R. Sura K. Zubelewicz J. Żyżyński	E.M. Łon

## Voting records of the Monetary Policy Council members on motions and resolutions

Date	Subject matter of motion or resolution	Voting of the MPC members	
		For	Against
8 February 2022	Resolution No. 3/2022 on the reference rate, refinancing credit rate, deposit rate as well as the rediscount and discount rates at NBP	A. Glapiński G.M. Ancyparowicz Ł.J. Hardt C. Kochalski L. Kotecki P. Litwiniuk R. Sura K. Zubelewicz J. Żyżyński	E.M. Łon
8 February 2022	Motion to raise the required reserve ratio to 3.50%  Motion passed	A. Glapiński G.M. Ancyparowicz Ł.J. Hardt C. Kochalski L. Kotecki P. Litwiniuk R. Sura K. Zubelewicz J. Żyżyński	E.M. Łon
8 February 2022	Resolution No. 4/2022 amending the resolution on the required reserve ratios for banks, cooperative savings and credit unions and the National Association of Cooperative Savings and Credit Unions and the level of the interest rate on the required reserve	A. Glapiński G.M. Ancyparowicz Ł.J. Hardt C. Kochalski L. Kotecki P. Litwiniuk R. Sura K. Zubelewicz J. Żyżyński	E.M. Łon
8 March 2022	Motion to raise the NBP reference rate by 0.75 percentage points, i.e. to 3.50%, and to simultaneously raise the remaining interest rates to the following levels: – lombard rate to 4.00%, – deposit rate to 3.00%, – rediscount rate to 3.55%, – discount rate to 3.60%  Motion passed	A. Glapiński I.K. Dąbrowski W.S. Janczyk C. Kochalski L. Kotecki P. Litwiniuk R. Sura H.J. Wnorowski J. Żyżyński	No votes
8 March 2022	Resolution No. 5/2022 on the reference rate, refinancing credit rate, deposit rate as well as the rediscount and discount rates at NBP	A. Glapiński I.K. Dąbrowski W.S. Janczyk C. Kochalski L. Kotecki P. Litwiniuk R. Sura H.J. Wnorowski J. Żyżyński	No votes
6 April 2022	Resolution No. 6/2022 on approving the annual Financial Statements of Narodowy Bank Polski as at 31 December 2021	A. Glapiński I.K. Dąbrowski W.S. Janczyk C. Kochalski L. Kotecki P. Litwiniuk R. Sura H.J. Wnorowski	No votes
6 April 2022	Motion to raise the NBP reference rate by 1.00 percentage points, i.e. to 4.50%, and to simultaneously raise the remaining interest rates to the following levels: – lombard rate to 5.00%, – deposit rate to 4.00%, – rediscount rate to 4.55%, – discount rate to 4.60%  Motion passed	A. Glapiński I.K. Dąbrowski W.S. Janczyk C. Kochalski L. Kotecki R. Sura H.J. Wnorowski	P. Litwiniuk

Date	Subject matter of motion or resolution	Voting of the MPC members	
		For	Against
6 April 2022	Resolution No. 7/2022 on the reference rate, refinancing credit rate, deposit rate as well as the rediscount and discount rates at NBP	A. Glapiński I.K. Dąbrowski W.S. Janczyk C. Kochalski L. Kotecki R. Sura H.J. Wnorowski	P. Litwiniuk
5 May 2022	Motion to raise the NBP interest rates by 1.00 percentage point  Motion did not pass	L. Kotecki	A. Glapiński I.K. Dąbrowski W.S. Janczyk C. Kochalski P. Litwiniuk R. Sura H.J. Wnorowski
5 May 2022	Motion to raise the NBP reference rate by 0.75 percentage points, i.e. to 5.25%, and to simultaneously raise the remaining interest rates to the following levels: – lombard rate to 5.75%, – deposit rate to 4.75%, – rediscount rate to 5.30%, – discount rate to 5.35%  Motion passed	A. Glapiński I.K. Dąbrowski W.S. Janczyk C. Kochalski R. Sura H.J. Wnorowski	L. Kotecki P. Litwiniuk
5 May 2022	Resolution No. 8/2022 on the reference rate, refinancing credit rate, deposit rate as well as the rediscount and discount rates at NBP	A. Glapiński I.K. Dąbrowski W.S. Janczyk C. Kochalski R. Sura H.J. Wnorowski	L. Kotecki P. Litwiniuk
5 May 2022	Resolution No. 9/2022 on approving the <i>Report on Monetary Policy in 2021</i>	A. Glapiński I.K. Dąbrowski W.S. Janczyk C. Kochalski R. Sura H.J. Wnorowski	L. Kotecki P. Litwiniuk
5 May 2022	Resolution No. 10/2022 on the evaluation of the activities of the NBP Management Board as regards the implementation of monetary policy guidelines for 2021	A. Glapiński I.K. Dąbrowski W.S. Janczyk C. Kochalski R. Sura H.J. Wnorowski	L. Kotecki P. Litwiniuk
5 May 2022	Resolution No. 11/2022 on approving the <i>Report on the Operations of Narodowy Bank Polski in 2021</i>	A. Glapiński I.K. Dąbrowski W.S. Janczyk C. Kochalski P. Litwiniuk R. Sura H.J. Wnorowski	L. Kotecki
8 June 2022	Motion to raise the NBP interest rates by 1.00 percentage point  Motion did not pass	L. Kotecki	A. Glapiński I.K. Dąbrowski W.S. Janczyk C. Kochalski P. Litwiniuk R. Sura H.J. Wnorowski



## Voting records of the Monetary Policy Council members on motions and resolutions

Date	Subject matter of motion or resolution	Voting of the MPC members	
		For	Against
8 June 2022	<p>Motion to raise the NBP reference rate by 0.75 percentage points, i.e. to 6.00%, and to simultaneously raise the remaining interest rates to the following levels:</p> <ul style="list-style-type: none"> <li>– lombard rate to 6.50%,</li> <li>– deposit rate to 5.50%,</li> <li>– rediscount rate to 6.05%,</li> <li>– discount rate to 6.10%</li> </ul> <p>Motion passed</p>	<p>A. Glapiński I.K. Dąbrowski W.S. Janczyk C. Kochalski P. Litwiniuk R. Sura H.J. Wnorowski</p>	L. Kotecki
8 June 2022	<p>Resolution No. 12/2022 on the reference rate, refinancing credit rate, deposit rate as well as the rediscount and discount rates at NBP</p>	<p>A. Glapiński I.K. Dąbrowski W.S. Janczyk C. Kochalski P. Litwiniuk R. Sura H.J. Wnorowski</p>	L. Kotecki
7 July 2022	<p>Motion to raise the NBP reference rate by 0.50 percentage points, i.e. to 6.50%, and to simultaneously raise the remaining interest rates to the following levels:</p> <ul style="list-style-type: none"> <li>– lombard rate to 7.00%,</li> <li>– deposit rate to 6.00%,</li> <li>– rediscount rate to 6.55%,</li> <li>– discount rate to 6.60%.</li> </ul> <p>Motion passed</p>	<p>A. Glapiński I.K. Dąbrowski W.S. Janczyk C. Kochalski L. Kotecki P. Litwiniuk R. Sura H.J. Wnorowski</p>	No votes
7 July 2022	<p>Resolution No. 13/2022 on the reference rate, refinancing credit rate, deposit rate as well as the rediscount and discount rates at NBP</p>	<p>A. Glapiński I.K. Dąbrowski W.S. Janczyk C. Kochalski L. Kotecki P. Litwiniuk R. Sura H.J. Wnorowski</p>	No votes
7 September 2022	<p>Motion to raise the NBP interest rates by 0.50 percentage points</p> <p>Motion did not pass</p>	<p>L. Kotecki P. Litwiniuk</p>	<p>A. Glapiński I.K. Dąbrowski W.S. Janczyk C. Kochalski H.J. Wnorowski</p>
7 September 2022	<p>Motion to raise the NBP reference rate by 0.25 percentage points, i.e. to 6.75%, and to simultaneously raise the remaining interest rates to the following levels:</p> <ul style="list-style-type: none"> <li>– lombard rate to 7.25%,</li> <li>– deposit rate to 6.25%,</li> <li>– rediscount rate to 6.80%,</li> <li>– discount rate to 6.85%</li> </ul> <p>Motion passed</p>	<p>A. Glapiński I.K. Dąbrowski W.S. Janczyk C. Kochalski P. Litwiniuk H.J. Wnorowski</p>	L. Kotecki
7 September 2022	<p>Resolution No. 14/2022 on the reference rate, refinancing credit rate, deposit rate as well as the rediscount and discount rates at NBP</p>	<p>A. Glapiński I.K. Dąbrowski W.S. Janczyk C. Kochalski P. Litwiniuk H.J. Wnorowski</p>	L. Kotecki
7 September 2022	<p>Resolution No. 15/2022 on adopting the monetary policy guidelines for 2023</p>	<p>A. Glapiński I.K. Dąbrowski W.S. Janczyk C. Kochalski P. Litwiniuk H.J. Wnorowski</p>	L. Kotecki

### Appendix 3

Date	Subject matter of motion or resolution	Voting of the MPC members	
		For	Against
5 October 2022	Motion to raise the NBP interest rates by 1.00 percentage point  Motion did not pass	J.B. Tyrowicz	A. Glapiński I.K. Dąbrowski W.S. Janczyk C. Kochalski L. Kotecki P. Litwiniuk H.J. Wnorowski
5 October 2022	Motion to raise the NBP interest rates by 0.50 percentage points  Motion did not pass	L. Kotecki P. Litwiniuk J.B. Tyrowicz	A. Glapiński I.K. Dąbrowski W.S. Janczyk C. Kochalski H.J. Wnorowski
9 November 2022	Motion to raise the NBP interest rates by 1.00 percentage point  Motion did not pass	J.B. Tyrowicz	A. Glapiński I.K. Dąbrowski I. Duda W.S. Janczyk C. Kochalski L. Kotecki P. Litwiniuk G. Masłowska H.J. Wnorowski
9 November 2022	Motion to raise the NBP interest rates by 0.50 percentage points  Motion did not pass	L. Kotecki P. Litwiniuk J.B. Tyrowicz	A. Glapiński I.K. Dąbrowski I. Duda W.S. Janczyk C. Kochalski G. Masłowska H.J. Wnorowski
7 December 2022	Motion to raise the NBP interest rates by 1.00 percentage point  Motion did not pass	J.B. Tyrowicz	A. Glapiński I.K. Dąbrowski I. Duda W.S. Janczyk C. Kochalski L. Kotecki P. Litwiniuk G. Masłowska H.J. Wnorowski
7 December 2022	Motion to raise the NBP interest rates by 0.50 percentage points  Motion did not pass	L. Kotecki J.B. Tyrowicz	A. Glapiński I.K. Dąbrowski I. Duda W.S. Janczyk C. Kochalski P. Litwiniuk G. Masłowska H.J. Wnorowski
7 December 2022	Motion to raise the NBP interest rates by 0.25 percentage points  Motion did not pass	P. Litwiniuk	A. Glapiński I.K. Dąbrowski I. Duda W.S. Janczyk C. Kochalski L. Kotecki G. Masłowska J.B. Tyrowicz H.J. Wnorowski
7 December 2022	Resolution No. 16/2022 on approving the financial plan of Narodowy Bank Polski for 2023	A. Glapiński I.K. Dąbrowski I. Duda W.S. Janczyk C. Kochalski L. Kotecki P. Litwiniuk G. Masłowska H.J. Wnorowski	J.B. Tyrowicz

Appendix 4

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**Financial Statements  
of Narodowy Bank Polski  
as at 31 December 2022  
together with  
the Independent  
Auditor's Report**

## Balance Sheet of Narodowy Bank Polski as at 31 December 2022

Assets	Note	31.12.2022	31.12.2021
		<i>PLN thousand</i>	
1. Gold and gold receivables	1	58,650,238.7	54,843,799.4
2. Claims on non-residents denominated in foreign currency		675,407,337.1	619,333,303.4
2.1. <i>Receivables from the IMF</i>	2	31,411,666.6	30,010,120.7
2.2. <i>Balances with foreign institutions, securities, loans granted and other foreign assets</i>	3.1	643,995,670.5	589,323,182.7
6. Other claims on credit institutions denominated in domestic currency		169.2	7.0
7. Securities of residents denominated in domestic currency	3.2	140,673,185.5	149,322,164.0
10. Other assets		1,497,159.3	1,824,535.8
10.1. <i>Tangible fixed assets and intangible assets</i>	4	1,016,124.3	1,033,750.4
10.2. <i>Other financial assets</i>	3.3	303,134.2	299,061.9
10.3. <i>Off-balance-sheet instruments revaluation differences</i>	10	34,734.7	354,272.7
10.4. <i>Accruals and prepaid expenses</i>	8	49,683.9	41,496.4
10.5. <i>Sundry</i>	3.4	93,482.2	95,954.3
<b>Total assets</b>		<b>876,228,089.8</b>	<b>825,323,809.6</b>

Liabilities	Note	31.12.2022	31.12.2021
		<i>PLN thousand</i>	
1. Banknotes and coins in circulation	5	368,611,663.5	355,557,725.3
2. Liabilities to credit institutions related to monetary policy operations denominated in domestic currency	6.1	55,112,907.5	96,525,124.4
2.1. <i>Current accounts (incl. the required minimum reserve accounts)</i>		34,914,457.6	66,061,581.2
2.2. <i>Deposit facilities</i>		20,198,449.9	30,463,543.2
3. Other liabilities to credit institutions denominated in domestic currency	6.2	940,440.8	762,678.9
4. Liabilities due to issued securities denominated in domestic currency	6.1	252,181,174.3	184,521,188.7
5. Liabilities to other residents denominated in domestic currency	6.2	11,883,806.3	15,251,900.0
5.1. <i>Liabilities to general government</i>		10,792,940.6	15,185,508.3
5.2. <i>Other liabilities</i>		1,090,865.7	66,391.7
6. Liabilities to non-residents denominated in domestic currency	6.2	4,124,197.2	3,960,800.8
7. Liabilities to residents denominated in foreign currency	6.3	59,010,072.3	32,629,719.7
8. Liabilities to non-residents denominated in foreign currency	6.3	53,625,136.0	36,036,430.1
9. SDR allocation	2	30,871,510.9	29,769,702.4
11. Other liabilities		430,621.7	1,108,023.7
11.1. <i>Off-balance-sheet instruments revaluation differences</i>	10	2,404.1	24,134.5
11.2. <i>Accruals and deferred income</i>	8	97,303.7	97,536.8
11.3. <i>Sundry</i>	6.4	330,913.9	986,352.4
12. Provisions		15,281,500.7	16,693,832.6
12.1. <i>FX risk provision</i>	9.2	15,078,591.4	16,499,460.9
12.2. <i>Provisions for liabilities</i>	7	202,909.3	194,371.7
13. Revaluation accounts	9.1	50,056,738.6	51,038,899.5
14. Capital and reserves	9.3	1,500,000.0	1,500,000.0
15. Financial result	9.4	-27,401,680.0	-32,216.5
15.1. <i>Financial result for the financial year</i>		-16,943,670.7	10,974,518.7
15.2. <i>Loss of previous years</i>		-10,458,009.3	-11,006,735.2
<b>Total liabilities</b>		<b>876,228,089.8</b>	<b>825,323,809.6</b>

## Profit and Loss Account of Narodowy Bank Polski for the year ended on 31 December 2022

	Note	2022	2021
		PLN thousand	
1. Net result on interest	11	-5,829,784.9	2,252,493.1
1.1. Interest income*		9,371,032.8	3,140,350.1
1.2. Interest expenses*		-15,200,817.7	-887,857.0
2. Net result on financial operations		-9,768,368.9	9,949,936.6
2.1. Realised gains/losses	12.1	15,548,530.0	20,257,561.3
2.2. Unrealised losses	12.2	-26,737,763.7	-3,658,590.0
2.3. Net result on impairment on financial assets		-4.7	-493.1
2.4. Net result on FX risk provision	9.2	1,420,869.5	-6,648,541.6
3. Net result on commissions and fees	13	-449.4	1,385.0
3.1. Commissions and fees income		52,945.2	47,466.7
3.2. Commissions and fees expenses		-53,394.6	-46,081.7
4. Income on shares and participating interests	14	32,215.8	38,256.7
5. Other income	19	140,909.0	176,280.0
<b>A. Total net income</b>		<b>-15,425,478.4</b>	<b>12,418,351.4</b>
6. Salaries	15	-673,408.3	-640,499.1
7. Administrative expenses	16	-342,854.6	-299,532.6
8. Depreciation and amortisation expenses	17	-95,484.0	-114,186.4
9. Expenses on issue of banknotes and coins	18	-389,963.3	-364,457.2
10. Other expenses	19	-16,482.1	-25,157.4
<b>B. Financial result for the financial year</b>		<b>-16,943,670.7</b>	<b>10,974,518.7</b>

\* Change in the presentation of interest income and interest expenses – see Chapter 3.

# Notes

## 1. Introduction

### 1.1. Legal basis, scope of activities and bodies of NBP

In accordance with Article 227 para. 1 of the Constitution of the Republic of Poland, Narodowy Bank Polski, hereinafter referred to as “NBP”, is the central bank of the State. It has the exclusive right to issue money as well as to formulate and implement monetary policy. NBP is responsible for the value of Polish currency.

The role, functions, objective and tasks of NBP are set forth, in particular, in the following acts and regulations:

- the Act of 29 August 1997 on Narodowy Bank Polski (Journal of Laws of 2022, item 2025), hereinafter referred to as the “Act on NBP”,
- the Act of 29 August 1997 – Banking Law (Journal of Laws of 2022, item 2324, as amended),
- the Treaty on European Union and the Treaty on the Functioning of the European Union (consolidated texts: Official Journal of the EU 2016/C 202 of 7 June 2016, p. 1).

Pursuant to Article 2 of the Act on NBP, Narodowy Bank Polski has a legal personality and is not subject to entry into the register of State enterprises. NBP performs its activities in the territory of the Republic of Poland, and its registered office is in Warsaw.

In accordance with the Act on NBP, the basic objective of the activity of NBP is to maintain price stability, while supporting the economic policy of the government, insofar as this does not constrain the basic objective of NBP. The tasks of NBP also include:

- organising payments,
- managing the foreign exchange reserves,
- conducting foreign exchange activities within the bounds stipulated by relevant laws,
- providing banking services to the State budget,
- regulating the liquidity of banks and providing them with refinancing facilities,
- establishing the necessary conditions for the development of the banking system,
- acting in favour of the stability of the financial system,
- acting with the aim of eliminating or mitigating systemic risk in the financial system,
- compiling monetary and banking statistics, the balance of payments and the international investment position,
- performing other tasks as specified by laws.

In accordance with the Constitution of the Republic of Poland and the Act on NBP, the bodies of NBP are:

1. Governor of NBP (appointed for a six-year term of office),
2. Monetary Policy Council (its members are appointed for a six-year non-renewable term of office),
3. Management Board of NBP (its members are appointed for a six-year term of office).

The composition of NBP bodies as at 31 December 2022 was as follows:

#### **Governor of NBP<sup>1</sup>**

*Adam Glapiński*

#### **Monetary Policy Council<sup>2</sup>**

<b>Chairperson</b>	<i>Adam Glapiński</i>		
<b>Members</b>	<i>Ireneusz Dąbrowski</i>	<i>Cezary Kochalski</i>	<i>Gabriela Masłowska</i>
	<i>Iwona Duda</i>	<i>Ludwik Kotecki</i>	<i>Joanna Tyrowicz</i>
	<i>Wiesław Janczyk</i>	<i>Przemysław Litwiniuk</i>	<i>Henryk Wnorowski</i>

#### **Management Board of NBP<sup>3</sup>**

<b>Chairperson</b>	<i>Adam Glapiński</i>
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<sup>1</sup> The first term of office of Adam Glapiński as Governor of Narodowy Bank Polski ended on 21 June 2022. As of 22 June 2022 Adam Glapiński started the second term of office as Governor of Narodowy Bank Polski.

<sup>2</sup> In 2022 the following members of the Monetary Policy Council ended their terms of office as of:

- 25 January 2022 – Eugeniusz Gatnar and Jerzy Kropiwnicki,
- 9 February 2022 – Grażyna Ancyparowicz and Eryk Łon,
- 20 February 2022 – Łukasz Hardt and Kamil Zubelewicz,
- 30 March 2022 – Jerzy Żyżyński,
- 21 July 2022 – Rafał Sura (after he resigned from the post of a member of the Monetary Policy Council).

In 2022, the following members of the Monetary Policy Council were appointed for a six-year term of office, starting as of:

- 26 January 2022 – Ludwik Kotecki and Przemysław Litwiniuk,
- 21 February 2022 – Ireneusz Dąbrowski and Henryk Wnorowski,
- 23 February 2022 – Wiesław Janczyk,
- 7 September 2022 – Joanna Tyrowicz,
- 7 October 2022 – Iwona Duda and Gabriela Masłowska.

<sup>3</sup> As on 16 July 2022 Andrzej Kaźmierczak ceased to act as member of the Management Board of NBP (after his term of office ended).

On 28 July 2022 Rafał Sura was appointed member of the Management Board of NBP.

On 1 September 2022 Paweł Mucha was appointed member of the Management Board of NBP.

As on 6 October 2022 Paweł Szlamacha ceased to act as member of the Management Board of NBP (after his first term of office ended).

On 12 October 2022 Paweł Szlamacha was appointed member of the Management Board of NBP (second term of office).

<b>First Deputy Governor of NBP</b>	<i>Marta Kightley</i>		
<b>Deputy Governor of NBP</b>	<i>Adam Lipiński</i>		
<b>Members</b>	<i>Marta Gajeczka</i>	<i>Piotr Pogonowski</i>	<i>Paweł Szalamacha</i>
	<i>Paweł Mucha</i>	<i>Rafał Sura</i>	

## 1.2. Legal basis of preparation of the financial statements

The Management Board of NBP has prepared the financial statements of NBP as at 31 December 2022 on the basis of the following provisions:

- the Act on NBP,
- Resolution No. 13/2020 of the Monetary Policy Council of 6 November 2020 on the accounting principles of Narodowy Bank Polski, the format of the balance sheet, the profit and loss account and the contents of notes (NBP Official Journal, item 24), hereinafter referred to as “Resolution No. 13/2020 of the MPC”,
- Resolution No. 6/2019 of the Monetary Policy Council of 5 November 2019 on the principles for creating and releasing the provision against the foreign exchange rate risk of the zloty at Narodowy Bank Polski (NBP Official Journal, item 14), hereinafter referred to as “Resolution No. 6/2019 of the MPC”,
- Resolution No. 64/2020 of the Management Board of Narodowy Bank Polski of 21 December 2020 on the accounting organisation rules at Narodowy Bank Polski (as amended), referred hereinafter as “Resolution No. 64/2020 of the NBP Management Board”.

These regulations constitute the NBP accounting policy.

## 1.3. Period covered by the financial statements

The financial statements cover the financial year from 1 January 2022 to 31 December 2022. Comparative data in the financial statements cover the financial year from 1 January 2021 to 31 December 2021.

## 1.4. Certified auditor and its selection

The annual financial statements of NBP prepared as at 31 December 2022 are subject to audit by the certified auditor KPMG Audyty sp. z o.o. sp.k., with its registered office in Warsaw. The certified auditor was appointed by the Monetary Policy Council, hereinafter referred to as the “MPC”, in 2019 on the basis of Article 69 para. 1 of the Act on NBP. The selection was made following an open tendering, pursuant to the Act of 29 January 2004 – Public Procurement Law (Journal of Laws of 2018, item 1986, as amended), for a period of two years (audit of the financial statements for the years 2019 and 2020) with the option to extend the agreement for another two-year period (audit of the financial statements for the years 2021 and 2022). In 2021, the MPC decided to extend the agreement.



## 1.5. Information on the adoption and approval of NBP financial statements for the year 2021

The annual financial statements of NBP prepared as at 31 December 2021 were adopted by the MPC by Resolution No. 6/2022 on 6 April 2022 (NBP Official Journal, item 8) and approved by the Council of Ministers by Resolution No. 121/2022 on 3 June 2022. The certified auditor in charge of auditing the financial statements – KPMG Audyt Spółka z ograniczoną odpowiedzialnością sp.k. – issued an unmodified (unqualified) opinion on the audited financial statements.

In the financial statements prepared as at 31 December 2021, NBP recorded a net financial result of PLN 10,974,518.7 thousand. Therefore, in 2022 in accordance with Article 69 para. 4 of the Act on NBP, NBP paid a contribution from profit in the amount of PLN 10,425,792.8 thousand to the State budget. In accordance with Article 62 of the Act on NBP, 5% of NBP's profit, i.e. the amount of PLN 548,725.9 thousand, was allocated to NBP's reserve fund.

## 2. Description of significant accounting principles

To enhance the understanding of the information presented in the financial statements, detailed information about the significant principles of the accounting policy binding at NBP and on the assessments and estimates made are provided in individual explanatory notes (see Chapter 5).

### 2.1. Basic accounting principles

The accounting principles applied by NBP, as specified in the legal regulations listed in point 1.2. of the Introduction to the financial statements, conform to the standards applied in the European System of Central Banks, hereinafter referred to as "ESCB", the basis of which is the Guideline (EU) 2016/2249 of the European Central Bank, hereinafter referred to as the "ECB", of 3 November 2016 on the legal framework for accounting and financial reporting in the European System of Central Banks (ECB/2016/34, as amended), hereinafter referred to as "the ECB Guideline".

The following accounting principles are applied during the preparation of the financial statements of NBP:

- true and fair view,
- going concern,
- prudence,
- materiality,
- consistency and comparability,
- accruals principle.

## 2.2. Going concern

The financial statements of NBP were prepared under the going concern assumption. In accordance with Article 58 of the Act on NBP, NBP cannot be declared bankrupt.

## 2.3. Recognition of transactions in the accounting books of NBP

All economic events of a given financial year are recognised in the accounting books for that year.

When recognising transactions in the accounting books, NBP follows the so-called economic approach as laid down in the ECB Guideline. Consequently, the following rules are applied:

- foreign currencies and gold purchased or sold in a spot transaction or a forward transaction are recognised in the NBP accounting books (on off-balance-sheet accounts) on the trade date,
- interest, discount and premium on assets and liabilities as well as on off-balance-sheet instruments are recognised in the profit and loss account at the end of each operating day.

Securities purchased or sold in a spot transaction are recognised in the NBP accounting books on the settlement date.

## 2.4. Valuation as at the balance sheet date

As at the balance sheet date, for gold, foreign currencies, securities purchased by NBP and off-balance-sheet financial instruments<sup>4</sup> the principle of valuation at a market value is applied.<sup>5</sup> The revaluation results of the assets and liabilities to a market value as at the balance sheet date are recognised in accordance with the following rules:

- recognising unrealised losses (revaluation losses) in the financial result,
- unrealised gains (revaluation gains) are not recognised in the financial result – they are recognised on the liabilities side of the balance sheet as *Revaluation accounts*.

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<sup>4</sup> Foreign exchange off-balance sheet items arising from foreign exchange forward and swap transactions are valued at the average NBP exchange rate.

<sup>5</sup> The principle of valuation at market value was not applied for securities held-to-maturity and securities held for monetary policy purposes. Market value is the average of the bid and ask prices based on quotations for transactions of standard volume on a given market by recognised operators, whether operating in an organised market or an over-the-counter market or – if prices are not available on the market – a value determined according to an accepted and consistently applied valuation model, including a value determined by reference to appropriate published yield curves.

Price revaluation of financial instruments valued at a market price is carried out prior to their currency revaluation.

The value of individual assets and liabilities and gains and losses are determined separately, without netting the value of items which differ in kind.

Gold conforming to London Good Delivery standard is valued at the average market price for an ounce of gold quoted in US dollars on the London Bullion Market.

Marketable securities not classified as held-to-maturity are valued at their market value.

Marketable securities held to maturity are valued at their clean price adjusted for accrued discount and premium, less impairment.<sup>6</sup>

Marketable securities held for monetary policy purposes are valued at their clean price adjusted for accrued discount and premium, less impairment.

Securities issued by NBP are valued at their issue price adjusted for accrued discount and premium.

Forward transactions in securities are valued by comparing the market value of the securities on the valuation date with their value set in the agreement, discounted as at the settlement date of the spot transaction.

Futures are valued at market value.

The remaining assets and liabilities are valued at, respectively, nominal value, transaction price or market value.

Assets not valued at market value are reviewed for impairment, i.e. whether it is highly probable that a given asset will not generate expected economic benefits in the future. If such evidence is identified, the amount of expected impairment is determined by comparing their book value with their recoverable amount.

After their balance-sheet value has been determined in original currency, assets, liabilities and off-balance-sheet financial instruments in foreign currencies have their value determined in domestic

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<sup>6</sup> Marketable securities held-to-maturity may be sold before their maturity:

- 1) if the value of the securities sold is considered non-significant in comparison with the total value of the held-to-maturity securities holding, or
- 2) if the securities are sold during one month before maturity date, or
- 3) under exceptional circumstances, in particular in the case of a significant deterioration of the issuer's creditworthiness.

currency. In the revaluation process, the average NBP exchange rates prevailing at the balance sheet date are used.

For the valuation as at 31 December 2022, the prices/exchange rates announced on 30 December 2022 were used, and for comparable data – those announced on 31 December 2021.

## **2.5. Post-balance-sheet events**

The balance sheet and the profit and loss account shall be adjusted for the events the information on which was received after the balance sheet date and prior to the approval of the NBP annual financial statements, if such events materially affect their content and are events adjusting their balance at the balance sheet date.

## **3. Changes in accounting principles**

Changes in the NBP accounting policy in 2022 were introduced by Resolution No. 13/2020 of the MPC.

### *Recognising interest, discount and premium on securities in the financial result of NBP and presentation of the net result on interest in the profit and loss account*

As from 1 January 2022, interest, discount and premium on purchased securities are recognised in the net result on interest at the end of each operating day, in amounts calculated according to the internal rate of return. Until 31 December 2021, discount and premium on purchased securities were recognised in the financial result at the end of each operating day, in amounts calculated according to the internal rate of return. Interest on purchased securities was recognised in the financial result at the end of each operating day, in amounts calculated according to the straight-line method.

After the method for recognising interest, discount and premium on purchased securities in the financial result has been standardised, and also in order to enhance the transparency of the presentation of interest income and interest expenses, the following changes have been introduced in the presentation of the net result on interest:

- income and expenses (in case of a negative interest rate) on interest on financial assets are presented net as interest income (including for securities – income on interest and discount, less premium expenses, are presented as net income on interest),
- expenses and income (in case of a negative interest rate) on interest on financial liabilities are presented net as interest expenses.

Until the end of 2021:

- interest income comprised interest income on financial assets (including for securities – income on interest and discount) and interest income due to a negative interest rate on financial liabilities,

- interest expenses comprised interest expenses on financial liabilities, expenses on premium on securities and expenses due to a negative interest rate on financial assets.

The change in the presentation of income and expenses on interest is presented in tables below (see Note 11).

Profit and loss account of NBP	Note	2022	2021 comparative data	2021 data from the approved annual financial statements
		PLN thousand		
1. Net result on interest	11	-5,829,784.9	2,252,493.1	2,252,493.1
1.1. Interest income		9,371,032.8	3,140,350.1	8,619,588.1
1.2. Interest expenses		-15,200,817.7	-887,857.0	-6,367,095.0
...				

Net result on interest	Income		Expenses		Net result	
	2021 comparative data	2021 data from the approved annual financial statements	2021 comparative data	2021 data from the approved annual financial statements	2021 comparative data	2021 data from the approved annual financial statements
	PLN thousand					
<b>Investment instruments of foreign exchange reserves, of which</b>	<b>1,139,388.4</b>	<b>5,692,036.4</b>	<b>11,175.1</b>	<b>-4,541,472.9</b>	<b>1,150,563.5</b>	<b>1,150,563.5</b>
- securities	1,383,036.8	5,631,240.3	0.0	-4,248,203.5	1,383,036.8	1,383,036.8
* interest	5,422,281.4	5,422,281.4	-	-	5,422,281.4	5,422,281.4
* discount	208,958.9	208,958.9	-	-	208,958.9	208,958.9
* premium	-4,248,203.5	-	-	-4,248,203.5	-4,248,203.5	-4,248,203.5
- term deposits	-232,419.7	21,547.1	0.0	-253,966.8	-232,419.7	-232,419.7
* positive interest rate	21,547.2	21,547.2	-	-	21,547.2	21,547.2
* negative interest rate	-253,966.9	-	-	-253,966.8	-253,966.9	-253,966.8
- reverse repo transactions	-5,827.2	21,756.5	0.0	-27,583.7	-5,827.2	-5,827.2
* positive interest rate	21,756.5	21,756.5	-	-	21,756.5	21,756.5
* negative interest rate	-27,583.7	-	-	-27,583.7	-27,583.7	-27,583.7
- repo transactions	0.0	17,390.2	11,353.6	-6,036.6	11,353.6	11,353.6
* positive interest rate	-	-	-6,036.6	-6,036.6	-6,036.6	-6,036.6
* negative interest rate	-	17,390.2	17,390.2	-	17,390.2	17,390.2
- other	-5,401.5	102.3	-178.5	-5,682.3	-5,580.0	-5,580.0
* positive interest rate	102.3	102.3	-178.5	-178.5	-76.2	-76.2
* negative interest rate	-5,503.8	-	0.0	-5,503.8	-5,503.8	-5,503.8
<b>Gold</b>	<b>3,364.7</b>	<b>3,364.7</b>	<b>0.0</b>	<b>0.0</b>	<b>3,364.7</b>	<b>3,364.7</b>
<b>International Monetary Fund</b>	<b>7,833.8</b>	<b>7,833.8</b>	<b>-8,005.4</b>	<b>-8,005.4</b>	<b>-171.6</b>	<b>-171.6</b>
<b>Monetary policy instruments, of which:</b>	<b>2,007,566.9</b>	<b>2,897,212.6</b>	<b>-885,367.7</b>	<b>-1,775,013.4</b>	<b>1,122,199.2</b>	<b>1,122,199.2</b>
- NBP bills	0.0	0.0	-768,225.5	-768,225.5	-768,225.5	-768,225.5
- securities	1,986,694.4	2,876,340.1	0.0	-889,645.7	1,986,694.4	1,986,694.4
* interest	2,803,230.1	2,803,230.1	0.0	0.0	2,803,230.1	2,803,230.1
* discount	73,110.0	73,110.0	0.0	0.0	73,110.0	73,110.0
* premium	-889,645.7	0.0	0.0	-889,645.7	-889,645.7	-889,645.7
- required minimum reserve	420.9	420.9	-64,430.0	-64,430.0	-64,009.1	-64,009.1
- deposit facility	0.0	0.0	-52,187.4	-52,187.4	-52,187.4	-52,187.4
- other	20,451.6	20,451.6	-524.8	-524.8	19,926.8	19,926.8
<b>Other interest income/expenses, of which</b>	<b>-17,803.7</b>	<b>19,140.6</b>	<b>-5,659.0</b>	<b>-42,603.3</b>	<b>-23,462.7</b>	<b>-23,462.7</b>
- on financial assets	-17,803.6	760.3	-	-18,563.9	-17,803.6	-17,803.6
* positive interest rate	760.3	760.3	0.0	0.0	760.3	760.3
* negative interest rate	-18,563.9	0.0	0.0	-18,563.9	-18,563.9	-18,563.9
- on financial liabilities	0.0	18,380.3	-5,659.0	-24,039.3	-5,659.0	-5,659.0
* positive interest rate	0.0	0.0	-24,039.3	-24,039.3	-24,039.3	-24,039.3
* negative interest rate	0.0	18,380.3	18,380.3	0.0	18,380.3	18,380.3
<b>Total</b>	<b>3,140,350.1</b>	<b>8,619,588.1</b>	<b>-887,857.0</b>	<b>-6,367,095.0</b>	<b>2,252,493.1</b>	<b>2,252,493.1</b>

Values for the year 2021, brought to comparability with the data for 2022, are presented in subsequent notes (see Note 11).

#### 4. Values based on professional estimates

When preparing its financial statements, NBP makes specific estimates and assumptions that affect the amounts recognised in the financial statements. The estimates and assumptions are based, among others, on historical data and expectations about future events that are believed to be reasonable at the date of preparation of the financial statements. As the existing circumstances and expectations about future events may change as a result of market changes or an occurrence of factors beyond NBP's control, the NBP-made estimates are reviewed on a regular basis.

The key area where NBP makes estimates is the calculation of the amount of the FX risk provision.<sup>7</sup> In accordance with Resolution No. 6/2019 of the MPC, the estimated FX risk provision is equal to the amount that would cover a potential change in the value of foreign currency holdings due to identified foreign exchange rate risk of the zloty, decreased by estimated unrealised gains on changes in the foreign exchange rate of the zloty (see Note 9 and Note 9.2).

Other areas in which NBP makes significant estimates relate to, in particular, setting:

- the amount of provisions for liabilities due to retirement and disability severance payments, death in service benefits and jubilee awards (the provisions are estimated on the basis of actuarial assessment carried out periodically by an independent actuary),
- periods of use of tangible fixed assets and intangible assets,
- the discount rates of outstanding lease fees (the rates are used to determine the value of lease-related payments, and consequently to determine the value of right-of-use assets – see Note 4 and Note 6.4),
- write-downs due to assets impairment.

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<sup>7</sup> I.e. the provision against the foreign exchange rate risk of the zloty, whose principles for creating and releasing are determined by the MPC in Resolution No. 6/2019.

## 5. Explanatory notes

### Note 1 Gold and gold receivables

Financial instruments in gold are recognised in the NBP accounting books at transaction price. The transaction price of an ounce of gold in USD is converted into domestic currency at the average NBP exchange rate of the US dollar as at the transaction date.

Gold assets constitute a holding of gold for which the average cost is determined. The average cost of gold holding, which is the average cost of purchasing an ounce of gold by NBP, is used to calculate income and expenses arising from the sale of gold (realised gains or losses on transactions in gold) and determine the results of balance sheet valuation.

At the balance sheet date, gold is valued at the market value of an ounce of gold in USD, converted into domestic currency at the average NBP exchange rate of the USD prevailing at the balance sheet date. No distinction is made between the results of currency and price valuation of gold – they are treated jointly as gold holdings revaluation differences. Unrealised losses, recognised in the financial result on the balance sheet date, change the average cost of gold holding.

<i>PLN thousand</i>	31.12.2022	31.12.2021	Change
Gold stored at NBP	26,894,727.8	24,912,428.2	1,982,299.6
Gold on accounts with foreign banks, of which:	31,755,510.9	29,931,371.2	1,824,139.7
- <i>current accounts in gold</i>	0.0	18,144,948.1	-18,144,948.1
- <i>term deposits in gold</i>	31,755,510.9	11,786,423.1	19,969,087.8
<b>Total</b>	<b>58,650,238.7</b>	<b>54,843,799.4</b>	<b>3,806,439.3</b>
<i>of which gold revaluation differences</i>	27,515,054.6	23,474,557.2	4,040,497.4

		31.12.2022	31.12.2021	Change
Gold stored at NBP	thousands of ounces	3,371.2	3,371.2	0.0
	(tons)	(104.9)	(104.9)	(0.0)
Gold on accounts with foreign banks, of which:	thousands of ounces	3,980.6	4,050.5	-69.9
	(tons)	(123.8)	(125.9)	(-2.1)
- <i>current accounts in gold</i>	thousands of ounces	0.0	2,455.5	-2,455.5
	(tons)	(0.0)	(76.3)	(-76.3)
- <i>term deposits in gold</i>	thousands of ounces	3,980.6	1,595.0	2,385.6
	(tons)	(123.8)	(49.6)	(74.2)
<b>Total</b>	<b>thousands of ounces</b>	<b>7,351.8</b>	<b>7,421.7</b>	<b>-69.9</b>
	<b>(tons)</b>	<b>(228.7)</b>	<b>(230.8)</b>	<b>(-2.1)</b>



Gold is held at NBP and on accounts in foreign banks. Gold in foreign banks is:

- held on the current accounts,
- invested in term deposit transactions with foreign financial institutions; interest on term deposits in gold is accrued and paid in USD (see Note 3.1 and Note 11).

The decrease in the balance by 69.9 thousand ounces was a result of the investment policy pursued.

The domestic currency value of the item was mainly affected by the revaluation of the holding of gold (see Note 9.1 and Note 12.1).

## Note 2 Receivables from and liabilities to the IMF

Transactions with the International Monetary Fund (hereinafter the "IMF") are recognised in the NBP accounting books at nominal value. As at the balance-sheet date, the amounts of receivables from and liabilities to the IMF are valued according to nominal value. Valuation of assets is carried out with consideration for impairment write-downs.

The balances resulting from operations with the IMF are denominated in Special Drawing Rights (SDR) or in the zloty. The SDR is construed as a separate foreign currency.

The balances in SDR are converted into domestic currency at the average NBP exchange rate as at the balance-sheet date.

Items related to the IMF:

- **Reserve tranche** corresponds to the Republic of Poland's member quota in the IMF, less liabilities due to the account in domestic currency operated by NBP for the IMF (so-called No. 1 Account of the IMF).

The quota in the IMF of each member country is determined on the basis of selected macroeconomic indicators and paid in full amount (in domestic currency and in foreign currencies). The size of member quota determines for a given country, among others, the number of its voting rights in the IMF, the assigned amount of SDR allocation and the limits of loans granted to that country.

The funds accumulated in No. 1 Account of the IMF are used by the IMF under quarterly Financial Transaction Plans (FTPs). The funds are exchanged for foreign currency and transferred to member countries – IMF borrowers, which results in an increase in reserve tranche. On the other hand, loan repayments made by IMF borrowers in foreign currencies are exchanged for the domestic currency and credited to No. 1 Account of the IMF, which results in a decrease in reserve tranche.

- **Current account with the IMF** includes funds received under SDR allocation and payments in SDR due to loans extended to the IMF, as well as due to settlements arising from interest and fees on balances and transactions related to the IMF.
- **Term deposit in the IMF** (non-interest bearing) includes funds in the IMF-administered PRG-HIPC Trust (Poverty Reduction and Growth – Heavily Indebted Poor Countries Initiative).

#### ▪ Loans in foreign currency extended to the IMF

Since 2011 NBP has been a participant in the New Arrangements to Borrow (NAB). As a participant in the NAB, NBP has made a commitment to extend to the IMF interest-bearing loans up to the arranged limit. Under the decision effective from 1 January 2021 to 31 December 2025, at the end of 2022 and 2021 the maximum limit for loans amounted to SDR 2,570,800.0 thousand.<sup>8</sup>

Under the 2020 bilateral borrowing agreement (BBA), effective from 1 January 2021 to 31 December 2023, with an option to extend it by one year, subject to approval by NBP, NBP has made a commitment to extend interest-bearing loans to the IMF amounting up to the SDR equivalent of EUR 2,701,000.0 thousand.<sup>9</sup> The funds may be transferred by NBP at the request of the IMF. The IMF will be able to use these funds provided that it exhausts other available resources originating from quotas of member countries and loans under the NAB. Neither in 2022 nor in 2021 did the IMF borrow funds under BBA.

- **SDR allocations**, meaning granting SDRs to member countries, were conducted in 2009 and in 2021. Under the SDR allocations, the Republic of Poland received a total of SDR 5,229,896.4 thousand.

Reserve tranche (except for its fixed part amounting to SDR 56,236.0 thousand), the balance of the current account with the IMF, loans extended to the IMF and SDR allocation are remunerated on the basis of the interest rate determined by the IMF.

PLN thousand	Balance sheet item	31.12.2022	31.12.2021	Change
Reserve tranche, of which		6,264,325.2	5,737,726.8	526,598.4
- Member quota in the IMF		24,880,087.8	23,798,105.3	1,081,982.5
- No. 1 Account of the IMF		-18,615,762.6	-18,060,378.5	-555,384.1
Current account with the IMF		25,033,317.9	24,059,229.8	974,088.1
Term deposit with the IMF		41,565.5	40,261.8	1,303.7
Loans extended to the IMF		72,458.0	172,902.3	-100,444.3
<b>Total assets (Receivables from the IMF)</b>	A.2.1	<b>31,411,666.6</b>	<b>30,010,120.7</b>	<b>1,401,545.9</b>
<b>SDR allocation (Liabilities to the IMF)</b>	L.9	<b>30,871,510.9</b>	<b>29,769,702.4</b>	<b>1,101,808.5</b>
<b>Net item</b>		<b>540,155.7</b>	<b>240,418.3</b>	<b>299,737.4</b>
<i>of which SDR currency revaluation differences</i>		6,581.6	7,985.7	-1,404.1

<sup>8</sup> That is PLN 15,106,020.8 thousand according to the average NBP exchange rate as at 31 December 2022.

<sup>9</sup> That is PLN 12,667,419.9 thousand according to the average NBP exchange rate as at 31 December 2022.

<i>thousand SDR</i>	Balance sheet item	31.12.2022	31.12.2021	Change
Reserve tranche		1,066,086.7	1,008,086.7	58,000.0
- Member quota in the IMF		4,095,400.0	4,095,400.0	0.0
- No. 1 Account of the IMF		-3,029,313.3	-3,087,313.3	58,000.0
Current account with the IMF		4,260,265.1	4,227,072.6	33,192.5
Term deposit with the IMF		7,073.8	7,073.8	0.0
Loans extended to the IMF		12,331.2	30,378.0	-18,046.8
<b>Total assets (Receivables from the IMF)</b>	A.2.1	<b>5,345,756.8</b>	<b>5,272,611.1</b>	<b>73,145.7</b>
<b>SDR allocation (Liabilities to the IMF)</b>	L.9	<b>5,253,831.0</b>	<b>5,230,371.0</b>	<b>23,460.0</b>
<b>Net item</b>		<b>91,925.8</b>	<b>42,240.1</b>	<b>49,685.7</b>

In 2022, the change in the item in original currency was due to:

- an increase in the reserve tranche, which was a result of transactions under the FTPs – payments in favour of IMF member countries made by the IMF from No. 1 Account of the IMF with NBP,
- an increase in the current account with the IMF, mainly as a result of settlements with the IMF (see Note 12.1),
- a decrease in receivables due to loans extended to the IMF under the NAB, which was mainly a result of the repayment of a portion of debt towards NBP by the IMF.<sup>10</sup>

The domestic currency value of the receivables from the IMF and liabilities to the IMF was also affected by the currency revaluation of SDR (see Note 9.1).

### Note 3 Other financial assets

#### ▪ Securities

Debt securities purchased in a spot transaction are recognised in the NBP accounting books at the clean price.

Discount and premium on securities purchased are recognised in the financial result (the net result on interest) at the end of each operating day in amounts accrued according to the internal rate of return method (see Chapter 3).

Securities with the same International Securities Identification Number (ISIN) code, in relation to which NBP has a defined business intent, constitute a holding of securities.

<sup>10</sup> As at 31 December 2022, the outstanding amount of NBP's commitment to the IMF under the NAB amounted to SDR 2,558,525.0 thousand (PLN 15,033,892.9 thousand according to the average NBP exchange rate as at 31 December 2022). As at 31 December 2021, the outstanding amount of NBP's commitment was SDR 2,540,425.0 thousand (PLN 14,459,337.0 thousand according to the average NBP exchange rate as at 31 December 2021).

For a securities holding, the average cost is determined. The average cost of securities holding, which is the average cost of purchasing by NBP a security of a given code (adjusted for the accrued discount and premium), is used to calculate income and expenses arising from the sale of securities (realised price gains or losses) and to determine the results of balance sheet valuation.

As at the balance sheet date, securities denominated in foreign currencies not classified as held-to-maturity are valued at market price prevailing at the balance sheet date. Unrealised losses related to a given securities holding are not netted with unrealised gains on any other holding of securities. Unrealised losses recognised in the financial result on the balance sheet date change the average cost of a securities holding.

As at the balance sheet date, securities denominated in foreign currency held to maturity are valued at their purchase price, excluding the coupon purchased (clean price) adjusted for the accrued discount and premium, less impairment.

As at the balance sheet date, securities denominated in domestic currency held for monetary policy purposes are valued at purchase price, excluding the coupon purchased (clean price) adjusted for the accrued discount and premium, less impairment.

- **Reverse repo transactions**

A reverse repo transaction is a contract under which an entity agrees to purchase assets and, simultaneously, agrees to re-sell equivalent assets in future, for a transaction price. This transaction is recognised in assets as a loan granted, collateralised with assets received. Securities received as collateral do not increase the holding of these securities and are not recognised in the balance sheet assets. Securities received in reverse repo transactions are not subject to valuation and no income or expense on these securities is recognised in the financial result of NBP.

The difference between the agreed purchasing and re-selling price of securities in reverse repo transactions is recognised in the financial result at the end of each operating day in amounts calculated according to the straight-line method.

As at the balance sheet date, reverse repo transactions are valued at nominal value.

- **Term deposits**

Term deposits are recognised in the NBP accounting books and valued as at the balance sheet date at nominal value.

- **Current accounts, margins related to futures, foreign banknotes and coins in stock**

Current accounts, margins deposited in cash and foreign banknotes and coins in stock are recognised in the NBP accounting books and valued at the balance sheet date at nominal value.

- **Non-marketable shares, participating interests**

Non-marketable shares and participating interests are recognised in the NBP accounting books and valued at the balance sheet date at purchase price, less impairment.

- **Credit and loans granted, other claims**

Credit and loans granted and other claims are recognised in the NBP accounting books and valued at the balance sheet date at nominal value, less impairment.

- **Financial assets in foreign currency**

Following the valuation of financial assets in foreign currency according to the above principles, the balances are converted into domestic currency at the average NBP exchange rate as at the balance-sheet date.

### Note 3.1 Balances with foreign institutions, securities, loans granted and other foreign assets

<i>PLN thousand</i>	31.12.2022	31.12.2021	Change
Current accounts, of which	35,354,005.4	22,771,019.4	12,582,986.0
- <i>current account with the ECB for settlements in TARGET2</i>	15,008,464.4	2,574,140.7	12,434,323.7
Term deposits	37,562,191.4	22,638,153.6	14,924,037.8
Reverse repo transactions	53,550,113.6	35,876,615.9	17,673,497.7
Securities, of which	516,089,683.1	506,790,467.3	9,299,215.8
- <i>securities held to maturity</i>	44,572,354.4	41,215,224.6	3,357,129.8
Foreign banknotes and coins in stock	329,942.3	211,890.8	118,051.5
Other claims, of which	1,109,734.7	1,035,035.7	74,699.0
- <i>margins related to futures</i>	1,088,239.0	1,024,049.9	64,189.1
- <i>interest on term deposits in gold</i>	3,888.1	405.5	3,482.6
- <i>other</i>	17,607.6	10,580.3	7,027.3
<b>Total</b>	<b>643,995,670.5</b>	<b>589,323,182.7</b>	<b>54,672,487.8</b>
<i>of which</i>			
- <i>currency revaluation differences</i>	22,343,479.9	27,820,277.4	-5,476,797.5
- <i>price revaluation differences</i>	-25,273,296.8	-3,003,299.9	-22,269,996.9

The item comprises mostly the main investment instruments of foreign currency reserves in USD, EUR, GBP, CAD, AUD, NOK and NZD, that is:

- securities (discount securities and fixed-interest-rate securities) – all securities purchased by NBP are marketable securities; in 2021 under the implemented investment policy a portfolio comprising securities issued by the US Government in the amount of USD 9.9 billion was separated (in the value approximate to the book value as at the balance sheet date) and re-classified as held-to-maturity; in 2022 the composition of the portfolio held to maturity did not change,<sup>11</sup>
- term deposits,

<sup>11</sup> As at 31 December 2022, the market value of securities classified as held to maturity was PLN 38,603,591.0 thousand (PLN 40,029,535.5 thousand as at 31 December 2021).

- reverse repo transactions – under the NBP investment process, reverse repo transactions are usually executed simultaneously with repo transactions<sup>12</sup> (see Note 6.3).

The item includes also margins related to futures whose increase resulted from a higher investment in futures (see Note 10.3).

Basic investment instruments of foreign currency reserves by foreign currency are presented below.

31.12.2022							
<i>thousand units of original currency</i>	USD	EUR	GBP	CAD	AUD	NOK	NZD
Term deposits	3,176,884.5	1,889,427.0	481,443.3	302,832.4	288,020.3	14,242,794.7	1,423,394.8
Reverse repo transactions	1,837,082.2	5,630,323.8	2,828,558.6	0.0	1,364,600.8	0.0	0.0
Securities	50,213,583.7	22,384,081.3	11,446,271.0	16,174,867.6	14,377,788.1	51,867,070.8	3,875,206.7
<b>Total</b>	<b>55,227,550.4</b>	<b>29,903,832.1</b>	<b>14,756,272.9</b>	<b>16,477,700.0</b>	<b>16,030,409.2</b>	<b>66,109,865.5</b>	<b>5,298,601.5</b>

31.12.2021							
<i>thousand units of original currency</i>	USD	EUR	GBP	CAD	AUD	NOK	NZD
Term deposits	411,700.0	2,506,181.4	19,000.0	0.0	0.0	12,099,299.6	1,353,791.6
Reverse repo transactions	2,903,444.3	1,167,701.4	2,634,208.9	0.0	1,377,438.0	0.0	74,187.3
Securities	51,985,974.5	22,819,662.3	11,380,580.4	16,830,953.6	13,593,472.8	50,926,300.6	3,979,327.0
<b>Total</b>	<b>55,301,118.8</b>	<b>26,493,545.1</b>	<b>14,033,789.3</b>	<b>16,830,953.6</b>	<b>14,970,910.8</b>	<b>63,025,600.2</b>	<b>5,407,305.9</b>

Change							
<i>thousand units of original currency</i>	USD	EUR	GBP	CAD	AUD	NOK	NZD
Term deposits	2,765,184.5	-616,754.4	462,443.3	302,832.4	288,020.3	2,143,495.1	69,603.2
Reverse repo transactions	-1,066,362.1	4,462,622.4	194,349.7	0.0	-12,837.2	0.0	-74,187.3
Securities	-1,772,390.8	-435,581.0	65,690.6	-656,086.0	784,315.3	940,770.2	-104,120.3
<b>Total</b>	<b>-73,568.4</b>	<b>3,410,287.0</b>	<b>722,483.6</b>	<b>-353,253.6</b>	<b>1,059,498.4</b>	<b>3,084,265.3</b>	<b>-108,704.4</b>

The change in the item in original currency was mainly driven by:

- the inflow of funds in foreign currency due to transactions of holders of accounts with NBP, including an increase in the balance of funds on the current account with the ECB for settlements in TARGET2 following the higher balance of accounts in euro operated by NBP for domestic banks for settlements in that system (see Note 6.1 and Note 6.3).

<sup>12</sup> As at 31 December 2022, securities for the value of PLN 52,472,008.5 thousand were collateral to repo transactions (PLN 35,657,895.9 thousand as at 31 December 2021).

- an increased investment in simultaneous reverse repo and repo transactions in EUR amid a simultaneous decrease in investment in USD (see Note 6.3).

Additionally, the change in the item was a result of price revaluation and currency revaluation (see Note 9.1, Note 12.1 and Note 12.2).

### Note 3.2 Securities held for monetary policy purposes

<i>PLN thousand</i>	Balance sheet item	31.12.2022	31.12.2021	Change
	Treasury securities	78,258,176.6	86,952,637.8	-8,694,461.2
	Securities guaranteed by the State Treasury	62,415,008.9	62,369,526.2	45,482.7
<b>Total</b>	<b>A.7.1</b>	<b>140,673,185.5</b>	<b>149,322,164.0</b>	<b>-8,648,978.5</b>

This item is related to the 2020-2021 operations to purchase Treasury bonds and securities guaranteed by the Treasury in the secondary market as part of structural open market operations. The operations were conducted with the aim to change the liquidity structure of the banking sector in the long term, as well as to provide liquidity of the secondary market of purchased securities and to strengthen the monetary policy transmission mechanism (see Note 11).

The decrease in the value of the item in 2022 was mainly related to the issuer's redemption of Treasury securities, with a nominal value of PLN 7,784,070.0 thousand, at maturity (see Note 6.1).

### Note 3.3 Other financial assets

<i>PLN thousand</i>	31.12.2022	31.12.2021	Change
Shares and participating interests in domestic entities, of which	128,848.9	128,848.9	0.0
- shares in Krajowy Depozyt Papierów Wartościowych S.A.	51,708.1	51,708.1	0.0
- shares in Krajowa Izba Rozliczeniowa S.A.	75,312.5	75,312.5	0.0
- participating interests in Bazy i Systemy Bankowe Sp. z o.o	1,820.0	1,820.0	0.0
- other	8.3	8.3	0.0
Shares and participating interests in foreign entities, of which	174,285.3	170,213.0	4,072.3
- participating interests in the European Central Bank	114,866.2	112,649.7	2,216.5
- shares in the Bank for International Settlements	58,760.0	56,917.0	1,843.0
- participating interests in S.W.I.F.T	659.1	646.3	12.8
<b>Total</b>	<b>303,134.2</b>	<b>299,061.9</b>	<b>4,072.3</b>

The increase in the value of the item resulted from the currency revaluation of shares and participating interests in foreign entities.

The participation of NBP in domestic entities did not change in comparison to 31 December 2021, and as at 31 December 2022 was as follows:

Entity	Share capital (PLN thousand)	Nominal price per share/participating interest (PLN thousand)	Number of shares/participating interests held by NBP	NBP's participation in the share capital (%)
	31.12.2022	31.12.2022	31.12.2022	31.12.2022
NBP's participation in domestic entities, of which				
- Krajowy Depozyt Papierów Wartościowych S.A.	21,000.0	1.0	7,000	33.33%
- Krajowa Izba Rozliczeniowa S.A.	5,445.0	0.5	3,750	34.44%
- Bazy i Systemy Bankowe Sp. z o.o	10,000.0	10.0	1,000	100.00%

The participation of NBP in foreign entities was as follows:

- participating interests in the European Central Bank

Since 1 May 2004, i.e. the day of Poland's accession to the European Union, NBP has held a participating interest in the ECB's capital. As at 31 December 2022 and 31 December 2021, the capital paid up by NBP to the ECB amounted to EUR 24,492.3 thousand.

In accordance with Article 28(2) of the Statute of the European System of Central Banks and the European Central Bank, hereinafter referred to as the "Statute of the ESCB and ECB", only the national central banks of the ESCB are entitled to subscribe the ECB's capital. The ECB's capital is subscribed according to the subscription key determined in Article 29(1) of the Statute of the ESCB and ECB, i.e. shares of national central banks in the ECB's capital are expressed in percentage and correspond to the shares of individual member states in the population and the combined gross domestic product of EU states (in equal consideration). The subscription key of the ECB capital is regularly adjusted every five years, as well as at the time a change in the EU membership takes place. The last regular adjustment of the key was made in 2019. On 1 February 2020 an adjustment of the subscription key of the ECB capital was made following the exit of the United Kingdom from the European Union and, as a consequence, the withdrawal of the Bank of England from the ESCB.<sup>13</sup> Following this adjustment, the share of NBP in the ECB's subscribed capital increased from 5.2068% to 6.0335%, which corresponds to an increase in participating interest from EUR 563,636.5 thousand to EUR 653,126.8 thousand.

As a central bank from outside the euro area, NBP is required to pay up the minimum percentage of the ECB's capital subscribed by it, which was specified by the ECB General Council (pursuant to

<sup>13</sup> The amount of the ECB's subscribed capital has not changed as a result of the withdrawal of the Bank of England from the ESCB and amounts to EUR 10,825,007.1 thousand.



Article 47 of the Statute of the ESCB and the ECB) and constitutes NBP's contribution to the operational costs of the ECB. The percentage has amounted to 3.75% since 29 December 2010. Unlike euro area central banks, NBP has no right to participate in the ECB's profits nor is required to cover its losses. As at 31 December 2022 and 31 December 2021, the capital paid up by NBP to the ECB amounted to EUR 24,492.3 thousand. Upon Poland's entry into the euro area, NBP will be required to pay up the remaining 96.25% of the ECB's capital subscribed by it, i.e. EUR 628,634.5 thousand.

- shares of the Bank for International Settlements, hereinafter referred to as "BIS"  
As at 31 December 2022 and 31 December 2021, NBP held 8,000 shares that converted into the same number of votes. 25% of the nominal value of shares (the nominal value of 1 share amounts to SDR 5.0 thousand) was paid up, which totals SDR 10,000.0 thousand. The share of NBP in the share capital of BIS amounts to 1.41%.
- participating interests in S.W.I.F.T. (*Society for Worldwide Interbank Financial Telecommunication*)  
As at 31 December 2022 and as at 31 December 2021 NBP had 47 shares (in the amount of EUR 140.5 thousand), which represented less than 0.05% of their total number.

### Note 3.4. Sundry

PLN thousand	31.12.2022	31.12.2021	Change
Inventories, of which	10,170.9	25,601.6	-15,430.7
- precious metals	8,987.7	24,477.1	-15,489.4
- collector items not in circulation	369.7	366.7	3.0
- other	813.5	757.8	55.7
Credit and loans extended to employees in domestic currency, of which	21,770.2	22,107.6	-337.4
- loans extended from the Employee Benefit Fund	13,574.8	11,435.2	2,139.6
Other claims, of which	51,474.8	19,977.9	31,496.9
- on public authorities	5.8	3.3	2.5
- on customers and suppliers	31,089.2	7,387.6	23,701.6
- other	20,379.8	12,587.0	7,792.8
Funds of the Employee Benefit Fund	7,670.6	8,476.5	-805.9
Adjustment of off-balance-sheet instruments to the average cost of foreign currency holding	2,395.7	19,790.7	-17,395.0
<b>Total</b>	<b>93,482.2</b>	<b>95,954.3</b>	<b>-2,472.1</b>

As at 31 December 2022 *Adjustment of off-balance-sheet instruments to the average cost of foreign currency holding* related to spot and forward transactions in foreign currency recognised on off-balance-sheet accounts (as at 31 December 2021 it related to spot and forward transactions). The decrease in the item is the result of the volume of these transactions as at the end of the year (see Note 10.1) and the difference between the average cost of holding and the purchase/sale price of the transaction.

## Note 4 Tangible fixed assets and intangible assets

### ▪ Tangible fixed assets and intangible assets

Tangible fixed assets and intangible assets are recognised in the NBP accounting books at:

- purchase price, increased by costs directly related to the purchase and adaptation of an asset to the condition enabling its use, or
- production cost

– or according to the market value, if determining the purchase price or production cost is not possible.

Tangible fixed assets and intangible assets are depreciated/amortised according to the straight-line

method beginning from the month which follows the month when the asset was made available for use. The table below presents the estimated periods of use for particular groups of tangible fixed assets and intangible assets set for 31 December 2022.

Tangible fixed assets	Periods of use (in months)
Land, NBP's cultural goods	unlimited
Buildings and premises	480 or 780
Land and water engineering objects	267-480
Machines, devices, appliances, tools, and other equipment	36-360 <sup>1</sup>
Vehicles	72-180
Intangible assets	Periods of use (in months)
IT software licences	72 or 144
IT software developed by NBP	120
Copyrights, including the rights related to inventions, trademarks, utility and industrial designs	120

<sup>1</sup> A period of 360 months applies to turbine generator sets and electric generating sets, including AC electric generating units or sets of a voltage below 1000 V.

In specific cases, individual periods of use are adopted for tangible fixed assets and intangible assets.

Periods of use of tangible fixed assets and intangible assets are verified each financial year.

In the case of tangible fixed assets and intangible assets with a low initial value, i.e. below PLN 10.0 thousand, depreciation/amortisation is made on a one-off basis, in the amount equal to their initial value, at the end of the month when the assets were made available for use.

As at the balance sheet date, tangible fixed assets and intangible assets are valued at initial value less depreciation/amortisation and impairment.

- **Right-of-use assets**

Right-of-use assets comprise rights to use assets subject to lease (excluding intangible assets), including also the right of perpetual usufruct of land. Right-of-use assets are recognised in the NBP accounting books at cost, including in particular:

- the amount of initial valuation of the lease liability (see Note 6),
- lease fees paid on the date of commencement or before the date of commencement of the lease, less lease incentives received,
- initial direct costs incurred by NBP.

The value of a right-of-use assets item is depreciated or amortised throughout the period of lease or the period of use of the underlying assets item, whichever is shorter, using the straight-line method, starting from the month of the item's initial recognition.

As at the balance-sheet date, the value of right-of-use assets is valued at the initial value less revaluation of the lease liability (see Note 6.4) and less depreciation/amortisation and impairment.

In the case of a change of lease conditions, right-of-use assets and lease liabilities are adjusted accordingly (see Note 6).

Fees related to short-term lease (i.e. when the period of lease is no longer than 12 months and when no purchase of underlying asset is foreseen) or low-value lease (i.e. where the underlying asset or the monthly lease fee is worth less than PLN 10.0 thousand, except for the lease concerning the right of perpetual usufruct of land) are not settled according to the above principles and are recognised as expense throughout the lease period.

PLN thousand	31.12.2022	31.12.2021	Change
Tangible fixed assets	730,911.1	727,780.8	3,130.3
Right-of-use assets	198,658.8	205,422.0	-6,763.2
Intangible assets	86,554.4	100,547.6	-13,993.2
<b>Total</b>	<b>1,016,124.3</b>	<b>1,033,750.4</b>	<b>-17,626.1</b>

Change in tangible fixed assets, right-of-use assets and intangible assets in 2022 (due to rounding, individual figures in the table may not add up to totals)	Tangible fixed assets				Right-of-use assets			Intangible assets			
	Land, buildings, premises, land and water engineering objects	Machines, devices, appliances, tools, equipment and vehicles	Tangible fixed assets under construction	Total	Right of perpetual usufruct of land	Other right-of-use assets	Total	IT software licences	Copyrights, proprietary rights and similar rights and values	Intangible assets under construction	Total
PLN thousand											
Gross value as at start of period	970,487.5	691,023.9	11,530.6	1,673,042.0	175,983.5	48,002.4	223,985.9	434,093.6	20,184.3	7,482.4	461,760.3
Increases	6,372.0	45,084.1	45,403.7	96,859.8	4,412.9	2,453.2	6,866.1	10,573.4	1,887.4	3,437.4	15,878.1
Decreases	0.0	-14,962.8	-34,593.7	-49,556.4	0.0	-1,245.4	-1,245.4	-6,292.4	-1,934.1	-6,986.3	-15,212.8
Gross value as at the end of period	976,859.5	721,145.2	22,340.7	1,720,345.4	180,396.4	49,210.1	229,606.6	438,374.6	20,117.6	3,933.5	462,425.7
of which fully depreciated/amortised	1,507.0	295,551.4	0.0	297,058.4	0.0	0.0	0.0	111,559.7	3,373.9	0.0	114,933.6
Depreciation/amortisation as at start of period	-437,274.2	-507,236.9	0.0	-944,511.1	-5,085.3	-13,478.6	-18,563.9	-350,453.2	-10,750.6	0.0	-361,203.7
Increases	-14,947.5	-44,095.1	0.0	-59,042.7	-2,607.6	-11,021.5	-13,629.2	-21,129.3	-1,747.0	0.0	-22,876.2
Decreases	16.0	14,853.5	0.0	14,869.6	0.0	1,245.4	1,245.4	6,298.3	1,919.3	0.0	8,217.6
Depreciation/amortisation as at end of period	-452,205.7	-536,478.5	0.0	-988,684.2	-7,693.0	-23,254.8	-30,947.7	-365,284.1	-10,578.2	0.0	-376,862.3
Impairment as at start of period	-272.9	-477.2	0.0	-750.1	0.0	0.0	0.0	-8.9	0.0	0.0	-8.9
Increases	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Decreases	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Impairment as at end of period	-272.9	-477.2	0.0	-750.1	0.0	0.0	0.0	-8.9	0.0	0.0	-8.9
Net value as at end of period	524,300.9	184,189.5	22,340.7	730,911.1	172,703.5	25,955.4	198,658.8	73,081.5	9,539.4	3,933.5	86,554.4

Change in tangible fixed assets, right-of-use assets and intangible assets in 2021 (due to rounding, individual figures in the table may not add up to totals)	Tangible fixed assets				Right-of-use assets			Intangible assets			
	Land, buildings, premises, land and water engineering objects	Machines, devices, appliances, tools, equipment and vehicles	Tangible fixed assets under construction	Total	Right of perpetual usufruct of land	Other right-of-use assets	Total	IT software licences	Copyrights, proprietary rights and similar rights and values	Intangible assets under construction	Total
PLN thousand											
Gross value as at start of period	949,942.7	681,864.8	21,406.2	1,653,233.7	175,983.5	17,251.6	193,235.2	465,593.5	19,918.5	1,450.0	486,962.1
Increases	20,991.2	60,105.7	53,651.7	134,748.6	0.0	32,733.1	32,733.1	5,848.4	1,326.9	8,300.3	15,275.6
Decreases	-46.4	-50,966.6	-63,527.3	-114,940.3	0.0	-1,982.3	-1,982.3	-37,348.3	-1,061.2	-2,288.0	-40,677.4
Gross value as at the end of period	970,487.5	691,023.9	11,530.6	1,673,042.0	175,983.5	48,002.4	223,985.9	434,093.6	20,184.3	7,482.4	461,760.3
of which fully depreciated/amortised	1,481.9	253,679.6	0.0	255,161.5	0.0	0.0	0.0	102,389.6	4,260.8	0.0	106,650.4
Depreciation/amortisation as at start of period	-423,287.3	-496,260.7	0.0	-919,548.0	-2,542.7	-4,738.5	-7,281.2	-364,970.7	-9,333.9	0.0	-374,304.6
Increases	-14,238.0	-61,554.3	0.0	-75,792.3	-2,542.7	-10,640.6	-13,183.3	-22,818.0	-2,433.1	0.0	-25,251.1
Decreases	251.1	50,575.1	0.0	50,826.2	0.0	1,900.6	1,900.6	37,335.5	1,016.4	0.0	38,351.9
Depreciation/amortisation as at end of period	-437,274.2	-507,236.9	0.0	-944,511.1	-5,085.3	-13,478.6	-18,563.9	-350,453.2	-10,750.6	0.0	-361,203.7
Impairment as at start of period	-272.9	-474.3	0.0	-747.2	0.0	0.0	0.0	-8.9	0.0	0.0	-8.9
Increases	0.0	-5.0	0.0	-5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Decreases	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Impairment as at end of period	-272.9	-477.2	0.0	-750.1	0.0	0.0	0.0	-8.9	0.0	0.0	-8.9
Net value as at end of period	524,300.9	183,305.8	11,530.6	727,780.8	170,888.2	34,523.8	205,422.0	83,631.6	9,433.7	7,482.4	100,547.6

## Note 5 Banknotes and coins in circulation

Banknotes and coins in circulation are recognised as liabilities and are valued at the balance-sheet date at a nominal value of the issued general circulation banknotes and coins, decreased by a nominal value of the general circulation banknotes and coins denominated in domestic currency:

- at NBP cash points and vaults,
- placed as deposit in the vaults of other authorised entities,
- that have been withdrawn from circulation due to being worn out or damaged.

PLN thousand	31.12.2022	31.12.2021	Change
Domestic banknotes in circulation	362,247,258.9	349,495,557.8	12,751,701.1
Domestic coins in circulation	6,364,404.6	6,062,167.5	302,237.1
<b>Total</b>	<b>368,611,663.5</b>	<b>355,557,725.3</b>	<b>13,053,938.2</b>

The item comprises banknotes and coins in circulation issued by NBP, including collector banknotes and coins, whose value as at 31 December 2022 amounted to PLN 322,821.6 thousand as compared with PLN 313,639.6 thousand as at 31 December 2021.

The average level of banknotes and coins in circulation throughout 2022 amounted to PLN 376,350.1 million as compared with PLN 341,610.0 million in 2021.

## Note 6 Other financial liabilities

### ▪ Current accounts and term deposits operated by NBP

Liabilities due to balances on current accounts and term deposit accounts operated by NBP are recognised in the NBP accounting books and are valued as at the balance-sheet date at nominal value.

### ▪ Issued securities

Issued securities are recognised in the NBP accounting books at issue price and valued as at the balance sheet date at the issue price adjusted for accrued discount and premium.

### ▪ Repo transactions

A repo transaction is a contract under which an entity agrees to sell securities and, simultaneously, agrees to re-purchase these securities after a stated time, for an agreed price. This transaction is recognised in *Liabilities* as a received deposit, collateralised with assigned assets. Securities assigned as collateral do not decrease the holding of these securities and are disclosed in the assets of the NBP balance sheet.

The difference between the agreed selling and re-purchasing price of in repo transactions is recognised in the financial result at the end of each operating day in amounts calculated according to the straight-line method.

As at the balance-sheet date, repo transactions are valued at nominal value.

- **Lease liabilities**

A lease liability is recognised in the NBP accounting books at the discounted value of outstanding lease payments. For payments on the rights of perpetual usufruct of land, the interest rate of long-term Treasury bonds in wholesale offering set as at the date of recognition in the NBP accounting books is taken as the rate of discount of lease payments. For the remaining lease liabilities, the NBP reference rate binding on the day of their recognition in the NBP accounting books is used as the rate of discount.

As at the balance sheet date, the value of lease liabilities is adjusted for the value of interest rate calculated according to the adopted discount rate and outstanding lease payments.

In the event of a change of lease conditions, the value of right-of-use assets and lease liabilities is adjusted accordingly (see Note 4).

- **Other financial liabilities**

Other financial liabilities are recognised in the NBP accounting books and valued at the balance sheet date at the nominal value.

- **Financial liabilities in foreign currency**

Following the valuation of financial liabilities in foreign currency according to the above principles, the balances are converted into domestic currency at the average NBP exchange rate prevailing at the balance-sheet date.

## Note 6.1 Liabilities related to monetary policy operations

PLN thousand	Balance sheet item	31.12.2022	31.12.2021	Change
	Current accounts (incl. required minimum reserve accounts) of which	34,914,457.6	66,061,581.2	-31,147,123.6
	- current accounts of banks and KSKOK	33,925,136.3	65,724,007.7	-31,798,871.4
	- required minimum reserve accounts of banks not having a current account with NBP	589,165.0	337,573.5	251,591.5
	- interest on required minimum reserve	400,156.3	0.0	400,156.3
	Deposit facilities, of which	20,198,449.9	30,463,543.2	-10,265,093.3
	- accrued interest	6,914.9	1,043.2	5,871.7
	<b>Liabilities to credit institutions related to monetary policy operations denominated in domestic currency</b>	<b>55,112,907.5</b>	<b>96,525,124.4</b>	<b>-41,412,216.9</b>
	NBP bills issued under main operations	174,492,282.6	184,521,188.7	-10,028,906.1
	NBP bills issued under fine-tuning operations	77,688,891.7	0.0	77,688,891.7
	<b>Liabilities due to issued securities denominated in domestic currency</b>	<b>252,181,174.3</b>	<b>184,521,188.7</b>	<b>67,659,985.6</b>
	<b>Total</b>	<b>307,294,081.8</b>	<b>281,046,313.1</b>	<b>26,247,768.7</b>

The note comprises liabilities related to monetary policy operations conducted by NBP.

The amount of funds held by banks and KSKOK<sup>14</sup> with NBP due to the required minimum reserve depends on the basis for calculating the required minimum reserve and the required minimum reserve ratio in force. The required minimum reserve is an averaged value in the maintenance period.

Liabilities related to issued securities denominated in domestic currency comprise mainly liabilities to domestic banks related to the issue of NBP bills under open market main<sup>15</sup> and fine-tuning<sup>16</sup> operations aimed to absorb liquidity.<sup>17</sup>

The funds of the required minimum reserve and deposit facilities bear interest, whereas NBP bills are issued at a discount. As at 31 December 2022 and 31 December 2021, the interest rates which are the basis for remuneration of the required minimum reserve funds, deposit facilities and for determining discount on bills issued by NBP under open market operations were as follows:

<sup>14</sup> Credit unions hold their required minimum reserve at their accounts with the National Association of Cooperative Savings and Credit Unions [Krajowa Spółdzielcza Kasa Oszczędnościowo-Kredytowa, "KSKOK"].

<sup>15</sup> In 2022, the maturity of main operations was 6, 7 and 8 days (in 2021 it was 7 days).

<sup>16</sup> In 2022, the maturity of fine-tuning operations was 1 day, 2, 3 and 4 days (in 2021 it was 1 day, 2 and 3 days).

<sup>17</sup> Pursuant to Resolution No. 30/2003 of the NBP Management Board of 12 September 2003 on the issue of NBP bills (NBP Official Journal No. 15, item 24, as amended) NBP bills can be purchased by domestic banks, branches of foreign banks and branches of foreign credit institutions, the Bank Guarantee Fund and KSKOK.

## Rate of interest on liabilities due to monetary policy operations

%	31.12.2022	31.12.2021
Required minimum reserve*	6.75	1.75
Deposit facility**	6.25	1.25
NBP bills***	6.75	1.75

\* The interest rate of the funds of the required minimum reserve.

\*\* NBP deposit rate.

\*\*\* NBP reference rate.

The change in the total liabilities of NBP related to the monetary policy operations (an increase by PLN 26,247,768.7 thousand as at 31 December 2022 as compared with 31 December 2021) was affected by, among others, the following factors:

- the purchase of foreign currency incoming to NBP due to transactions by holders of accounts with NBP (see Note 3.1 and Note 6.3),
- contribution from NBP's profit for 2021 (see Note 9.4), cash flows related to NBP's net result on monetary policy instruments (see Note 11) and other NBP's other own operations,
- an increase in the volume of cash in circulation in 2022 (see Note 5),
- the issuer's redemption of Treasury securities held by NBP at maturity (see Note 3.2).

The balance of funds held by banks at NBP is allocated between NBP bills, deposit facility or a current account according to individual decisions carried out by banks.



**Note 6.2 Other liabilities denominated in domestic currency**

<i>PLN thousand</i>	Balance sheet item	31.12.2022	31.12.2021	Change
Settlements in the domestic payment systems of Krajowa Izba Rozrachunkowa, of which		940,440.8	762,678.9	177,761.9
- in the Elixir system		296,934.2	403,231.9	-106,297.7
- in the Express Elixir system		643,506.6	359,447.0	284,059.6
<b>Other liabilities to credit institutions denominated in domestic currency</b>	<b>L.3</b>	<b>940,440.8</b>	<b>762,678.9</b>	<b>177,761.9</b>
Liabilities to general government, of which	L.5.1	10,792,940.6	15,185,508.3	-4,392,567.7
- State budget accounts		6,529,897.4	6,454,710.0	75,187.4
- accounts of social insurance funds		4,147,311.7	8,637,379.5	-4,490,067.8
- other		115,731.5	93,418.8	22,312.7
Other liabilities	L.5.2	1,090,865.7	66,391.7	1,024,474.0
<b>Liabilities to other residents denominated in domestic currency</b>	<b>L.5</b>	<b>11,883,806.3</b>	<b>15,251,900.0</b>	<b>-3,368,093.7</b>
Accounts of international financial institutions and central banks, of which		31,005.8	54,713.6	-23,707.8
- No. 2 Account of the IMF		23,378.3	22,890.0	488.3
Accounts of international non-financial organisations		4,093,191.4	3,906,087.2	187,104.2
<b>Liabilities to non-residents denominated in domestic currency</b>	<b>L.6</b>	<b>4,124,197.2</b>	<b>3,960,800.8</b>	<b>163,396.4</b>
<b>Total</b>		<b>16,948,444.3</b>	<b>19,975,379.7</b>	<b>-3,026,935.4</b>

The item comprises mainly:

- current accounts, auxiliary accounts and term deposit accounts in domestic currency operated by NBP for general government entities and non-monetary financial institutions,
- current accounts in domestic currency operated by NBP for international financial and non-financial organisations and central banks, including the account operated by NBP for the IMF, which is used for the Fund's administrative expenditures (so-called No. 2 Account of the IMF) – see Note 12.1,
- liabilities due to settlements in the payment systems operated by Krajowa Izba Rozliczeniowa S.A.

The decrease in the item was mainly related to the lower balance of accounts operated by NBP in domestic currency for social insurance funds, with a simultaneous increase in the balance of other liabilities to residents stemming from a higher balance of accounts operated for entities from outside the general government sector.

### Note 6.3 Liabilities denominated in foreign currency

<i>PLN thousand</i>	Balance sheet item	31.12.2022	31.12.2021	Change
	State budget accounts	43,632,742.0	29,844,278.0	13,788,464.0
	Accounts of domestic banks for settlements in TARGET2	15,008,405.6	2,574,101.1	12,434,304.5
	Other liabilities to residents	368,924.7	211,340.6	157,584.1
	<b>Liabilities to residents denominated in foreign currency</b>	<b>59,010,072.3</b>	<b>32,629,719.7</b>	<b>26,380,352.6</b>
	Repo transactions	53,539,855.3	35,873,254.8	17,666,600.5
	Accounts of international non-financial organisations	75,187.0	163,175.3	-87,988.3
	Other liabilities to non-residents	10,093.7	0.0	10,093.7
	<b>Liabilities to non-residents denominated in foreign currency</b>	<b>53,625,136.0</b>	<b>36,036,430.1</b>	<b>17,588,705.9</b>
	<b>Total</b>	<b>112,635,208.3</b>	<b>68,666,149.8</b>	<b>43,969,058.5</b>
	<i>of which currency revaluation differences</i>	<i>2,925,807.6</i>	<i>2,871,552.2</i>	<i>54,255.4</i>

The item comprises mainly:

- current accounts, auxiliary accounts and term deposit accounts in foreign currency operated by NBP for general government entities and accounts of domestic banks for settlements in TARGET2,
- liabilities due to repo transactions with foreign financial institutions; under the investment process implemented by NBP, repo transactions are usually executed simultaneously with reverse repo transactions (see Note 3.1),

Repo transactions by foreign currency are presented below.

<i>thousand units of original currency</i>	USD	EUR	GBP	AUD	NZD
<b>31.12.2022</b>	1,837,038.7	5,629,448.7	2,827,476.2	1,364,523.5	0.0
<b>31.12.2021</b>	2,903,406.7	1,167,558.5	2,633,780.4	1,377,374.6	74,182.2
<b>Change</b>	-1,066,368.0	4,461,890.2	193,695.8	-12,851.1	-74,182.2

- liabilities denominated in foreign currency due to payment orders by holders of accounts with NBP which are in the course of settlement as at the balance-sheet date.

The increase in the item was mainly related to higher balances on accounts in foreign currency operated by NBP for the State budget and for domestic banks for settlements in TARGET2 (see Note 3.1) and a higher value of repo transactions.

## Note 6.4 Sundry

PLN thousand	31.12.2022	31.12.2021	Change
Lease liabilities	204,917.9	209,587.8	-4,669.9
Other liabilities, of which	71,231.0	64,572.8	6,658.2
- to public authorities	20,615.3	18,073.8	2,541.5
- to suppliers	26,649.3	34,508.0	-7,858.7
- other	23,966.4	11,991.0	11,975.4
Employee Benefit Fund	21,296.0	19,911.7	1,384.3
Adjustment of off-balance-sheet instruments to the average cost of foreign currency holding	33,469.0	692,280.1	-658,811.1
<b>Total</b>	<b>330,913.9</b>	<b>986,352.4</b>	<b>-655,438.5</b>

*Lease liabilities* comprised the present (discounted) value of outstanding lease payments. They mainly relate to the rights to perpetual usufruct of land (see Note 4 and Note 11).

As at 31 December 2022, *Adjustment of off-balance-sheet instruments to the average cost of foreign currency holding* related to FX spot transactions recognised on off-balance-sheet accounts (as at 31 December 2021 it related to swap, spot and forward transactions). The decrease in the item is the result of the volume of these transactions as at the end of the year (see Note 10.1) and the difference between the purchase/sale price of the transaction and the average cost of holding.

## Note 7 Provisions for liabilities

Provisions for liabilities are recognised in the NBP accounting books when NBP is under an obligation arising from past events and when it is probable that the fulfilment of the obligation or the materialisation of the identified risk will reduce the economic benefits of NBP, and the amount of this obligation can be measured reliably. Provisions are created and recognised as expense in the amount that is estimated in a reliable way and that would have to be paid not later than on the balance sheet date to fulfil the above mentioned obligation.

As at the balance-sheet date provisions for liabilities are adjusted. Provisions for liabilities unused due to a full or partial cessation of obligation justifying their creation are released as income. Provisions for liabilities may be allocated exclusively for the purpose for which they were created.

PLN thousand	31.12.2022	31.12.2021	Change
Provisions for liabilities to employees	201,352.5	192,667.9	8,684.6
Other provisions	1,556.8	1,703.8	-147.0
<b>Total</b>	<b>202,909.3</b>	<b>194,371.7</b>	<b>8,537.6</b>

The change in provisions for liabilities in 2022 and 2021 by allocation into particular categories are presented in tables below (see also Note 15 and Note 16).

PLN thousand	31.12.2021	Increase	Use	Decrease	31.12.2022
Provisions for liabilities to employees, of which	192,667.9	27,080.5	-18,395.9	0.0	201,352.5
- due to retirement severance payments	105,747.2	6,469.4	-6,369.6	0.0	105,847.0
- due to disability severance payments	2,339.3	88.2	-134.3	0.0	2,293.2
- due to jubilee awards	66,667.4	8,180.3	-10,253.0	0.0	64,594.7
- due to untaken leaves	12,009.3	2,553.1	-500.1	0.0	14,062.3
- due to amounts paid after death	3,671.9	314.9	-126.8	0.0	3,860.0
- due to statutory and additional severance payments for employees under employment contracts who are laid off for reasons unrelated to employees	2,232.8	9,474.6	-1,012.1	0.0	10,695.3
Other provisions, of which	1,703.8	83.0	0.0	-230.0	1,556.8
- for liabilities due to court proceedings	1,642.1	77.8	0.0	-230.0	1,489.9
- for liabilities resulting from financial operations in domestic currency	61.7	5.2	0.0	0.0	66.9
<b>Total</b>	<b>194,371.7</b>	<b>27,163.5</b>	<b>-18,395.9</b>	<b>-230.0</b>	<b>202,909.3</b>

PLN thousand	31.12.2020	Increase	Use	Decrease	31.12.2021
Provisions for liabilities to employees, of which	171,187.2	38,183.0	-14,138.7	-2,563.6	192,667.9
- due to retirement severance payments	93,366.3	17,602.4	-5,221.5	0.0	105,747.2
- due to disability severance payments	2,168.9	322.8	-152.4	0.0	2,339.3
- due to jubilee awards	60,009.8	14,960.8	-8,303.2	0.0	66,667.4
- due to untaken leaves	14,808.2	0.0	-235.3	-2,563.6	12,009.3
- due to amounts paid after death	0.0	3,671.9	0.0	0.0	3,671.9
- due to statutory and additional severance payments for employees under employment contracts who are laid off for reasons unrelated to employees	834.0	1,625.1	-226.3	0.0	2,232.8
Other provisions, of which	8,382.4	348.0	0.0	-7,026.6	1,703.8
- for liabilities due to court proceedings	8,325.3	343.4	0.0	-7,026.6	1,642.1
- for liabilities resulting from financial operations in domestic currency	57.1	4.6	0.0	0.0	61.7
<b>Total</b>	<b>179,569.6</b>	<b>38,531.0</b>	<b>-14,138.7</b>	<b>-9,590.2</b>	<b>194,371.7</b>

## Note 8 Accruals, prepaid expenses and deferred income

Expenses and income related to future periods are recognised in the NBP accounting books, respectively, as components of assets and liabilities.

Expenses and income, partly or completely related to future financial years, are recognised in the NBP accounting books accordingly as accruals and prepaid expenses or accruals and deferred income and are carried to the financial result of the financial year which they concern.

Expenses relating to the current financial year for which the obligation to pay will arise in the following financial year are recognised in the financial result in the amount estimated in a reliable

way, and the underlying potential liability of the current financial year is recognised in the accounting books as accruals and prepaid expenses.

The value of assets received free of charge or the value of disclosed tangible fixed assets and intangible assets subject to depreciation/amortisation according to the straight-line method are initially recognised in the accounting books as accruals and deferred income and are subsequently carried to financial result along with depreciation/amortisation made on these assets.

<i>PLN thousand</i>	Balance sheet item	31.12.2022	31.12.2021	Change
Prepaid expenses related to services		49,683.9	41,496.4	8,187.5
<b>Total assets (Accruals and prepaid expenses)</b>	A.10.4	<b>49,683.9</b>	<b>41,496.4</b>	<b>8,187.5</b>
Accruals		96,136.8	96,244.0	-107.2
Deferred income		1,166.9	1,292.8	-125.9
<b>Total assets (Accruals and deferred income)</b>	L.11.2	<b>97,303.7</b>	<b>97,536.8</b>	<b>-233.1</b>

Prepaid expenses and accruals related to services concern mainly expenditures related to NBP's own administrative activities (the former relate primarily to fees for IT services in favour of NBP, whereas the latter include mainly components of salaries for 2022 paid out in the following year and future liabilities due to supplies of goods and services in 2022).

## Note 9 Equity

In line with the practice adopted by central banks of the ESCB, NBP classifies the following as its equity:

- the statutory fund, determined by Article 61 of the Act on NBP,
- the reserve fund which – in accordance with Article 62 of the Act on NBP – is created from the transfer of 5% of NBP's annual profit until it reaches the amount equivalent to the statutory fund and may only be used to cover NBP's balance sheet losses,
- the provision against the foreign exchange rate risk of the zloty, created as provided for in Article 65 of the Act on NBP,
- gold revaluation account,
- gold, currency and price revaluation gains,
- loss of previous years,
- part of profit of the current year at the disposal of NBP (5% of profit), which will be allocated to increase the reserve fund.

- **Gold, currency and price revaluation gains**

Revaluation gains on gold holding are determined by comparing the average cost of gold holding with the average market price of gold converted in PLN, which is higher than the average cost of gold holding.

Foreign currency revaluation gains are determined by comparing the average cost of foreign currency holding with the average NBP exchange rate, which is higher than the average cost of foreign currency holding.

Price revaluation gains on securities are determined by comparing the average cost of securities holding with the average market price of these securities, which is higher than the average cost of holding.

Price revaluation gains on forward transactions in securities are determined by comparing the contract price discounted as at the settlement date (spot) with a lower (in the case of forward sale) or higher (in the case of forward purchase) average market price of securities as at valuation date.

The value of gold holding revaluation differences, revaluation differences on holdings of individual foreign currencies and price revaluation differences on securities holdings are determined separately, without netting the value of individual items which differ in kind.

- **Gold revaluation account**

Gold revaluation account comprises surpluses of unrealised gains over unrealised losses stemming from recalculation of gold, which arose before 1 January 2004.

The balance of the gold revaluation account is decreased as income in the amount of unrealised gold revaluation losses recognised in the financial result at the balance sheet date.

- **FX risk provision**

The FX risk provision is estimated on the basis of financial risk assessment methods which are generally accepted and consistently applied by NBP (see Chapter 7.1.4.).

At NBP, the Value at Risk (VaR) methodology is used to perform an analysis of the foreign exchange rate risk of the zloty. It estimates the loss expected due to fluctuations of the foreign exchange rate of the zloty, which in normal conditions and with an assumed probability, should not be exceeded within the adopted time horizon. At NBP, a horizon of one year and a 95% confidence level were adopted for the purposes of estimating FX risk provision.

The Value at Risk is then decreased by unrealised foreign currency revaluation gains estimated on the basis of statistical distribution analysis. The estimation is based on the foreign currency holdings as at the balance sheet date and historical time series of the average cost of currency holdings and the average NBP exchange rates for these currencies. Such an approach makes it possible to determine a stable level of unrealised gains and thus limits volatility of the FX risk provision.

The provision is created and released at the balance sheet date.

The provision is created as expense in the amount equal to half of the surplus of income on realised FX gains over realised and unrealised FX losses recognised in the financial result for the financial year. The creation of the provision must not lead to a negative financial result of the financial year for NBP.

The provision is released – by recognising it as income – to cover unrealised losses arising from changes in the foreign exchange rate of the zloty, increased by the surplus of the realised FX losses over realised FX gains, in the amount that could result in a loss.

The surplus of the created provision over its estimated value is released as income.

PLN thousand	L.12 Provisions	L.13 Revaluation accounts		L.14 Capital and reserves		L.15 Financial result		Total
	FX risk provision	Gold revaluation account	Revaluation accounts*	Statutory fund	Reserve fund	Loss of previous years	Financial result for the financial year	
<b>As at 31.12.2020</b>	<b>9,850,919.3</b>	<b>1,618,023.2</b>	<b>44,122,332.9</b>	<b>1,500,000.0</b>	<b>391,425.1</b>	<b>-11,865,363.4</b>	<b>9,344,061.5</b>	<b>54,961,398.6</b>
Contribution from NBP's profit							-8,876,858.4	-8,876,858.4
Allocation of NBP profit to reserve fund					467,203.1		-467,203.1	0.0
Covering loss of previous years					-858,628.2	858,628.2		0.0
Gold holding, currency and price revaluation gain/loss			5,298,543.4					5,298,543.4
Foreign exchange rate risk provision	6,648,541.6							6,648,541.6
Financial result for the financial year							10,974,518.7	10,974,518.7
<b>As at 31.12.2021</b>	<b>16,499,460.9</b>	<b>1,618,023.2</b>	<b>49,420,876.3</b>	<b>1,500,000.0</b>	<b>0.0</b>	<b>-11,006,735.2</b>	<b>10,974,518.7</b>	<b>69,006,143.9</b>
Contribution from NBP's profit							-10,425,792.8	-10,425,792.8
Allocation of NBP profit to reserve fund					548,725.9		-548,725.9	0.0
Covering loss of previous years					-548,725.9	548,725.9		0.0
Gold holding, currency and price revaluation gain/loss			-982,160.9					-982,160.9
Transfer from FX risk provision	-1,420,869.5							-1,420,869.5
Financial result for the financial year							-16,943,670.7	-16,943,670.7
<b>As at 31.12.2020</b>	<b>15,078,591.4</b>	<b>1,618,023.2</b>	<b>48,438,715.4</b>	<b>1,500,000.0</b>	<b>0.0</b>	<b>-10,458,009.3</b>	<b>-16,943,670.7</b>	<b>39,233,650.0</b>

\* Revaluation accounts concern gold revaluation gains, currency revaluation gains and price revaluation gains on securities and off-balance-sheet financial instruments (see Note 9.1).

## Note 9.1 Revaluation accounts

PLN thousand	31.12.2022	31.12.2021	Change
Gold holding revaluation gains	27,515,054.6	23,474,557.2	4,040,497.4
Currency revaluation gains	20,878,316.0	25,546,797.0	-4,668,481.0
Price revaluation gains, of which	45,344.8	399,522.1	-354,177.3
- on securities	43,545.4	395,860.3	-352,314.9
- on off-balance-sheet financial instruments	1,799.4	3,661.8	-1,862.4
Gold revaluation account	1,618,023.2	1,618,023.2	0.0
<b>Total</b>	<b>50,056,738.6</b>	<b>51,038,899.5</b>	<b>-982,160.9</b>

PLN	Average cost of holding	Average NBP exchange rate / Average price of gold	Average cost of holding	Average NBP exchange rate / Average price of gold
	31.12.2022		31.12.2021	
USD	4.0272	4.4018	3.7755	4.0600
EUR	4.6212	4.6899	4.5015	4.5994
GBP	5.2919	5.2957	5.1105	5.4846
CAD	3.3083	3.2486	3.2076	3.1920
AUD	2.9651	2.9890	2.8198	2.9506
NOK	0.4509	0.4461	0.4340	0.4608
NZD	2.8119	2.7884	2.7263	2.7775
SDR	5.8044	5.8760	5.5026	5.6917
Ounce of gold	4,235.0060	7,977.6022	4,226.6645	7,389.6060

- **Gold revaluation gains**

In 2022, an increase in gold revaluation gains was mainly related to a higher positive difference between the average price of gold and the average cost of gold holding. The increase in the price of gold was due to the increase in the average USD exchange rate with a simultaneous decrease in the price of an ounce of gold in USD (the price of an ounce of gold in USD was, respectively, USD 1,812.35 as at 31 December 2022 and USD 1,820.10 as at 31 December 2021).

- **Currency revaluation gains**

PLN thousand	31.12.2022	31.12.2021	Change
USD	18,945,722.3	14,894,942.8	4,050,779.5
EUR	1,531,382.1	2,256,854.0	-725,471.9
GBP	44,852.0	4,273,426.7	-4,228,574.7
AUD	347,683.6	1,890,391.4	-1,542,707.8
NOK	0.0	1,689,541.3	-1,689,541.3
NZD	0.0	263,912.0	-263,912.0
SDR	7,297.6	9,876.3	-2,578.7
CHF	1,116.8	267,391.3	-266,274.5
Other	261.6	461.2	-199.6
<b>Total</b>	<b>20,878,316.0</b>	<b>25,546,797.0</b>	<b>-4,668,481.0</b>



- **Price revaluation gains on securities**

<i>PLN thousand</i>	<b>31.12.2022</b>	<b>31.12.2021</b>	<b>Change</b>
Securities in USD	37,808.1	247,735.4	-209,927.3
Securities in EUR	275.0	50,668.8	-50,393.8
Securities in GBP	686.8	0.0	686.8
Securities in CAD	4,775.5	89,134.5	-84,359.0
Securities in AUD	0.0	864.9	-864.9
Securities in NOK	0.0	397.0	-397.0
Securities in NZD	0.0	7,059.7	-7,059.7
<b>Total</b>	<b>43,545.4</b>	<b>395,860.3</b>	<b>-352,314.9</b>

- **Price revaluation gains on off-balance sheet financial instruments**

As at 31 December 2022, price revaluation gains on off-balance-sheet financial instruments related to forward sale transactions in securities denominated in AUD. As at 31 December 2021, price revaluation gains on off-balance-sheet financial instruments related to forward purchase transactions in securities denominated in USD and forward sale transactions in securities denominated in AUD (see Note 10 and Note 10.2).

- **Gold revaluation account**

Due to the fact that as at 31 December 2022 no unrealised gold revaluation losses occurred, NBP, similarly to 31 December 2021, did not release the gold revaluation account.

## **Note 9.2 FX risk provision**

As at 31 December 2022, the estimation of the FX risk provision (equal to the amount of value at risk less unrealised gains on the foreign exchange rate of the zloty) amounted to PLN 94,551,517.4 thousand (PLN 52,036,768.0 thousand as at 31 December 2021). Pursuant to Resolution No. 6/2019 of the MPC as at 31 December 2022 the provision to cover unrealised foreign exchange losses in the amount of PLN 1,420,869.5 thousand was released (as at 31 December 2021 the amount of the provision was supplemented by the amount of PLN 6,648,541.6 thousand, that is an amount equal to half of the surplus of income of realised foreign exchange gains over realised and unrealised foreign exchange losses on foreign currencies recognised in the financial result for the financial year (see Note 12.1, Note 12.2 and Chapter 7.1.4). As at 31 December 2022, the FX risk provision amounted to PLN 15,078,591.4 thousand (PLN 16,499,460.9 thousand as at 31 December 2021).

### Note 9.3 Reserve fund

In 2022, the reserve fund of NBP was supplemented by the amount of PLN 548,725.9 thousand, that is a contribution from profit to NBP's reserve fund in 2021, and then the NBP's reserve fund was allocated in full to cover NBP's balance sheet loss of previous years (see Note 9 and Note 9.4).

### Note 9.4 Financial result

#### ▪ Financial result for the financial year

The NBP financial result for 2022 was negative (loss) and amounted to PLN -16,943,670.7 thousand (the 2021 profit amounted to PLN 10,974,518.7 thousand).

In accordance with Article 62 and Article 69 of the Act on NBP, NBP's profit is allocated (within 14 days of the approval of the NBP annual financial statements by the Council of Ministers) to NBP's reserve fund (5% of the profit) and contribution from NBP's profit to the State budget (respectively, in 2022: 548,725.9 thousand and 10,425,792.8 thousand from NBP's profit for 2021).

A negative financial result for the financial year is subject to accumulation in the item *Loss of previous years*.

#### ▪ Loss of previous years

Uncovered loss of previous years in the amount of PLN 10,458,009.3 thousand is the result of NBP's loss for the year:

- 2007 – in the amount of PLN 12,427,261.7 thousand,
- 2017 – in the amount of PLN 2,524,935.6 thousand,

and its partial coverage from the reserve fund:

- in 2008 – in the amount of PLN 969,350.0 thousand,
- in 2015 – in the amount of PLN 250,000.0 thousand,
- in 2016 – in the amount of PLN 400,000.0 thousand,
- in 2018 – in the amount of PLN 1,467,483.8 thousand,
- in 2021 – in the amount of PLN 858,628.2 thousand,
- in 2022 – in the amount of PLN 548,725.9 thousand.

## Note 10 Off-balance-sheet items

### ▪ Spot, forward and swap transactions in foreign currency

Foreign currency purchased or sold by NBP for another foreign currency is recognised in the NBP accounting books at the value of the foreign currency quoted in the transaction, which is converted into domestic currency at the average exchange rate prevailing at transaction date.

Foreign currency purchased or sold by NBP for domestic currency is recognised in the NBP accounting books at transaction value, unless separate regulations provide otherwise.

Funds purchased or sold in FX forward transaction are recognised on off-balance-sheet accounts from the trade date to settlement date at the FX spot rate set in the contract.

Funds purchased or sold (in a spot transaction) and, respectively, re-sold or re-purchased (in a forward transaction) as part of FX swap is recognised from the trade date to the settlement date on off-balance-sheet account at the agreed FX spot rate.

The results of an adjustment to the average cost of foreign currency holding and revaluation gains or losses on transactions in foreign currency recognised on off-balance-sheet accounts are presented in the NBP balance sheet according to the balance of adjustment and revaluation of these transactions, determined separately for each transaction type (spot, forward, swap) and separately for each foreign currency – gains as assets, while losses as liabilities.

### ▪ Securities purchased or sold in a forward transaction

Securities purchased or sold in a forward transaction are recognised from the trade date to the settlement date on off-balance-sheet accounts at an agreed price. On the trade date, securities purchased or sold in a forward transaction do not change the amount of a holding of securities.

Securities purchased or sold in a forward transaction are valued at the balance sheet date at the market value of such transactions prevailing at the valuation date by comparing the market value of securities with the price set in the agreement, discounted as at the settlement date of the spot transaction. The common rules for recognition of unrealised gains and losses are applied to revaluation gains and losses.

Price valuation gains or losses on forward transactions in securities denominated in foreign currency recognised in off-balance-sheet accounts are presented in the NBP balance sheet – gains as assets, while losses as liabilities.

On the transaction settlement date, securities purchased in a forward transaction increase the holding of securities, while securities sold in a forward transaction decrease the holding of securities.

If more than one transaction for the forward purchase or sale of securities has been entered, valuation and settlement of these transactions are carried out separately.

### ▪ Futures

Futures are recognised on off-balance-sheet accounts, from the trade date to the settlement date, at nominal value of the purchased or sold underlying instrument.

If, on the closing day of the open position in futures, the actual flow of the underlying instrument takes place, its purchase or sale is recognised at market value.

The list of currency revaluation gains and losses on spot, forward or swap transactions in foreign currency recognised in off-balance-sheet transactions and of price revaluation gains and losses on forward transactions in securities denominated in foreign currency is presented below (see Note 9.1 and Note 12.2).

<i>PLN thousand</i>	Balance sheet item	31.12.2022	31.12.2021	Change
Currency revaluation gains on FX spot, FX forward and FX swap transactions		32,935.3	350,610.9	-317,675.6
Price revaluation gains on forward transactions in securities in foreign currency		1,799.4	3,661.8	-1,862.4
<b>Total assets (Off-balance-sheet instruments revaluation differences)</b>	<b>A.10.3</b>	<b>34,734.7</b>	<b>354,272.7</b>	<b>-319,538.0</b>
Currency revaluation losses on FX spot and FX forward transactions		2,352.2	23,930.4	-21,578.2
Price revaluation losses on forward transactions in securities in foreign currency		51.9	204.1	-152.2
<b>Total liabilities (Off-balance-sheet instruments revaluation differences)</b>	<b>L.11.1</b>	<b>2,404.1</b>	<b>24,134.5</b>	<b>-21,730.4</b>

### Note 10.1 Spot, forward and swap transactions recognised on off-balance-sheet accounts

<i>PLN thousand</i>	Balance sheet item	31.12.2022	31.12.2021	Change
Currency to be received due to FX spot, FX forward and FX swap transactions	-	730,113.9	5,903,731.3	-5,173,617.4
Currency to be paid due to FX spot, FX forward and FX swap transactions	-	730,113.9	5,903,731.3	-5,173,617.4
Gains on adjustments to the average costs of holding	A.10.5	2,395.7	19,790.7	-17,395.0
Losses on adjustments to the average costs of holding	L.11.3	33,469.0	692,280.1	-658,811.1
Currency revaluation gains on FX spot, FX forward and FX swap transactions	A.10.3	32,935.3	350,610.9	-317,675.6
Currency revaluation losses on FX spot and FX forward transactions	L.11.1	2,352.2	23,930.4	-21,578.2

As at 31 December 2022, the decrease in off-balance-sheet items resulted from a lower volume of FX spot transactions and no FX forward and FX swap transactions carried out by NBP. Swap transactions presented as at 31 December 2021 were carried out on the CHF/PLN currency pair (see Chapter 7.1.1.2.3).

The change in the adjustment to the average cost of holding of spot, forward and swap transactions in foreign currency is related to the volume of those transactions as at the year-end and the difference between the average cost of holding and the exchange rate of purchase/sale of those transactions.

The change in the currency valuation of spot, forward and swap transactions denominated in foreign currency is related to the volume of those transactions as at the year-end and the difference between the average cost of holding and the average NBP exchange rate.

## Note 10.2 Securities purchased or sold in a forward transaction

<i>PLN thousand</i>	Balance sheet item	31.12.2022	31.12.2021	Change
Securities denominated in foreign currency bought in forward transactions, of which		1,297,788.0	3,333,696.7	-2,035,908.7
- securities in USD		1,297,788.0	3,333,696.7	-2,035,908.7
Securities denominated in foreign currency sold in forward transactions, of which		860,358.3	794,394.2	65,964.1
- securities in AUD		860,358.3	794,394.2	65,964.1
Price revaluation gains	A.10.3	1,799.4	3,661.8	-1,862.4
Price revaluation losses	L.11.1	51.9	204.1	-152.2

Forward transactions in securities denominated in foreign currency are used by NBP as part of the foreign currency reserves management.

The change in the price valuation of forward transactions in securities denominated in foreign currency is related to the volume of those transactions as at the year-end and the difference between the market price of these securities and their contract price.

## Note 10.3 Futures

<i>PLN thousand</i>	31.12.2022	31.12.2021	Change
Bond futures purchased, of which	1,731,913.2	204,764.0	1,527,149.2
- bond futures in AUD	0.0	204,764.0	-204,764.0
- bond futures in CAD	1,731,913.2	0.0	1,731,913.2
Bond futures sold, of which	998,006.8	682,241.1	315,765.7
- bond futures in CAD	330,133.4	0.0	330,133.4
- bond futures in EUR	0.0	682,241.1	-682,241.1
- bond futures in USD	667,873.4	0.0	667,873.4
Equity index futures purchased, of which	3,824.9	3,441.1	383.8
- equity index futures in EUR	1,339.9	1,286.7	53.2
- equity index futures in GBP	251.3	260.2	-8.9
- equity index futures in USD	2,233.7	1,894.2	339.5

Futures are used by NBP as part of the foreign currency reserves management (see Note 3.1), with the aim to raise long-term yields on foreign currency reserves and increase investment diversification.

## Note 11 Net result on interest

Interest, discount and premium on securities purchased are recognised in the financial result in amounts calculated according to the internal rate of return, which is adjusted in the event of price revaluation losses on securities at the end of a year (see Note 12.2).

Discount on securities issued by NBP is recognised in the financial result in amounts calculated for the period for which a given security was issued according to the straight-line method.

Interest on other financial assets and liabilities is recognised in the financial result at the end of each operating day in amounts calculated according to the straight-line method, except for interest:

- to be paid due to the required minimum reserve, which is recognised in the financial result at the end of each month in amounts calculated for each reserve period,
- on funds deposited in current accounts in other banks, which is recognised in the financial result on the payment date,
- on margins related to futures, which is recognised in the financial result on the payment date,
- on assets and liabilities related to NBP's own administrative activities, including on lease liabilities, which is recognised not later than at the end of month.

Interest on term deposits in gold is accrued and paid in USD (see Note 1 and Note 3.1).

Interest to be received or paid due to forward transactions in foreign currency, which results from a difference between the set FX spot and forward rate, is recognised in the net result on interest at the end of each operational day in amounts calculated according to the straight-line method.

Interest to be received or paid due to swap transactions in foreign currency, which results from a difference between the set FX spot and forward rate, is recognised in the net result on interest at the end of each operational day in amounts calculated according to the straight-line method.

Accrued interest, discount and premiums in foreign currency are converted into domestic currency at the average NBP exchange rate.

	Income*		Expenses**		Result		
	2022	2021 Comarable date	2022	2021 Comarable date	2022	2021 Comarable date	Change
<i>PLN thousand</i>							
Investment instruments of foreign exchange reserves, of which	6,791,713.9	1,139,388.4	-321,468.5	11,175.1	6,470,245.4	1,150,563.5	5,319,681.9
- securities	6,058,536.9	1,383,036.8	0.0	0.0	6,058,536.9	1,383,036.8	4,675,500.1
- term deposits	310,273.7	-232,419.7	0.0	0.0	310,273.7	-232,419.7	542,693.4
- reverse repo transactions	412,888.0	-5,827.2	0.0	0.0	412,888.0	-5,827.2	418,715.2
- repo transactions	0.0	0.0	-321,293.1	11,353.6	-321,293.1	11,353.6	-332,646.7
- other	10,015.3	-5,401.5	-175.4	-178.5	9,839.9	-5,580.0	15,419.9
Gold	14,407.6	3,364.7	0.0	0.0	14,407.6	3,364.7	11,042.9
International Monetary Fund	377,792.4	7,833.8	-379,302.3	-8,005.4	-1,509.9	-171.6	-1,338.3
Monetary policy instruments, of which:	2,190,234.2	2,007,566.9	-14,144,621.4	-885,367.7	-11,954,387.2	1,122,199.2	-13,076,586.4
- NBP bills	0.0	0.0	-10,395,434.6	-768,225.5	-10,395,434.6	-768,225.5	-9,627,209.1
- securities	2,188,736.9	1,986,694.4	0.0	0.0	2,188,736.9	1,986,694.4	202,042.5
- required minimum reserve***	1,485.9	420.9	-3,184,812.9	-64,430.0	-3,183,327.0	-64,009.1	-3,119,317.9
- deposit facility	0.0	0.0	-448,632.3	-52,187.4	-448,632.3	-52,187.4	-396,444.9
- other	11.5	20,451.6	-115,741.6	-524.8	-115,730.1	19,926.8	-135,656.9
Other interest income/expense, of which	-3,115.3	-17,803.7	-355,425.5	-5,659.0	-358,540.8	-23,462.7	-335,078.1
<b>Total</b>	<b>9,371,032.8</b>	<b>3,140,350.1</b>	<b>-15,200,817.7</b>	<b>-887,857.0</b>	<b>-5,829,784.9</b>	<b>2,252,493.1</b>	<b>-8,082,278.0</b>

\* Income (and expenses in case of a negative interest rate) on interest on financial assets.

\*\* Expenses (and income in case of a negative interest rate) on interest on financial liabilities.

\*\*\* Income includes interest income for non-compliance with the obligation to maintain the required minimum reserve.

The decrease of the net result on income in 2022 was mainly related to an increase in expenses on monetary policy, caused primarily by an increase in the NBP annual average reference rate with a simultaneous smaller increase in income on investment instruments of foreign exchange reserves, which was the result of a rise in foreign interest rates.

*Net result on interest on investment instruments of foreign currency reserves (see Note 3.1 and Note 6.3)*

2022									
<i>PLN thousand</i>	USD	EUR	GBP	CAD	AUD	NOK	NZD	Other	Total
Securities	3,196,719.9	-177,897.9	701,983.9	864,107.4	805,990.2	391,763.2	275,870.2	0.0	6,058,536.9
Term deposits	84,828.2	5,724.3	28,443.3	14,682.8	8,790.2	91,851.2	75,953.7	0.0	310,273.7
Reverse repo transactions	132,747.9	32,089.6	181,657.9	3,516.3	62,595.0	0.0	281.3	0.0	412,888.0
Repo transactions	-122,206.5	-287.5	-139,173.1	-3,276.7	-56,107.5	0.0	-241.8	0.0	-321,293.1
Other	8,637.2	-74.0	1,044.3	319.6	46.2	25.6	-147.8	-11.2	9,839.9
<b>Total</b>	<b>3,300,726.7</b>	<b>-140,445.5</b>	<b>773,956.3</b>	<b>879,349.4</b>	<b>821,314.1</b>	<b>483,640.0</b>	<b>351,715.6</b>	<b>-11.2</b>	<b>6,470,245.4</b>

2021									
<i>PLN thousand</i>	USD	EUR	GBP	CAD	AUD	NOK	NZD	Other	Total
Securities	1,352,686.4	-591,738.5	81,971.3	25,711.6	194,004.9	188,159.8	132,241.3	0.0	1,383,036.8
Term deposits	339.5	-253,879.6	331.7	114.3	37.5	9,547.1	11,089.8	0.0	-232,419.7
Reverse repo transactions	8,373.4	-27,572.5	12,552.2	0.0	230.3	0.0	589.4	0.0	-5,827.2
Repo transactions	6,651.3	8,664.5	-4,141.3	0.0	434.8	0.0	-255.7	0.0	11,353.6
Other	-553.1	-4,732.4	-84.4	0.0	-28.5	-16.4	-153.2	-12.0	-5,580.0
<b>Total</b>	<b>1,367,497.5</b>	<b>-869,258.5</b>	<b>90,629.5</b>	<b>25,825.9</b>	<b>194,679.0</b>	<b>197,690.5</b>	<b>143,511.6</b>	<b>-12.0</b>	<b>1,150,563.5</b>

Change									
<i>PLN thousand</i>	USD	EUR	GBP	CAD	AUD	NOK	NZD	Other	Total
Securities	1,844,033.5	413,840.6	620,012.6	838,395.8	611,985.3	203,603.4	143,628.9	0.0	4,675,500.1
Term deposits	84,488.7	259,603.9	28,111.6	14,568.5	8,752.7	82,304.1	64,863.9	0.0	542,693.4
Reverse repo transactions	124,374.5	59,662.1	169,105.7	3,516.3	62,364.7	0.0	-308.1	0.0	418,715.2
Repo transactions	-128,857.8	-8,952.0	-135,031.8	-3,276.7	-56,542.3	0.0	13.9	0.0	-332,646.7
Other	9,190.3	4,658.4	1,128.7	319.6	74.7	42.0	5.4	0.8	15,419.9
<b>Total</b>	<b>1,933,229.2</b>	<b>728,813.0</b>	<b>683,326.8</b>	<b>853,523.5</b>	<b>626,635.1</b>	<b>285,949.5</b>	<b>208,204.0</b>	<b>0.8</b>	<b>5,319,681.9</b>

The increase of PLN 5,319,681.9 thousand in the net result on interest on investment instruments of foreign currency reserves was recorded amid:

- an increase in the average annual interest on securities and in term deposits,
- an average annual depreciation of the zloty against all reserve currencies (see table below),
- higher average annual investment in simultaneous repo and reverse repo transactions in EUR and AUD and, at the same time, lower average annual investment in simultaneous repo and reverse repo transactions in USD and stand-alone reverse repo transactions in EUR.



## Average annual foreign exchange rates

PLN	2022	2021	Change
USD	4.4607	3.8629	0.5978
EUR	4.6869	4.5674	0.1195
GBP	5.4986	5.3117	0.1869
CAD	3.4255	3.0810	0.3445
AUD	3.0933	2.9000	0.1933
NOK	0.4643	0.4493	0.0150
NZD	2.8287	2.7310	0.0977

*Interest income on gold (see Note 1 and Note 3.1)*

The item includes net result on interest on term deposits in the form of physical gold holding, which is accrued and paid in USD. The increase in the item in 2022 was the result of a depreciation of the zloty against USD, in average annual terms, and the higher average annual level of deposit placement and of interest rate.

*Net result on interest on receivables/liabilities related to the IMF (see Note 2)*

PLN thousand	Income		Expenses		Result		
	2022	2021	2022	2021	2022	2021	Change
Interest on reserve tranche	69,948.3	2,713.6	0.0	0.0	69,948.3	2,713.6	67,234.7
Interest on current account with the IMF	306,711.6	4,996.9	0.0	0.0	306,711.6	4,996.9	301,714.7
Interest on loans extended to the IMF	1,132.5	123.3	0.0	0.0	1,132.5	123.3	1,009.2
Interest on SDR allocation	0.0	0.0	-379,302.3	-8,005.4	-379,302.3	-8,005.4	-371,296.9
<b>Total</b>	<b>377,792.4</b>	<b>7,833.8</b>	<b>-379,302.3</b>	<b>-8,005.4</b>	<b>-1,509.9</b>	<b>-171.6</b>	<b>-1,338.3</b>

The net result on interest on receivables/liabilities related to the IMF is a result of higher interest expenses on interest-bearing liabilities in SDR (SDR allocation) and income on interest-bearing receivables in SDR (reserve tranche<sup>18</sup>, current account with the IMF and loans extended to the IMF, see Note 2). The increase in the negative result was primarily a result of the increase in the average annual interest on SDR in the context of the surplus of liabilities over receivables in SDR as well as a depreciation of the zloty against SDR in average annual terms (an increase of the exchange rate from 5.5009 in 2021 to 5.9606 in 2022).

<sup>18</sup> The value of non-interest-bearing part of the reserve tranche is fixed and amounts to SDR 56,236.0 thousand (see Note 2).

*Net interest result on monetary policy instruments (see Note 3.2 and Note 6.1 )*

The decrease, by PLN 13,076,586.4 thousand, in the net result on interest on instruments used in monetary policy operations was mostly driven by:

- higher, by PLN 9,627,209.1 thousand, discount expenses on NBP bills (see Note 6.1 which was mainly a result of a rise in the average annual NBP reference rate,

<i>PLN thousand</i>	2022	2021	Change
Discount expenses on NBP bills issued under main monetary policy operations	-10,107,613.5	-761,414.2	-9,346,199.3
Discount expenses on NBP bills issued under fine-tuning monetary policy operations	-287,821.1	-6,811.3	-281,009.8
<b>Total</b>	<b>-10,395,434.6</b>	<b>-768,225.5</b>	<b>-9,627,209.1</b>

*Average annual level of main and fine-tuning operations\* and average annual reference rate*

<i>PLN million / %</i>	2022	2021	Change
Main operations	191,702.0	205,666.6	-13,964.6
Fine-tuning operations	5,818.0	393.6	5,424.4
NBP reference rate	5.28	0.35	4.93 p.p.

\* All calendar days from 1 January to 31 December were taken into account in the calculation of the average annual level of main and fine-tuning operations.

- higher, by PLN 3,119,317.9 thousand, interest expenses on the required minimum reserve, which resulted mainly from an increase in the average level of the required minimum reserve during the year (see Note 6.1 )

*Average level of required minimum reserve\* and average annual interest rate on required minimum reserve*

<i>PLN million / %</i>	2022	2021	Change
Required minimum reserve	56,615.9	10,119.6	46,496.3
Interest rate on required minimum reserve	5.28	0.34	4.94 p.p.

\* Amounts of the required minimum reserve are calculated based on reserve maintenance periods weighted with the number of days in the period.

- higher, by PLN 396,444.9 thousand, expenses on deposit facility, which was mainly a result of a higher average annual deposit rate with a simultaneously lower use of this instrument,

## Value of deposit facilities and the average annual level of deposit rate

PLN million / %	2022	2021	Change
Total value of deposit facilities*	3,438,074.6	3,894,163.6	-456,089.0
Average annual deposit rate**	4.78	0.15	4.63 p.p.

\* Value calculated for the days of use.

\*\* All calendar days from 1 January to 31 December were taken into account in the calculation of the average annual level of the interest rate.

with a simultaneous

- higher, by PLN 202,042.5 thousand, net result on securities purchased under structural open market operations (see Note 3.2).

PLN thousand	2022	2021	Change
Net result on securities held for monetary policy purposes	2,188,736.9	1,986,694.4	202,042.5
- Treasury securities	1,038,181.6	908,442.0	129,739.6
- securities guaranteed by the State Treasury	1,150,555.3	1,078,252.4	72,302.9

*Other interest income/expenses*

The item *Other interest income/expenses* comprises mainly interest expenses on accounts operated by NBP for the State budget and interest income and expenses related to settlements in TARGET2. The item also comprises interest expenses on lease liabilities (see Note 4 and Note 6.4).

PLN thousand	Income		Expenses		Result		
	2022	2021	2022	2021	2022	2021	Change
Interest expenses on current and auxiliary accounts as well as term deposits with NBP, of which	0.0	0.0	-359,773.3	-17,102.2	-359,773.3	-17,102.2	-342,671.1
- in foreign currency	0.0	0.0	-148,477.0	-5.8	-148,477.0	-5.8	-148,471.2
- in domestic currency	0.0	0.0	-211,296.3	-17,096.4	-211,296.3	-17,096.4	-194,199.9
Interest income/expenses related to settlements in TARGET2	-3,837.8	-18,563.9	11,421.8	18,380.3	7,584.0	-183.6	7,767.6
Other interest income/expenses	722.5	760.2	-7,074.0	-6,937.1	-6,351.5	-6,176.9	-174.6
<b>Total</b>	<b>-3,115.3</b>	<b>-17,803.7</b>	<b>-355,425.5</b>	<b>-5,659.0</b>	<b>-358,540.8</b>	<b>-23,462.7</b>	<b>-335,078.1</b>

\* Income includes income and expenses (a negative interest rate) on interest on assets related to settlements in TARGET2, whereas expenses include income on interest on liabilities related to settlements in TARGET2.

## Note 12 Net result on financial operations

### Note 12.1 Net realised gains/losses

- **Realised foreign exchange gains/losses on transactions in foreign currency and on transactions in gold**

Income and expenses on transactions in foreign currency and transactions in gold are recognised in the financial result on the day when the change took place, in the amount of:

- the difference between the value in domestic currency resulting from a decrease of a foreign currency holding (or a gold holding) and the value determined according to the average daily purchase cost of foreign currency (or gold) – as regards inflow and outflow of foreign currency (or gold) in a given operating day,
- the difference between the value in domestic currency resulting from a decrease of a foreign currency holding (or a gold holding) and the value determined according to the average purchase cost of foreign currency (or gold) – as regards surplus of outflow of foreign currency (or gold) over inflow in a given operating day (net outflow),

In the case of a short position in a given foreign currency (or gold) a reverse approach is applied.

- **Realised price gains/losses**

Gains or losses resulting from spot sale transactions in securities bearing the same code are recognised in the financial result on the settlement day, in the amount equal to the difference between the sale amount and the amount determined according to the average cost of holding of the securities at the end of the current business day.

The result of the settlement of transactions in securities is calculated:

- for securities purchased in a forward transaction – as the difference between the market price and the agreed price, adjusted for revaluation losses recognised at the balance sheet date,
- for securities sold in a forward transaction – as the difference between the agreed price, adjusted for revaluation losses recognised at the balance sheet date, and the average cost of a securities holding.

If more than one transaction for the forward purchase or sale of securities has been entered, valuation and settlement of these transactions are carried out separately.

Daily changes in market prices of futures are recognised in the financial result on a daily basis, including the day of closing the open position in futures.

<i>PLN thousand</i>	2022	2021	Change
Realised foreign exchange gains/losses on transactions in foreign currency	25,171,742.9	13,556,309.0	11,615,433.9
Realised gains/losses on transactions in gold	281,199.1	6,142,695.3	-5,861,496.2
Realised price gains/losses, of which	-9,903,279.7	514,987.4	-10,418,267.1
- on spot transactions in securities	-6,788,169.9	-690,621.7	-6,097,548.2
- on off-balance-sheet financial instruments, of which	-3,115,109.7	1,205,536.4	-4,320,646.1
* on forward transactions in securities	-1,263,838.0	-173,431.7	-1,090,406.3
• on futures, of which:	-1,851,271.7	1,378,968.1	-3,230,239.8
# on bond futures	333,831.3	369,122.9	-35,291.6
# on depo futures	-28,700.1	-1,029.5	-27,670.6
# on equity index futures	-2,156,402.9	1,010,874.7	-3,167,277.6
- other realised price gains*	0.0	72.7	-72.7
Other income/expenses on financial operations**	-1,132.3	43,569.6	-44,701.9
<b>Total</b>	<b>15,548,530.0</b>	<b>20,257,561.3</b>	<b>-4,709,031.3</b>

\* Other realised price gains/losses include the result of reallocation of participating interests in SWIFT in 2021 (see Note 3.3).

\*\* The item includes the result of the valuation of the balance of Account No. 2 for the IMF (PLN -1,132.3 thousand in 2022 as compared with PLN -2,088.0 thousand in 2021 – see Note 6.3). Moreover, in 2021 the item included income of PLN 45,657.7 thousand as the result of settlement of the IMF's transactions (see Note 2).

#### *Net result on realised foreign exchange gains/losses on transactions in foreign currency*

<i>PLN thousand</i>	2022	2021	Change
AUD	2,202,603.3	1,504,073.4	698,529.9
CAD	1,888,925.1	-2,507.7	1,891,432.8
CHF	882,207.5	32,798.8	849,408.7
EUR	2,200,035.4	1,728,124.5	471,910.9
GBP	1,910,777.4	1,617,679.8	293,097.6
NOK	1,158,391.9	1,238,855.8	-80,463.9
NZD	451,666.2	826,414.6	-374,748.4
USD	14,472,637.2	6,600,229.9	7,872,407.3
SDR	3,927.9	10,004.4	-6,076.5
Other	571.0	635.5	-64.5
<b>Total</b>	<b>25,171,742.9</b>	<b>13,556,309.0</b>	<b>11,615,433.9</b>

The increase in the net result stemmed mainly from:

- an increase in the average annual positive difference between the average NBP exchange rate and the average cost of holding for USD, CAD, AUD and GBP with a simultaneous decrease of the difference for NZD and NOK,
- an increase in the sale volume of CAD, EUR, NOK and GBP with a simultaneous decrease for USD (see Note 3.1 and Note 12.2).

*Net result on realised gains/losses on transactions in gold*

In 2022, the decrease resulted mainly from a lower volume of purchase/sale transactions concluded by NBP in the gold market (see Note 1).

*Net result on realised price gains/losses**Net result on realised price gains/losses on the sale of securities in spot transactions*

<i>PLN thousand</i>	<b>2022</b>	<b>2021</b>	<b>Change</b>
USD	-2,233,867.7	-386,863.1	-1,847,004.6
EUR	-1,358,142.5	-14,368.7	-1,343,773.8
GBP	-1,190,706.5	-132,368.1	-1,058,338.4
CAD	-694,202.4	0.0	-694,202.4
AUD	-848,718.2	-6,221.1	-842,497.1
NOK	-295,522.4	-123,178.3	-172,344.1
NZD	-167,010.2	-27,622.4	-139,387.8
<b>Total</b>	<b>-6,788,169.9</b>	<b>-690,621.7</b>	<b>-6,097,548.2</b>

*Net result on realised price gains/losses on forward transactions in securities*

<i>PLN thousand</i>	<b>2022</b>	<b>2021</b>	<b>Change</b>
USD	-313,587.1	-460.5	-313,126.6
EUR	-27,166.0	-4,792.0	-22,374.0
GBP	-150,766.1	-6.3	-150,759.8
CAD	-59,910.8	2,856.8	-62,767.6
AUD	-698,808.3	-177,934.0	-520,874.3
NOK	7,265.4	-5,160.5	12,425.9
NZD	-20,865.1	12,064.8	-32,929.9
<b>Total</b>	<b>-1,263,838.0</b>	<b>-173,431.7</b>	<b>-1,090,406.3</b>

*Net result on realised price gains/losses on daily revaluation of futures contracts*

<i>PLN thousand</i>	USD	EUR	GBP	CAD	AUD	Total
<b>Bond futures</b>						
<b>2022</b>	104,201.8	254,752.3	-31,942.4	-12,658.9	19,478.5	<b>333,831.3</b>
<b>2021</b>	288,252.4	18,035.9	37,344.7	0.0	25,489.9	<b>369,122.9</b>
<b>Change</b>	-184,050.6	236,716.4	-69,287.1	-12,658.9	-6,011.4	<b>-35,291.6</b>
<b>Depo futures</b>						
<b>2022</b>	-5,356.8	0.0	-23,343.3	0.0	0.0	<b>-28,700.1</b>
<b>2021</b>	0.0	0.0	-1,029.5	0.0	0.0	<b>-1,029.5</b>
<b>Change</b>	-5,356.8	0.0	-22,313.8	0.0	0.0	<b>-27,670.6</b>
<b>Equity index futures</b>						
<b>2022</b>	-1,800,061.2	-422,011.6	65,721.2	-6.6	-44.7	<b>-2,156,402.9</b>
<b>2021</b>	623,853.3	320,255.4	66,766.0	0.0	0.0	<b>1,010,874.7</b>
<b>Change</b>	-2,423,914.5	-742,267.0	-1,044.8	-6.6	-44.7	<b>-3,167,277.6</b>

The lower net result on realised price gains/losses in 2022 was mostly related to sale transactions in securities amid rising yields in foreign markets and losses on investment in equity index futures following the fall of the indices.

## Note 12.2 Unrealised losses

### ▪ Currency revaluation losses

Currency revaluation losses are determined by comparing the average cost of foreign currency holding with the average NBP exchange rate, which is lower than the average cost (in the case of a positive foreign currency holding) or by comparing the average cost of foreign currency holding with the average NBP exchange rate, which is higher than the average cost (in the case of a negative foreign currency holding) – see Note 9.1.

### ▪ Price revaluation losses

Price revaluation losses on securities are determined by comparing the average cost of securities holding with the average market price of these securities, which is lower than the average cost.

Price revaluation losses on forward transactions in securities are determined by comparing the contract price, discounted as at the settlement date of the spot transaction, with a lower (in the case of forward purchase) or a higher (in the case of forward sale) current market price of the instrument.

<i>PLN thousand</i>	2022	2021	Change
Currency revaluation losses	-1,420,869.5	-259,225.8	-1,161,643.7
Price revaluation losses, of which	-25,316,894.2	-3,399,364.2	-21,917,530.0
- on securities	-25,316,842.3	-3,399,160.1	-21,917,682.2
- on off-balance-sheet financial instruments	-51.9	-204.1	152.2
<b>Total</b>	<b>-26,737,763.7</b>	<b>-3,658,590.0</b>	<b>-23,079,173.7</b>

Currency revaluation losses by foreign currency are presented below.

<i>PLN thousand</i>	2022	2021	Change
CAD	-978,211.6	-259,212.6	-718,999.0
HUF	-15.7	-3.9	-11.8
JPY	-13.3	-9.3	-4.0
NOK	-318,214.7	0.0	-318,214.7
NZD	-124,336.8	0.0	-124,336.8
SEK	-77.4	0.0	-77.4
<b>Total</b>	<b>-1,420,869.5</b>	<b>-259,225.8</b>	<b>-1,161,643.7</b>

Price revaluation losses by securities held by NBP denominated in foreign currencies are presented below.

<i>PLN thousand</i>	2022	2021	Change
Securities in USD	-9,916,207.8	-881,434.3	-9,034,773.5
Securities in EUR	-6,572,513.3	-406,979.5	-6,165,533.8
Securities in GBP	-3,193,475.4	-680,668.5	-2,512,806.9
Securities in CAD	-1,906,440.6	-9,229.7	-1,897,210.9
Securities in AUD	-2,074,134.8	-526,847.3	-1,547,287.5
Securities in NOK	-974,462.8	-533,468.6	-440,994.2
Securities in NZD	-679,607.6	-360,532.2	-319,075.4
<b>Total</b>	<b>-25,316,842.3</b>	<b>-3,399,160.1</b>	<b>-21,917,682.2</b>

In 2022, the increase in unrealised price revaluation losses was a result of the increase in the yields in all markets (see Note 3.1).

In 2022 and 2021, price revaluation losses on off-balance-sheet financial instruments mainly related to forward purchase transactions in securities denominated in USD (see Note 10.2).



**Note 13 Net result on commissions and fees**

<i>PLN thousand</i>	Item of the Profit and Loss Account	2022	2021	Change
Income on the execution of payment orders		39,036.8	33,740.4	5,296.4
Other fees and commissions income		13,908.4	13,726.3	182.1
<b>Fees and commissions income</b>	<b>P&amp;L 3.1</b>	<b>52,945.2</b>	<b>47,466.7</b>	<b>5,478.5</b>
Expenses on fees for NBP's TARGET2 participation		-16,280.1	-15,339.3	-940.8
Expenses on opening and operation of NBP accounts (including gold and securities accounts)		-17,575.5	-17,098.2	-477.3
Expenses on the execution of own payment orders		-4,599.4	-4,276.3	-323.1
Expenses due to substitution cash services		-2,553.7	-1,840.3	-713.4
Other fees and commissions expenses		-12,385.9	-7,527.6	-4,858.3
<b>Fees and commissions expenses</b>	<b>P&amp;L 3.2</b>	<b>-53,394.6</b>	<b>-46,081.7</b>	<b>-7,312.9</b>
<b>Net result on fees and commissions</b>		<b>-449.4</b>	<b>1,385.0</b>	<b>-1,834.4</b>

The decrease in the net result on commissions and fees in 2022 was mainly the effect of:

- an increase in other commissions and fees expenses, mainly due to higher expenses on futures, primarily in relation with higher trade in equity index futures (see Note 3.1, Note 10.3 and Note 12.1),
- an increase in expenses on fees for NBP's participation in TARGET2 – following a rise in the number of the payment orders executed and a higher EUR exchange rate in 2022,

with a simultaneous

- higher income for the execution of payment orders – mainly in relation with a rise in the number of the payment orders executed.

**Note 14 Income on shares and participating interests**

Income on dividends from shares and participating interests held by NBP is recognised in the financial result on the day an asset originates. Dividends received in foreign currency are converted into domestic currency at the average NBP exchange rate prevailing at that day.

The item includes income on dividends from shares and participating interests in domestic and foreign entities held by NBP (see Note 3.3).

<i>PLN thousand</i>	2022	2021	Change
<b>Dividends received, of which</b>	<b>32,215.8</b>	<b>38,256.7</b>	<b>-6,040.9</b>
- Krajowy Depozyt Papierów Wartościowych S.A.	9,793.0	6,641.6	3,151.4
- Krajowa Izba Rozliczeniowa S.A.	9,256.9	8,859.4	397.5
- Bank for International Settlements	13,165.9	22,755.7	-9,589.8

## Note 15 Salaries

<i>PLN thousand</i>	2022	2021	Change
Expenses on salaries	-534,943.5	-496,170.7	-38,772.8
Expenses on provisions for liabilities to employees	-17,291.0	-32,886.0	15,595.0
Expenses on social contributions, of which	-121,173.8	-111,442.4	-9,731.4
- <i>Occupational Pension Scheme</i>	-33,232.4	-31,108.3	-2,124.1
<b>Total</b>	<b>-673,408.3</b>	<b>-640,499.1</b>	<b>-32,909.2</b>

In 2022, the average headcount at NBP amounted to 3,344 employees and was lower by 16 employees as compared with 2021.

In 2022, higher salaries resulted mainly from the adopted HR and remuneration policy.

The decrease in expenses on provisions for liabilities to employees in 2022 was mainly driven by lower expenses on the creation of the provision for retirement severance payments and jubilee awards. In 2022 and 2021, expenses on the creation of provisions for liabilities to employees by categories were as follows (see Note 7).

<i>PLN thousand</i>	2022		2021	
	Expenses on provisions	of which actuarial gains/losses*	Expenses on provisions	of which actuarial gains/losses*
<b>Expenses on provisions for liabilities to employees, of which</b>	<b>-17,291.0</b>	<b>1,193.2</b>	<b>-32,886.0</b>	<b>-21,105.7</b>
- due to retirement severance payments	-6,469.4	1,826.2	-17,602.4	-11,631.8
- due to disability severance payments	-88.2	223.5	-322.8	-74.0
- due to jubilee awards	-8,180.3	-856.5	-14,960.8	-9,399.9
- due to untaken leaves	-2,553.1	-	0.0**	-

\* Actuarial gains and losses result from changes in the actuarial assumptions, such as the probability of an employee quitting job, death rate, discount rate or the level of future remunerations. Actuarial gains are presented with a (+) sign, while actuarial losses with a (-) sign.

\*\* In the case of a provision for liabilities due to untaken leaves in 2021, an income from its partial release was taken to the Item *Other income*.

**Note 16 Administrative expenses**

<i>PLN thousand</i>	2022	2021	Change
Materials and energy used	-34,021.6	-28,517.8	-5,503.8
Benefits for employees and other eligible persons	-24,660.2	-18,310.6	-6,349.6
Business travel	-2,277.3	-471.3	-1,806.0
Services from third parties	-254,121.6	-218,468.7	-35,652.9
Taxes and fees	-11,831.1	-11,053.2	-777.9
Transfers to Employee Benefit Fund	-6,628.2	-6,203.7	-424.5
Other administrative expenses	-9,314.6	-16,507.3	7,192.7
<b>Total</b>	<b>-342,854.6</b>	<b>-299,532.6</b>	<b>-43,322.0</b>

The increase in administrative expenses in 2022 was mainly a result of:

- an increase in expenses on services from third parties – mainly related to the maintenance of IT systems and IT infrastructure, repairs and maintenance of tangible fixed assets and information services,
- an increase in expenses on benefits for employees and other eligible persons – mainly due to the change in the provision for liabilities arising from additional benefits for employees (see Note 7, Note 15 and Note 19),
- an increase in expenses on materials and energy used – mainly electricity, gas and publications and educational materials purchased by NBP,

with a simultaneous

- decrease in other administrative expenses – mainly on NBP's educational activity.

**Note 17 Depreciation and amortisation expenses**

<i>PLN thousand</i>	2022	2021	Change
Tangible fixed assets depreciation expenses	-59,007.6	-75,787.1	16,779.5
Right-of-use assets depreciation expenses	-13,629.2	-13,149.2	-480.0
Intangible assets amortisation expenses	-22,847.2	-25,250.1	2,402.9
<b>Total</b>	<b>-95,484.0</b>	<b>-114,186.4</b>	<b>18,702.4</b>

The decrease in depreciation and amortisation expenses in 2022 was mainly related to a change of the threshold of depreciation/amortisation made on a one-off basis related to tangible fixed assets and intangible assets (see Note 4).

## Note 18 Expenses on issue of banknotes and coins

Expenses on the issue of banknotes and coins are recognised in the financial result on the date the liability arose, regardless of the date the banknotes and coins are put into circulation.

The item comprises expenses on issue of banknotes and coins, including collector banknotes and coins. In 2022, the item amounted to PLN 389,963.3 thousand and was by PLN 25,506.1 thousand higher as compared with 2021. The increase in the item resulted mainly from higher expenses on the issue of general circulation banknotes as a result, among others, of a rise in the overall number of ordered banknotes.

## Note 19 Other income and other expenses

Other income/expenses include mainly income on the sale of collector coins and banknotes, and expenses corresponding to the nominal value of collector coins and banknotes sold. The decrease in the balance of other income was mainly the result of a decrease in this income and lower income from the release of the provisions in 2022 (see Note 7).

## 6. Other explanatory notes

### Note 20 Other issues

#### *The Russia's military aggression against Ukraine*

Narodowy Bank Polski has carefully analysed the impact of the Russia's military aggression of Ukraine on the economic situation in Poland, standing ready to immediately take preventive actions against possible negative trends on the financial and FX markets.

In 2022, NBP took decisions, among others, concerning:

- interventions in the FX market, particularly with the aim to reduce fluctuations of the zloty exchange rate which were not in line with the direction of the pursued monetary policy,
- opening a FX swap line with the National Bank of Ukraine (NBU),
- supporting the process of exchange of Ukrainian hryvnia for Polish zloty in Polish banks.<sup>19</sup>

Both as at 31 December 2022 and as at 31 December 2021, NBP did not have direct exposures to Russian or Belarussian entities which were subject to the economic sanctions arising from the above-mentioned

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<sup>19</sup> From 25 March 2022 to 9 September 2022 refugees from Ukraine exchanged a total of UAH 728 million for PLN 98 million. All the exchanged hryvnias were transferred by PKO Bank Polski S.A. to the regional branches of NBP, and then settled at the exchange rate set by the NBU. All the UAH currency purchased in this way was then sold to the NBU at the same exchange rate. Thus, the mutual financial settlements of parties involved in the exchange of hryvnia for Polish zloty for the needs of refugees from Ukraine have been completed. The final settlement with the National Bank of Ukraine took place on 28 September 2022.

military aggression. None of NBP's counterparties which cooperate with NBP under the process of foreign currency reserves management (including issuers of securities) had its seat in the territory of Ukraine. NBP monitored, on an ongoing basis, adverse effects of the above mentioned military aggression on risk in the process of foreign currency reserves management and in the monetary policy operations. It specifically analysed credit risk and the financial standing of commercial banks in which funds are deposited under the foreign currency reserves management, as well as issuers of corporate bonds held in NBP's portfolio. The analyses (including the analyses of entities' ratings) did not indicate any significant growth in credit risk.

Moreover, NBP monitored, on an ongoing basis, the level of operational and cybersecurity risk. The Bank had in place contingency procedures, including a business continuity plan.

A sharp rise in demand for cash was recorded in the period directly following the Russia's military aggression of Ukraine, i.e. after 24 February 2022. The value of cash in circulation was at its all-time high on 14 March 2022, when it amounted to PLN 395.7 billion (an increase of PLN 40.1 bn or 11.3%, compared to the 31 December 2021 figure). Later in 2022 the situation on the cash market calmed down. Starting from June 2022, the value of cash in circulation was declining gradually. The higher value of cash transferred to NBP was particularly due to an increase in interest rates, which led to an increased attractiveness of term deposits offered by banks to their customers (see Note 5).

### *Swap arrangements*

In 2022 and 2021, NBP was party to a swap arrangement with the Swiss National Bank (SNB). In 2022, NBP was also party to swap arrangements with the ECB and the NBU.<sup>20</sup> No transactions were carried out under these arrangements, therefore they had no impact on the NBP balance sheet and profit and loss account in 2022 and 2021.

In 2022 and 2021, NBP carried out FX swap transactions with domestic banks (see Note 10.1 and Chapter 7.1.1.2.3). There were no such transactions as at 31 December 2022.

## **7. Financial, operational and tax risk**

Narodowy Bank Polski operates a risk management system which is a continuous and repeatable decision-making process that supports the attainment of NBP goals, while using appropriate organisational, procedural and technical solutions. It includes:

- as relates to financial risk – the activity of the NBP Head Office department responsible for financial risk management;
- as relates to operational risk (see Chapter 7.2) – management at the following levels:
  - decentralised operational risk management by directors of the Head Office departments and NBP regional branches who, on an ongoing basis, monitor operational risk, perform the assessment of

<sup>20</sup> The swap arrangement with SNB was concluded in 2012, whereas the arrangements with ECB and NBU – in 2022.

its level and take measures mitigating risk occurrence in their units and report such incidents in accordance with internal regulations,

- the activity of the NBP Head Office Department, which – on an ongoing basis – monitors and analyses operational risk in NBP as a whole, prepares regulations and draft measures related to changes to operational risk management. It also prepares reports on operational risk for the Commission for Operational Risk Management and the Management Board of NBP,
- operational risk management effectiveness assessed by the Commission for Operational Risk Management which monitors the current level of operational risk, performs analysis of the causes underlying materialisation of risk assessed as high or unacceptable, and also submits proposed solutions and changes in this area to the Management Board of NBP,
- strategic decision-making by the NBP Management Board.

The tasks carried out as part of risk management include:

- on-going identification and analysis of individual types of risk,
- measurement of risk level and its acceptance or non-acceptance,
- selection of risk mitigation mechanisms,
- monitoring and day-to-day control of the efficiency of the risk mitigation mechanisms applied,
- provision of periodical information about the results of risk management.

## **7.1. Financial risk**

The main types of financial risk underlying the activities of NBP are: credit risk, liquidity risk and market risk (interest rate risk, foreign exchange rate risk, risk of changes in the prices of equity index futures). The accepted level of financial risk is set through the system of investment limits, determination of which takes also into account mitigation of concentration risk. NBP's exposure to individual types of risk stems from its performance of statutory tasks of the central bank, i.e. managing the foreign currency reserves and implementing monetary policy, including regulating the liquidity of banks and providing them with refinancing facilities. The Financial Risk Management Department monitors, on an ongoing basis, the Bank's exposure to financial risk and presents financial risk analysis to the Management Board of NBP.

### **7.1.1. Credit risk**

Credit risk is related to potential financial losses arising from counterparty default (in particular, failure to repay, in full or in part, principal or interest within the agreed time), or due to a decline in the market value of investment instruments arising from a deterioration in the issuer's creditworthiness.

#### **7.1.1.1. Credit risk in foreign currency reserve management**

Exposure to credit risk in the process of NBP foreign exchange reserve management is mitigated using the following methods:

- limiting the share of term deposit transactions and non-government securities,

- counterparty selection criteria and on-going monitoring of their creditworthiness,
- limits imposed on counterparties of term deposit transactions and foreign currency transactions,
- limitation of the maturity of term deposit transactions,
- selection criteria for issuers of securities,
- limits for issuers of securities,
- entering into master agreements with counterparties,
- collateral in repo/reverse repo transactions.

Credit risk analysis is conducted by NBP using both data related to the financial position of counterparties and assignments of rating agencies as well as risk valuation reflected in market quotations.

Narodowy Bank Polski's exposure to credit risk due to the main investment instruments of foreign currency reserves is presented below.<sup>21</sup>

<i>PLN thousand</i>	31.12.2022	31.12.2021	Balance sheet item	Note
Current account in gold	0.0	18,144,948.1	A.1	1
Term deposits in gold	31,755,510.9	11,786,423.1	A.1	1
Current accounts in foreign currency*	20,345,541.1	20,196,878.7	A.2.2	3.1
Term deposits in foreign currency	37,562,191.4	22,638,153.6	A.2.2	3.1
Reverse repo transactions	53,550,113.6	35,876,615.9	A.2.2	3.1
Securities denominated in foreign currency	516,089,683.1	506,790,467.3	A.2.2	3.1
Margins related to futures transactions	1,088,239.0	1,024,049.9	A.2.2	3.1
Interest on term deposits in gold	3,888.1	405.5	A.2.2	3.1
<b>Total</b>	<b>660,395,167.2</b>	<b>616,457,942.1</b>		

\* Current accounts excluding the current accounts in the ECB used for settlements in TARGET2 (see Note 3.1).

The dominant portion of foreign currency reserves is invested in government securities of high rating countries characterised by the highest level of safety and liquidity. Non-government securities held in the investment portfolios are issued primarily by international institutions and government agencies. The scale of investment in the corporate bond market is small. Around 1% of securities held by NBP is classified as green bonds and sustainable bonds.<sup>22</sup> The share of term deposits in foreign currency reserves is low – transactions are concluded for short periods with banks of high creditworthiness. NBP also holds funds in current accounts, mainly operated by central banks, in the process of foreign currency reserves management.

The creditworthiness ratings of the country of the securities issuer are, among others, used for estimating the credit quality of securities issued by governments and central banks. The credit quality

<sup>21</sup> It is assumed that the exposure to the IMF (receivables from the IMF – see Note 2) does not generate credit risk.

<sup>22</sup> Green bonds or sustainable bonds are issues whose proceeds are used to finance or re-finance green projects or in the case of the latter – social projects. These may include projects linked to energy efficiency, renewable energy, prevention of environment pollution, sustainable management of natural resources, biodiversity, provision of essential infrastructure and services or food security, and support for socio-economic progress.

of issuers of other securities as well as counterparties with which term deposits are concluded (except for central banks) is assessed based on the scoring models that take into account, among others, ratings assigned by rating agencies and individual issuer's financial data. The financial standing of issuers and NBP's counterparties is subject to on-going monitoring based on daily information about changes in creditworthiness ratings and rating forecasts provided by rating agencies, as well as implied ratings derived from CDS (Credit Default Swap).

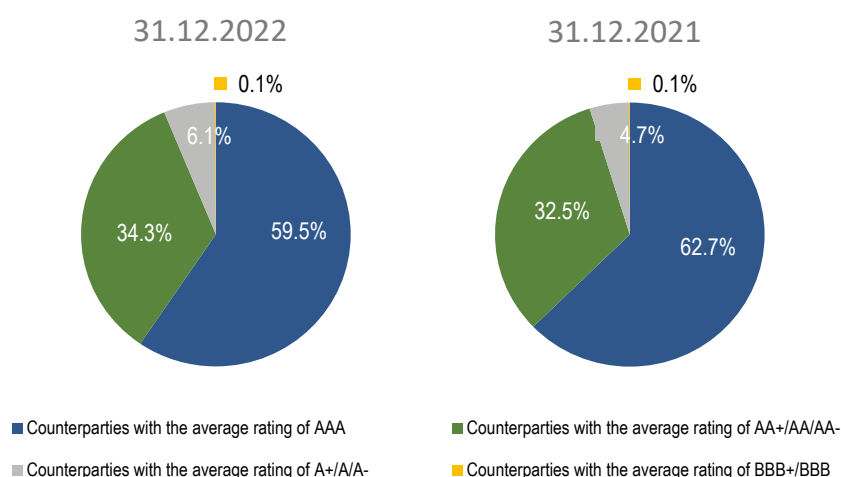
The results of an analysis of data as of 31 December 2022 indicate that no cases of impairment of securities held to maturity have occurred.

Exposure to credit risk related to deposits and securities related to foreign exchange reserve management, by issuer/counterparty's sector, geographical location and credit rating, is presented below.

<i>PLN thousand</i>	31.12.2022	31.12.2021
General government institutions	470,891,051.9	469,944,728.5
- Foreign central government institutions	431,788,496.2	431,946,535.0
- Other	39,102,555.7	37,998,193.5
Monetary financial institutions	94,487,430.2	54,893,091.8
- Foreign credit institutions	75,930,741.1	47,011,150.8
- Central banks	18,556,689.1	7,881,941.0
International financial organisations	3,304,973.3	822,850.1
Non-monetary financial institutions	8,799,728.9	7,189,758.1
Non-financial sector	7,928,089.2	8,365,021.0
<b>Total</b>	<b>585,411,273.5</b>	<b>541,215,449.5</b>

<i>PLN thousand</i>	31.12.2022	31.12.2021
United States	174,506,217.4	178,075,175.1
Euro area	170,912,123.0	142,415,872.5
United Kingdom	78,903,375.8	70,305,912.3
Canada	55,845,278.2	53,724,403.9
Australia	45,767,385.6	40,108,900.8
Norway	27,612,796.8	24,508,810.5
Asian countries	12,533,835.8	14,755,401.3
New Zealand	10,805,626.5	11,052,580.7
Switzerland	5,219,661.0	4,138,547.4
Other	3,304,973.4	2,129,845.0
<b>Total</b>	<b>585,411,273.5</b>	<b>541,215,449.5</b>





### 7.1.1.2. Credit risk underlying domestic operations

#### 7.1.1.2.1. Securities

In 2022, NBP did not continue to purchase Treasury bonds and securities guaranteed by the Treasury in the secondary market, as part of its structural open market operations, and did not reinvest funds from the redemption of these instruments by their issuer at maturity. As a result of operations conducted in previous years as of 31 December 2022, NBP held Treasury securities in zloty and securities guaranteed by the State Treasury in zloty for a total accounting book value of PLN 140,673,185.5 thousand (PLN 149,332,164.0 thousand as of 31 December 2021 – see Note 3.2). Securities denominated in domestic currency held for monetary policy purposes are valued according to their clean price adjusted for the accrued discount and premium, less impairment.

Securities held for monetary policy purposes were issued or fully guaranteed by the State Treasury. The results of the analysis performed as at 31 December 2022 show that no indications of their impairment have occurred.

#### 7.1.1.2.2. Claims on credit operations

To support the liquidity of the financial system, NBP may grant a refinancing loan in zloty to banks to supplement their financial resources. Specifically, banks use intraday credit and marginal lending facility (Lombard credit). Banks also use intraday credit in euro. On request by a bank, NBP may also grant a refinancing loan in another form specified by the Management Board of NBP.

The total drawing on the credit in annual terms\*

PLN million / EUR	2022	2021	Change
Lombard credit	62.2	9.9	52.3
Intraday credit	18,564,907.0	19,527,146.4	-962,239.4
Intraday credit in EUR	51,011.9	52,551.4	-1,539.5

\* The values of credits are the sum total of their daily drawing and result from banks' individual liquidity needs.

The risk underlying these operations is mitigated through the use of eligible collateral that meets the criteria set by NBP. When setting the required level of collateral, the haircut rate is applied, with the purpose to take into account the risk of unfavourable changes of the market value of collateral, in particular of market prices and exchange rates.

Treasury and NBP securities denominated in PLN and securities guaranteed by the State Treasury in zloty are the primary collateral presented by banks. The list of assets accepted as collateral also comprises other securities deposited with the Central Securities Depository of Poland [Krajowy Depozyt Papierów Wartościowych S.A.]: covered bonds, municipal bonds, corporate bonds, bonds issued by the European Investment Bank denominated in PLN, as well as – in the case of Lombard credit – EUR-denominated Treasury bonds.

In the case of a refinancing loan granted in another form specified by the Management Board of NBP, a wider range of collateral may apply.

Intraday credit in euro is extended in accordance with the principles laid down in the Agreement on the terms of opening and maintaining an account in euro in the TARGET2-NBP system, and it may be collateralised by Treasury bonds participating in BondSpot S.A. fixing and accepted by the ECB (in addition, haircut related to the exchange rate risk is taken into account).

#### **7.1.1.2.3. FX swap transactions with domestic banks**

In 2022 and 2021, NBP executed an FX swap transaction on the CHF/PLN currency pair. The collateral for the operation was set with haircut and the margin requirement, thus mitigating risk exposure (see Note 10.1). There were no FX swap transactions as at 31 December 2022.

#### **7.1.2. Liquidity risk**

Liquidity risk is associated with the possibility of incurring additional expenses, if an urgent need arises to raise liquid funds.

As NBP has the exclusive right to issue banknotes and coins of the Republic of Poland, NBP is capable of creating liquidity in domestic currency. This is, however, constrained by the responsibility of NBP for the stability of domestic currency. The assumptions of monetary policy are set annually by the MPC, which, based on the above assumptions, also approves the financial plan of NBP.

In the process of foreign currency reserves management, NBP provides adequate liquidity of funds by matching current and expected cash flows. Investments are made in the markets that ensure immediate availability of funds – reserve currencies and investment instruments are principally characterised by high liquidity.

### 7.1.2.1. Maturity analysis for financial liabilities in foreign currency

The table below presents the maturity analysis for financial liabilities of NBP denominated in foreign currency as at 31 December 2022 and 31 December 2021.<sup>23</sup>

Moreover, when joining the IMF borrowing programmes (see Note 2), NBP committed to grant foreign-currency-denominated loans to the IMF under, respectively:

- NAB agreement – up to the amount of SDR 2,570,800.0 thousand (SDR 2,570,800.0 thousand as at 31 December 2021), of which the outstanding amount of NBP's commitment as at 31 December 2022 was SDR 2,558,525.0 thousand (SDR 2,540,425.0 thousand as at 31 December 2021),
- bilateral borrowing agreements – up to the amount of EUR 2,701,000.0 thousand (EUR 2,701,000.0 thousand as at 31 December 2021), of which the outstanding amount of NBP's commitment as at 31 December 2022 was EUR 2,701,000.0 thousand (EUR 2,701,000.0 thousand as at 31 December 2021).

31.12.2022	TOTAL	Avista	From 1 day to 1 month	Over 1 month to 3 months	Over 3 months	Balance-sheet value	L.7 Liabilities to residents denominated in foreign currency	L.8 Liabilities to non-residents denominated in foreign currency	L.9 SDR allocation	L.11 Other liabilities
<i>PLN thousand</i>										
Current/auxiliary accounts in foreign currency operated by NBP	45,773,861.4	45,773,861.4	0.0	0.0	0.0	45,773,861.5	45,698,674.5	75,187.0	0.0	0.0
Term deposit accounts in foreign currency operated by NBP	13,188,279.9	0.0	4,153,300.6	9,034,979.3	0.0	13,132,527.1	13,132,527.1	0.0	0.0	0.0
Repo transactions	53,677,589.8	0.0	41,197,628.7	6,892,926.7	5,587,034.4	53,539,855.3	0.0	53,539,855.3	0.0	0.0
Other financial liabilities denominated in foreign currency	194,142.5	0.0	193,996.6	145.9	0.0	194,142.5	178,670.7	10,093.8	0.0	5,178.0
SDR allocation	30,952,659.7	0.0	221,788.5	0.0	30,730,871.2	30,871,510.9	0.0	0.0	30,871,510.9	0.0
<b>TOTAL</b>	<b>143,786,533.3</b>	<b>45,773,861.4</b>	<b>45,766,714.4</b>	<b>15,928,051.9</b>	<b>36,317,905.6</b>	<b>143,511,897.3</b>	<b>59,010,072.3</b>	<b>53,625,136.1</b>	<b>30,871,510.9</b>	<b>5,178.0</b>

31.12.2021	TOTAL	Avista	From 1 day to 1 month	Over 1 month to 3 months	Over 3 months	Balance-sheet value	L.7 Liabilities to residents denominated in foreign currency	L.8 Liabilities to non-residents denominated in foreign currency	L.9 SDR allocation	L.11 Other liabilities
<i>PLN thousand</i>										
Current/auxiliary accounts in foreign currency operated by NBP	32,619,174.3	32,619,174.3	0.0	0.0	0.0	32,619,174.4	32,455,999.0	163,175.4	0.0	0.0
Term deposit accounts in foreign currency operated by NBP	7,015.1	0.0	7,015.1	0.0	0.0	7,015.1	7,015.1	0.0	0.0	0.0
Repo transactions	35,679,576.0	0.0	25,577,651.4	1,367,527.9	8,934,396.7	35,873,254.8	0.0	35,873,254.8	0.0	0.0
Other financial liabilities denominated in foreign currency	174,485.1	0.0	174,392.0	93.1	0.0	174,332.7	166,705.5	0.0	0.0	7,627.2
SDR allocation	29,771,979.3	0.0	4,978.0	0.0	29,767,001.3	29,769,702.4	0.0	0.0	29,769,702.4	0.0
<b>TOTAL</b>	<b>98,452,229.8</b>	<b>32,619,174.3</b>	<b>25,764,036.5</b>	<b>1,367,621.0</b>	<b>38,701,398.0</b>	<b>98,443,479.4</b>	<b>32,629,719.6</b>	<b>36,036,430.2</b>	<b>29,769,702.4</b>	<b>7,627.2</b>

In the case of liabilities denominated in foreign currency due to current and auxiliary accounts, NBP generally holds liquid funds in current accounts and overnight term deposits on the assets side. For liabilities due to accepted term deposits, appropriate funds on the assets side are invested in term

<sup>23</sup> Liabilities due to FX spot, FX forward and FX swap transactions recognised on off-balance-sheet accounts are presented in Note 10.1. Liabilities due to NBP's own administrative activities were not included, as bearing no material impact.

deposits of the same maturity date. On the other hand, repo transactions are executed simultaneously with reverse repo transactions of the same maturity date (see Note 3.1).

### 7.1.3. Interest rate risk

Interest rate risk is related to a potential decline in the market value of financial instruments due to an unfavourable change in their yields.

The primary measure of interest rate risk applied by NBP is modified duration, hereinafter referred to as “MD”, which specifies the sensitivity of investment portfolio values to changes in the yield on financial instruments.

To mitigate the interest rate risk in the process of managing foreign currency reserves, NBP defines the benchmark level of MD of foreign currency reserves, along with admissible fluctuation bands. In 2022, the MD of the reserves remained at the level close to its level in the preceding year.

Sensitivity analysis, conducted based on MD<sup>24</sup>, has shown that a change in interest rates by 100 basis points (for each foreign exchange portfolio, evenly distributed along the yield curve) would result in a change of the value of securities portfolios by PLN 14,138.7 million as at 31 December 2022 (as at 31 December 2021 – by PLN 14,883.7 million). The change in value of securities portfolios in individual currencies in response to a 100 bps change in interest rates, as estimated based on MD analysis, is presented below.

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<sup>24</sup> In its sensitivity analysis NBP applied the MD ratio for individual foreign-currency securities portfolios as at 31 December 2022 and as at 31 December 2021 (in both cases, excluding the portfolio of securities held to maturity) as a linear measure of the relationship between price and yield, as well as the holding of securities portfolios as at 31 December 2022 and as at 31 December 2021 (in both cases, excluding the portfolio of securities held to maturity) based on values used in the monitoring of MD.

MD-based estimate of a change in values of securities portfolios in individual currencies in response to a 100 bps change in interest rates

<i>PLN million</i>	31.12.2022	31.12.2021	Change
USD	4,946.2	5,079.0	-132.8
EUR	2,946.5	3,152.4	-205.9
GBP	1,787.1	1,904.0	-116.9
CAD	1,468.4	1,549.0	-80.6
AUD	1,738.3	1,700.7	37.6
NOK	876.9	1,031.9	-155.0
NZD	375.3	466.7	-91.4
<b>Total</b>	<b>14,138.7</b>	<b>14,883.7</b>	<b>-745.0</b>

In accordance with the accounting principles of NBP, price revaluation gains on securities denominated in foreign currency at the end of the year are recorded as revaluation accounts on the liabilities side of the balance sheet, while losses on price revaluation of these securities are debited to NBP's financial result.

Securities denominated in foreign currency held to maturity and securities denominated in domestic currency held for monetary policy purposes are valued at clean price adjusted for the accrued discount and premium, less impairment (see Note 3.1 and Note 3.2).

#### 7.1.4. Foreign exchange rate risk and gold price risk

Foreign exchange rate risk arises out of a potential decline in the value of foreign currency holdings as a result of fluctuations of foreign currency rates in the foreign exchange market.

The assessment of exposure to foreign exchange rate risk is carried out based on the parametric Value at Risk (VaR) methodology. The level of VaR calculated as at the balance sheet date is taken into account for calculating the amount of the FX risk provision (see Chapter 4 and Note 9).

In the process of foreign currency reserves management NBP defines the currency structure of the strategic benchmark<sup>25</sup> alongside admissible fluctuation band (see Note 3.1 and Note 12.1).

As at 31 December 2022 and 31 December 2021, the currency composition of the strategic benchmark included:

<sup>25</sup> The strategic currency benchmark is a reference portfolio for a portion of actively managed foreign currency reserves, mirroring long-term assumptions for the investment strategy by setting the foreign currency composition and the level of modified duration. The strategic benchmark does not include the portfolio of securities held to maturity, as it is not actively managed.

Currency composition of the strategic benchmark		
Currency	31.12.2022	31.12.2021
	% share	
USD	36%	36%
EUR	22%	22%
GBP	13%	13%
CAD	11%	11%
AUD	9%	9%
NOK	6%	6%
NZD	3%	3%

The risk of a change in the price of gold (see Note 1) arises out of a potential decline in the value of gold as a result of changes in the market price of gold.

The impact of a decline in the price of gold on the financial result is limited by unrealised gold revaluation gains and gold revaluation account (see Note 9.1).

The balance-sheet values of foreign currency holdings and gold holding of NBP as at 31 December 2022 and 31 December 2021 by currency are presented below, wherein items in foreign currency related to own administrative activities are presented as part of PLN holdings since they are immaterial.

31.12.2022	PLN thousand	PLN	USD	EUR	GBP	CAD	AUD	NOK	NZD	SDR	Gold	Other currencies	Total
<b>ASSETS</b>													
1.	Gold and gold receivables	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	58,650,238.7	0.0	58,650,238.7
2.	Claims on non-residents denominated in foreign currency	0.0	243,916,250.5	176,046,972.3	78,263,570.9	53,553,959.1	47,918,333.6	29,487,576.7	14,776,073.4	31,411,666.6	0.0	23,934.0	675,407,337.1
6.	Other claims on credit institutions denominated in domestic currency	189.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	189.2
7.	Securities of residents denominated in domestic currency	140,673,185.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	140,673,185.5
10.	Other assets	1,274,579.2	20,331.6	131,547.4	494.1	6,062.7	4,195.1	1,189.2	0.0	58,760.0	0.0	0.0	1,457,159.3
	<b>TOTAL ASSETS</b>	<b>141,947,933.9</b>	<b>243,936,582.1</b>	<b>176,177,519.7</b>	<b>78,264,065.0</b>	<b>53,560,021.8</b>	<b>47,922,528.7</b>	<b>29,488,765.9</b>	<b>14,776,073.4</b>	<b>31,470,426.6</b>	<b>58,650,238.7</b>	<b>23,934.0</b>	<b>876,228,089.8</b>
<b>LIABILITIES</b>													
1.	Banknotes and coins in circulation	368,611,663.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	368,611,663.5
2.	Liabilities to credit institutions related to monetary policy operators denominated in domestic currency	55,112,907.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55,112,907.5
3.	Other liabilities to credit institutions denominated in domestic currency	940,440.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	940,440.8
4.	Liabilities due to issued securities denominated in domestic currency	252,181,174.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	252,181,174.3
5.	Liabilities to other residents denominated in domestic currency	11,883,806.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11,883,806.3
6.	Liabilities to non-residents denominated in domestic currency	4,124,197.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,124,197.2
7.	Liabilities to residents denominated in foreign currency	0.0	13,365,064.0	45,644,484.6	382.0	21.2	4,076,580.8	2.5	0.0	0.0	0.0	118.0	59,010,072.3
8.	Liabilities to non-residents denominated in foreign currency	0.0	8,086,142.9	26,476,740.5	14,973,691.8	0.0	4,076,580.8	0.0	0.0	0.0	0.0	0.0	53,625,136.0
9.	SDR allocation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30,871,510.9	0.0	0.0	30,871,510.9
11.	Other liabilities	387,827.4	18,021.2	14,799.6	131.0	6,224.1	2,398.2	1,190.2	0.0	0.0	0.0	30.0	430,621.7
12.	Provisions	15,281,500.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15,281,500.7
13.	Revaluation accounts	50,011,383.8	37,808.1	275.0	686.8	4,775.5	1,799.4	0.0	0.0	0.0	0.0	0.0	50,066,738.6
14.	Capital and reserves	-1,500,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1,500,000.0
15.	Financial result	-27,401,680.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-27,401,680.0
	<b>TOTAL LIABILITIES</b>	<b>732,633,231.5</b>	<b>21,517,036.2</b>	<b>72,136,299.7</b>	<b>14,974,891.6</b>	<b>11,020.8</b>	<b>4,082,758.4</b>	<b>1,192.7</b>	<b>0.0</b>	<b>30,871,510.9</b>	<b>0.0</b>	<b>148.0</b>	<b>876,228,089.8</b>
<b>ASSETS</b>													
1.	Gold and gold receivables	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	54,843,795.4	0.0	54,843,795.4
2.	Claims on non-residents denominated in foreign currency	0.0	225,161,371.4	142,818,029.7	77,116,328.7	53,732,496.3	46,402,858.2	29,048,156.7	15,019,537.0	30,010,120.6	0.0	24,404.8	619,333,303.4
6.	Other claims on credit institutions denominated in domestic currency	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0
7.	Securities of residents denominated in domestic currency	149,322,184.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	149,322,184.0
10.	Other assets	1,275,838.4	53,603.7	117,556.5	0.0	2,767.3	42,009.6	14.1	9,433.7	56,917.0	0.0	266,395.5	1,524,558.8
	<b>TOTAL ASSETS</b>	<b>150,596,009.4</b>	<b>225,214,975.1</b>	<b>142,935,586.2</b>	<b>77,116,328.7</b>	<b>53,735,263.6</b>	<b>46,444,867.8</b>	<b>29,048,170.8</b>	<b>15,028,970.7</b>	<b>30,067,037.6</b>	<b>54,843,795.4</b>	<b>290,800.3</b>	<b>825,323,809.6</b>
<b>LIABILITIES</b>													
1.	Banknotes and coins in circulation	355,557,725.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	355,557,725.3
2.	Liabilities to credit institutions related to monetary policy operators denominated in domestic currency	96,525,124.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	96,525,124.4
3.	Other liabilities to credit institutions denominated in domestic currency	762,678.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	762,678.9
4.	Liabilities due to issued securities denominated in domestic currency	184,521,188.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	184,521,188.7
5.	Liabilities to other residents denominated in domestic currency	15,251,900.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15,251,900.0
6.	Liabilities to non-residents denominated in domestic currency	3,960,800.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,960,800.8
7.	Liabilities to residents denominated in foreign currency	0.0	1,283,990.7	31,316,056.0	19,542.8	0.0	4,064,081.6	0.0	0.0	0.0	0.0	91.2	32,629,719.7
8.	Liabilities to non-residents denominated in foreign currency	0.0	11,787,831.4	5,533,244.0	14,445,232.1	0.0	4,064,081.6	0.0	0.0	29,769,702.4	0.0	0.0	36,038,430.1
9.	SDR allocation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29,769,702.4
11.	Other liabilities	362,931.6	52,222.1	7,834.7	353.4	2,852.5	34,397.6	30.4	12,273.9	0.0	0.0	615,127.5	1,108,023.7
12.	Provisions	16,893,832.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16,893,832.6
13.	Revaluation accounts	50,639,377.4	247,760.7	50,668.8	0.0	89,134.5	4,501.4	387.0	7,069.7	0.0	0.0	0.0	51,038,899.5
14.	Capital and reserves	-1,500,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1,500,000.0
15.	Financial result	-32,216.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-32,216.5
	<b>TOTAL LIABILITIES</b>	<b>725,763,343.2</b>	<b>13,381,804.9</b>	<b>36,907,842.5</b>	<b>14,465,128.3</b>	<b>91,987.0</b>	<b>4,102,880.6</b>	<b>427.4</b>	<b>225,374.6</b>	<b>29,769,702.4</b>	<b>0.0</b>	<b>615,218.7</b>	<b>825,323,809.6</b>

### 7.1.5. Equity index futures price risk

The risk of a change in the price of equity index futures is related to a potential loss of value of these contracts, arising mainly from unfavourable changes in the prices of the underlying instrument (equity index).

Daily changes in the market prices of futures are recognised in the financial result on a daily basis, including also on the day of closing the open position in futures, as realised price gains/losses (see Note 12.1).

As at the end of 2022 and the end of 2021, NBP invested in equity index futures in the markets in the United States, euro area and the United Kingdom.

### 7.1.6. Market value of financial assets and liabilities and off-balance-sheet financial instruments

Narodowy Bank Polski values financial assets and liabilities and off-balance-sheet financial instruments using market prices (mark-to-market valuation) or valuation models accepted in market practice (mark-to-model valuation) with prices or market parameters as input factors, with the exception of:

- claims and liabilities due to bank accounts, including deposits and term deposits,
- credits and loans granted,
- securities held to maturity,
- securities held for monetary policy purposes,
- banknotes and coins in circulation,
- securities issued by NBP,
- other financial assets and liabilities (presented in items A.10 and L.11).

Securities held to maturity and securities denominated in domestic currency held for monetary policy purposes are valued at clean price adjusted for the accrued discount and premium, less impairment.

As regards other financial instruments, bearing in mind their nature (e.g. short-term character, uniqueness of the instrument), it was assumed that their balance sheet value approximately equals their market/current value.

Financial assets and liabilities as well as off-balance-sheet financial instruments are classified into one of the following three levels based on the methods of determining the market value for price valuation used by NBP:



Level 1	Level 2	Level 3
<p>Financial assets and liabilities and off-balance-sheet financial instruments whose market value is determined directly on the basis of (unadjusted) prices quoted on active markets for identical assets, liabilities or off-balance-sheet financial instruments.</p> <p>NBP has classified into this category securities denominated in foreign currency purchased by NBP, except for securities valued by reference to yield curve values.*</p>	<p>Financial assets and liabilities and off-balance-sheet financial instruments whose market value is determined on the basis of valuation models, for which all significant input data are observable in the market directly (as prices) or indirectly (as based on prices).</p> <p>NBP has classified into this category:</p> <ul style="list-style-type: none"> <li>▪ securities priced based on the yield curves values for a given type of securities having the same credit risk of the issuer,</li> <li>▪ forward transactions in securities for the revaluation of which it uses the model with input parameters coming directly from the market.</li> </ul>	<p>Financial assets and liabilities as well as off-balance-sheet financial instruments whose market value is estimated using valuation models for which input data are not based on data observable in the market.</p> <p>As at 31 December 2022 and 31 December 2021, NBP did not classify any financial assets and liabilities and off-balance-sheet financial instruments into this category.</p>

\* Gold is also subject to revaluation according to market prices. To measure its value, NBP uses the average market price of gold which is converted into domestic currency at the average NBP exchange rate of the US dollar prevailing at the balance sheet date.

Financial assets and liabilities and off-balance-sheet financial instruments that are presented in the balance sheet as at 31 December 2022 and 31 December 2021 according to market value, assigned to individual levels, are presented below.

31.12.2022 PLN thousand	Level 1	Level 2	Level 3	Balance-sheet value	Balance sheet item
<b>ASSETS</b>					
Securities purchased by NBP	431,279,628.9	40,237,699.8	0.0	471,517,328.7	A.2.2
Forward transactions in securities (revaluation gains)	0.0	1,799.4	0.0	1,799.4	A.10.3
<b>LIABILITIES</b>					
Forward transactions in securities (revaluation losses)	0.0	51.9	0.0	51.9	L.11.1

31.12.2021 PLN thousand	Level 1	Level 2	Level 3	Balance-sheet value	Balance sheet item
<b>ASSETS</b>					
Securities purchased by NBP	439,569,252.2	26,005,990.5	0.0	465,575,242.7	A.2.2
Forward transactions in securities (revaluation gains)	0.0	3,661.8	0.0	3,661.8	A.10.3
<b>LIABILITIES</b>					
Forward transactions in securities (revaluation losses)	0.0	204.1	0.0	204.1	L.11.1

In 2022 and 2021 there were no transfers between Level 1 and Level 2.

Narodowy Bank Polski also invests in futures transactions. These contracts are marked to market (Level 1) and settled on a daily basis (see Chapter 2.4 and Note 12.1).

## 7.2. Operational risk

The concept of operational risk in NBP includes the possibility of incurring financial or non-financial damages, including failure to carry out tasks or a negative impact on the reputation of NBP, both resulting from inadequate or failed internal processes and systems as well as personnel or external events.

Until the end of 2022, the operational risk in NBP was divided into four sub-categories: safety risk, personnel risk, legal risk and technological risk, which includes ICT technological risk (related, inter alia, to IT and ICT systems, IT software and hardware) and non-ICT technological risk (related, inter alia, to construction facilities and elements of mobile equipment).

From 1 January 2023, the subcategories of operational risk were extended to include an additional subcategory – cybersecurity risk.

The operational risk mitigation mechanisms used at NBP include, in particular:

- external and internal regulations,
- the scope of job responsibilities and division of duties,
- data reconciliation, and the “four-eyes” principle,
- the system of (financial, time) limits and restrictions,
- introduction of access control system as well as IT and telecommunications, physical and electronic safeguards,
- generation of back-up copies of electronic files,
- development of contingency and evacuation plans as well as training and tests related to securing business continuity in NBP,
- insurance,
- control and internal audit.

In 2022, operational risks in NBP activity, including risks identified resulting from Russia’s war efforts in Ukraine, were monitored on an ongoing basis (see Note 20). In 2022, the Commission for Operational Risk Management held 11 sessions to discuss topics related to the assessment of the current activities aimed to ensure the proper execution of NBP tasks. The level of risk at NBP in 2022 was monitored on an ongoing basis and mitigating measures were also systematically adopted.

## 7.3. Tax risk

Due to the legal status of NBP and its specificity resulting from the functions it performs as a central bank, the scope of the provisions of tax law and provisions relating to other public levies applicable to NBP includes, under:

- the Tax on Goods and Services (VAT) – splitting the activity of NBP into activity not subject to regulations on VAT in respect of which NBP engages as public authority and is bound by provisions of law, in particular: Constitution of the Republic of Poland, the Act on NBP, the Public Finance Act<sup>26</sup>, the Foreign Exchange Law<sup>27</sup> and the Banking Law Act<sup>28</sup>, and, in the remaining scope, the activity subject to regulations on VAT, in respect of which NBP usually acts as VAT taxpayer,
- the Corporate Income Tax (CIT)<sup>29</sup> – benefiting from full personal exemption as CIT taxpayer and being subject to an obligation as a tax remitter of withholding tax on general terms,
- the Personal Income Tax (PIT) – being subject to obligations as a tax remitter, including with respect to withholding tax, on general terms,
- the Tax on Civil Law Activities and the Stamp Duty – benefiting from full personal exemption from this tax and this duty, on a par with budgetary units,
- the Immovable Property Tax – being subject to obligations as a taxpayer of this tax on general terms,
- the Tax on Certain Financial Institutions – NBP is not subject to this tax.

At NBP, internal rules apply which define, taking into account the above legal context, the scope of responsibilities for NBP's tax settlements. The monitoring and management of tax risk are centralised at the Accounting and Finance Department. At NBP, the set action framework is oriented towards ensuring security, transparency, predictability and rationality of tax settlements. Accuracy, timeliness and completeness of tax settlements is subject to periodic verification (at least every 3 years) by an external, professional entity through tax review.

Warsaw, 23 March 2023

Director of the Accounting  
and Finance Department  
of Narodowy Bank Polski:

/-/ Krzysztof Kruszewski

Management Board  
of Narodowy Bank Polski:

/-/ Adam Glapiński  
/-/ Marta Kightley  
/-/ Adam Lipiński  
/-/ Marta Gajęcka  
/-/ Paweł Mucha  
/-/ Piotr Pogonowski  
/-/ Rafał Sura  
/-/ Paweł Szałamacha

<sup>26</sup> The Public Finance Act of 27 August 2009 (Journal of Laws of 2022, item 1634, as amended),

<sup>27</sup> The Act of 27 July 2022 – Foreign Exchange Law (Journal of Laws of 2022, item 309).

<sup>28</sup> The Act of 29 August 1997 – Banking Law (Journal of Laws of 2022, item 2324, as amended).

<sup>29</sup> In accordance with the Act on NBP, 95% of NBP's profit is remitted to the State budget (see Note 9.4).



*This document is a free translation of the Polish original. Terminology current in Anglo-Saxon countries has been used where practicable for the purposes of this translation in order to aid understanding. The binding Polish original should be referred to in matters of interpretation.*

# Independent Auditor's Report

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## To the Monetary Policy Council of Narodowy Bank Polski

### Opinion

We have audited the accompanying annual financial statements of Narodowy Bank Polski ("NBP"), which comprise:

- the balance sheet of NBP as at 31 December 2022;
- the profit and loss account of NBP for the year ended 31 December 2022;
- the notes

(all together "financial statements").

In our opinion, the accompanying financial statements of NBP:

- give a true and fair view of the financial position of NBP as at 31 December 2022 and of its financial performance for the financial year then ended in accordance with the act on Narodowy Bank Polski of 29 August 1997 (the "Act on NBP"), Resolution No. 13/2020 of the Monetary Policy Council of 6 November 2020 on the accounting principles of Narodowy Bank Polski, specimen balance sheet, profit and loss account and contents of notes, Resolution No. 6/2019 of the Monetary Policy Council of 5 November 2019 on the principles for creating and releasing the provision against the foreign exchange rate risk of the zloty at Narodowy Bank Polski and Resolution No. 64/2020 of the Management Board of Narodowy Bank Polski of 21 December 2020 on the principles for organization of accounting in Narodowy Bank Polski (all together "the legal basis for preparation of the financial statements of NBP");
- respects, with regard to form and content, with applicable laws and the provisions of the NBP's articles of association;
- have been prepared, in all material respects, on the basis of properly maintained accounting records in accordance with Resolution No. 64/2020 of the Management Board of Narodowy Bank Polski of 21 December 2020 on the principles for organization of accounting in Narodowy Bank Polski.

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KPMG Audyt spółka z ograniczoną odpowiedzialnością sp.k.

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tel. +48 (22) 528 11 00, fax +48 (22) 528 10 09, kpmg@kpmg.pl

KPMG Audyt Spółka z ograniczoną odpowiedzialnością sp.k., a Polish limited partnership and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee.

Company registered at the District Court for the capital city of Warsaw in Warsaw, 12th Commercial Division of the National Business Register.

KRS 0000339379  
NIP: 527-261-53-62  
REGON: 142078130



## Basis for Opinion

We conducted our audit in accordance with:

- International Standards on Auditing as adopted by the National Council of Statutory Auditors as National Standards on Auditing (the “NSA”); and
- the act on statutory auditors, audit firms and public oversight dated 11 May 2017 (the “Act on statutory auditors”).

Our responsibilities under those standards and regulations are further described in the Auditor’s Responsibility for the Audit of the Financial Statements section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

## Independence and Ethics

We are independent of NBP in accordance with International Ethics Standards Board for Accountants International Code of Ethics for Professional Accountants (including International Independence Standards) (“IESBA Code”) as adopted by the resolution of the National Council of Statutory Auditors, together with the ethical requirements that are relevant to our audit of the financial statements in Poland and we have fulfilled our other ethical responsibilities in accordance with these requirements and the IESBA Code. During our audit the key statutory auditor and the audit firm remained independent of NBP in accordance with requirements of the Act on statutory auditors.

## Responsibility of the Management Board of NBP for the Financial Statements

The Management Board of NBP is responsible for the preparation, on the basis of properly maintained accounting records, of financial statements that give a true and fair view in accordance with the legal basis for the preparation of the financial statements of NBP and with the adopted accounting principles (policy), with laws applicable to NBP and for such internal control as the Management Board of NBP determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Management Board of NBP is responsible for assessing the NBP’s ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting principles in accordance with applicable laws, in particular Article 58 of the Act on NBP.

## Auditor’s Responsibility for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors’ 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 NSAs 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 financial statements.

The scope of audit does not include assurance on the future viability of NBP or on the efficiency or effectiveness with which the Management Board of NBP has conducted or will conduct the affairs of NBP.

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

- identify and assess the risks of material misstatement of the 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 NBP's internal control;
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Management Board of NBP;
- conclude on the appropriateness of the Management Board of NBP'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 NBP's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report on the audit of the financial statements to the related disclosures in the 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 auditors' report on the audit of the financial statements, including those related to Article 58 of the Act on NBP;
- evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the Management Board of NBP 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.

On behalf of audit firm

**KPMG Audyt Spółka z ograniczoną odpowiedzialnością sp.k.**

Registration No. 3546

*Signed on the Polish original*

Marcin Podsiadły

Key Statutory Auditor

Registration No. 12774

Limited Partner, Proxy

*Signed on the Polish original*

Tadeusz de Ville

Proxy

Warsaw, 23 March 2023

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## Statistical annex

**Table I. Basic statistical data**

Period	1. Industrial output			2. Construction output			3. Consumer Price Index			4. Producer Price Index	
	current prices	constant prices		current prices	constant prices		the same month previous year = 100	previous month = 100	December previous year = 100	the same month previous year = 100	previous month = 100
		the same month previous year = 100	previous month = 100		the same month previous year = 100	previous month = 100					
	million PLN	%	%	million PLN	%	%	%	%	%	%	%
1	2	3	4	5	6	7	8	9	10	11	
December 2021	176 255.9	116.3	96.8	14 571.1	103.1	122.9	108.6	100.9	108.6	114.4	101.0
January 2022	173 958.4	118.0	96.0	6 424.8	120.8	43.5	109.4	101.9	101.9	116.1	102.4
February	181 323.6	117.3	103.4	6 877.5	121.2	105.8	108.5	99.7	101.6	116.1	101.1
March	224 243.6	115.4	116.3	9 848.2	127.6	141.4	111.0	103.3	104.9	121.9	106.6
April	202 125.6	112.4	88.3	9 368.1	109.0	93.9	112.4	102.0	107.0	124.1	102.5
May	207 313.2	114.9	101.3	10 839.6	113.0	114.2	113.9	101.7	108.8	124.7	101.4
June	208 760.8	110.4	99.7	11 564.5	106.0	105.4	115.5	101.5	110.4	125.6	101.6
July	198 711.7	107.1	93.0	10 924.1	104.1	93.5	115.6	100.5	110.9	125.5	101.3
August	201 388.5	110.9	100.7	11 573.8	105.9	105.0	116.1	100.8	111.8	125.5	100.8
September	217 597.1	109.8	109.8	12 137.7	100.2	103.4	117.2	101.6	113.6	124.6	100.2
October	218 307.5	106.6	99.1	12 773.2	103.9	104.0	117.9	101.8	115.6	123.1	100.9
November	223 453.9	104.5	102.8	13 997.7	104.0	109.0	117.5	100.7	116.4	121.1	99.7
December	211 915.9	101.0	93.6	16 507.6	99.1	117.2	116.6	100.1	116.6	120.5	100.6

Period	5. Construction Price Index		6. Number of employed, corporate sector total	7. Average employment, corporate sector total	8. Number of unemployed	9. Unemployment rate	10. Average monthly employee earnings, gross, corporate sector	11. National budget revenue & expenditure		
	the same month previous year = 100	previous month = 100						revenue	expenditure	financial surplus/deficit and net foreign lending/borrowing
	%	%	thousands	thousands	thousands	%	PLN	million PLN	million PLN	million PLN
	12	13	14	15	16	17	18	19	20	21
December 2021	107.6	101.0	6 709	6 362	895.2	5.8	6 644.4	494 967.7	521 295.5	-7 534.1
January 2022	108.3	101.1	6 779	6 460	927.1	5.9	6 064.2	58 740.5	36 449.0	22 085.5
February	109.3	101.2	6 794	6 475	921.8	5.9	6 220.0	91 615.0	80 350.9	13 561.0
March	110.4	101.4	6 806	6 485	902.1	5.8	6 665.6	120 093.0	120 360.4	467.9
April	111.3	101.3	6 817	6 497	878.0	5.6	6 627.0	168 056.6	158 849.4	8 265.4
May	112.2	101.3	6 815	6 492	850.2	5.4	6 399.6	209 964.8	197 910.7	9 332.6
June	113.2	101.4	6 818	6 497	818.0	5.2	6 554.9	263 627.0	235 893.3	23 712.7
July	113.6	100.9	6 824	6 508	810.2	5.2	6 778.6	313 291.8	278 631.6	34 061.9
August	114.0	101.0	6 822	6 503	806.9	5.2	6 583.0	345 107.4	317 580.0	26 551.2
September	114.8	101.4	6 829	6 494	801.7	5.1	6 687.8	383 133.5	355 676.1	26 748.1
October	115.2	101.3	6 840	6 501	796.0	5.1	6 687.9	425 936.0	398 701.3	26 160.9
November	114.7	100.6	6 849	6 507	800.2	5.1	6 858.0	464 528.6	446 252.4	29 702.9
December	114.4	100.6	6 846	6 505	812.3	5.2	7 330.0	504 968.2	517 399.0	2 439.5



Table I. Basic statistical data, cont'd

Period	12. Corporate financial performance												
	revenues		operating costs		pre-tax profit/loss	statutory deductions	net profit/loss	cost to sales ratio	net margin	quick liquidity ratio	total current assets	accounts receivable and associated claims	accounts payable
	total	of which: sales of goods & services	total	of which: cost of sales									
	million PLN	million PLN	million PLN	million PLN	million PLN	million PLN	million PLN	%	%	%	million PLN	million PLN	million PLN
22	23	24	25	26	27	28	29	30	31	32	33	34	
December 2021	3 960 652.7	2 318 532.0	3 695 681.8	2 363 317.0	264 970.9	42 507.6	222 463.3	93.3	5.6	107.6	1 496 539.9	458 577.4	477 329.8
January 2022	.	.	.	.	.	.	.	.	.	.	.	.	.
February	.	.	.	.	.	.	.	.	.	.	.	.	.
March	1 130 874.0	671 057.1	1 058 599.1	669 965.8	72 274.9	13 366.4	58 908.5	93.6	5.2	108.0	1 600 015.2	500 807.0	508 200.2
April	.	.	.	.	.	.	.	.	.	.	.	.	.
May	.	.	.	.	.	.	.	.	.	.	.	.	.
June	2 373 597.2	1 403 180.1	2 212 358.6	1 404 618.1	161 238.7	26 682.2	134 556.5	93.2	5.7	105.6	1 670 073.3	510 006.4	520 217.0
July	.	.	.	.	.	.	.	.	.	.	.	.	.
August	.	.	.	.	.	.	.	.	.	.	.	.	.
September	3 650 433.0	2 147 965.9	3 419 785.4	2 162 124.1	230 647.6	38 343.2	192 304.4	93.7	5.3	104.4	1 776 767.6	521 678.4	553 306.5
October	.	.	.	.	.	.	.	.	.	.	.	.	.
November	.	.	.	.	.	.	.	.	.	.	.	.	.
December	5 046 969.6	2 978 854.8	4 742 003.3	3 000 974.5	304 966.2	53 537.1	251 429.1	94.0	5.0	105.4	1 766 606.0	525 841.6	556 044.2

**Table II. Financial market – basic information**

Period	1. NBP interest rates					2. Reserve requirement						
						Reserve requirement ratio on zloty deposits		Reserve requirement ratio on foreign currency deposits (PLN equivalent)		Reserve requirement ratio on repo operations	Interest on reserve requirement <sup>1</sup>	Total required reserves held
	Reference rate	Lombard rate	Deposit rate	Rediscount rate	Discount rate	demand	time	demand	time			
	%	%	%	%	%	%	%	%	%	%	%	million PLN
1	2	3	4	5	6	7	8	9	10	11	12	
December 2021	1.75	2.25	1.25	1.80	1.85	2.0	2.0	2.0	2.0	0.0	1.75	35 667.3
January 2022	2.25	2.75	1.75	2.30	2.35	2.0	2.0	2.0	2.0	0.0	2.25	35 896.0
February	2.75	3.25	2.25	2.80	2.85	2.0	2.0	2.0	2.0	0.0	2.75	35 110.2
March	3.50	4.00	3.00	3.55	3.60	3.5	3.5	3.5	3.5	0.0	3.50	62 096.5
April	4.50	5.00	4.00	4.55	4.60	3.5	3.5	3.5	3.5	0.0	4.50	62 096.5
May	5.25	5.75	4.75	5.30	5.35	3.5	3.5	3.5	3.5	0.0	5.25	62 023.2
June	6.00	6.50	5.50	6.05	6.10	3.5	3.5	3.5	3.5	0.0	6.00	62 481.9
July	6.50	7.00	6.00	6.55	6.60	3.5	3.5	3.5	3.5	0.0	6.50	62 481.9
August	6.50	7.00	6.00	6.55	6.60	3.5	3.5	3.5	3.5	0.0	6.50	63 753.8
September	6.75	7.25	6.25	6.80	6.85	3.5	3.5	3.5	3.5	0.0	6.75	64 913.5
October	6.75	7.25	6.25	6.80	6.85	3.5	3.5	3.5	3.5	0.0	6.75	65 136.8
November	6.75	7.25	6.25	6.80	6.85	3.5	3.5	3.5	3.5	0.0	6.75	65 569.9
December	6.75	7.25	6.25	6.80	6.85	3.5	3.5	3.5	3.5	0.0	6.75	65 569.9

<sup>1</sup> From April 2020 interest on reserve requirement is at the level of the NBP reference rate.

Period	3. Treasury bill tenders					
	Number of tenders during month	Face value of bills offered for sale	Demand declared by bidders (at face value)	Face value of bills sold	Yield on bills purchased, weighted average	Bills outstanding from tender sales at month end (purchase prices)
		million PLN	million PLN	million PLN	%	million PLN
	13	14	15	16	17	18
December 2021	0	0.00	0.00	0.00	0.00	0.00
January 2022	0	0.00	0.00	0.00	0.00	0.00
February	0	0.00	0.00	0.00	0.00	0.00
March	0	0.00	0.00	0.00	0.00	0.00
April	0	0.00	0.00	0.00	0.00	0.00
May	0	0.00	0.00	0.00	0.00	0.00
June	0	0.00	0.00	0.00	0.00	0.00
July	0	0.00	0.00	0.00	0.00	0.00
August	0	0.00	0.00	0.00	0.00	0.00
September	0	0.00	0.00	0.00	0.00	0.00
October	0	0.00	0.00	0.00	0.00	0.00
November	0	0.00	0.00	0.00	0.00	0.00
December	0	0.00	0.00	0.00	0.00	0.00

**Table II. Financial market – basic information, cont'd**

Period	4. Tenders for NBP money-market bills					
	Number of tenders during month	Face value of bills offered for sale	Demand declared by bidders (at face value)	Face value of bills sold	Yield on bills purchased, weighted average	Bills outstanding from tender sales at month end (purchase prices)
		million PLN	million PLN	million PLN	%	million PLN
	19	20	21	22	23	24
December 2021	8	1 403 000.00	1 105 060.20	1 105 060.20	1.66	184 512.14
January 2022	11	1 266 000.00	1 091 279.81	1 089 768.05	2.24	227 862.78
February	9	1 207 000.00	1 033 429.54	1 033 429.54	2.64	187 227.32
March	5	863 000.00	783 954.96	783 954.96	3.35	176 549.00
April	8	1 074 000.00	892 601.81	886 081.81	4.34	189 706.06
May	7	886 000.00	772 260.68	772 260.68	5.25	172 107.45
June	6	901 000.00	753 411.19	753 411.19	5.87	190 650.76
July	7	1 101 000.00	969 000.62	969 000.62	6.41	218 027.88
August	5	871 000.00	795 354.88	795 354.88	6.50	197 010.26
September	8	1 159 000.00	962 878.79	962 878.79	6.71	157 924.26
October	5	940 000.00	824 013.10	824 013.10	6.75	175 206.98
November	6	998 000.00	904 096.59	904 096.59	6.75	221 723.25
December	8	1 390 000.00	1 152 102.98	1 152 102.98	6.75	252 086.80

**Table II. Financial market – basic information, cont'd**

Period	5. Repurchase agreements (credit repo)				6. Structural outright buy operations			
	number of tenders during month	assets earmarked by NBP for purchase of securities	nominal value of bids declared by banks	nominal value of bids accepted	number of tenders during month	nominal value of securities earmarked for purchase by NBP	nominal value of bids declared by banks	nominal value of bids accepted
		million PLN	million PLN	million PLN		million PLN	million PLN	million PLN
	25	26	27	28	29	30	31	32
December 2021	0	0.00	0.00	0.00	0	0.00	0.00	0.00
January 2022	0	0.00	0.00	0.00	0	0.00	0.00	0.00
February	0	0.00	0.00	0.00	0	0.00	0.00	0.00
March	0	0.00	0.00	0.00	0	0.00	0.00	0.00
April	0	0.00	0.00	0.00	0	0.00	0.00	0.00
May	0	0.00	0.00	0.00	0	0.00	0.00	0.00
June	0	0.00	0.00	0.00	0	0.00	0.00	0.00
July	0	0.00	0.00	0.00	0	0.00	0.00	0.00
August	0	0.00	0.00	0.00	0	0.00	0.00	0.00
September	0	0.00	0.00	0.00	0	0.00	0.00	0.00
October	0	0.00	0.00	0.00	0	0.00	0.00	0.00
November	0	0.00	0.00	0.00	0	0.00	0.00	0.00
December	0	0.00	0.00	0.00	0	0.00	0.00	0.00

Table II. Financial market – basic information, cont'd

Period	7. Data on trading sessions of Warsaw Stock Exchange										
	Number of companies at month end	Capitalisation at month end	P/E ratio at month end	Warsaw Stock Exchange Index (WIG) at month end	WIG monthly average	mWIG40 at month end	mWIG40 monthly average	sWIG80 at month end	sWIG80 monthly average	Monthly turnover	Turnover ratio
		million PLN								million PLN	%
	33	34	35	36	37	38	39	40	41	42	43
December 2021	430	701 152.4	13.6	2 266.9	2 213.4	5 291.7	5 273.0	20 056.1	20 003.1	22 657.0	35.9
January 2022	429	678 385.7	12.4	2 209.6	2 293.0	5 106.6	5 331.2	19 483.2	20 281.5	27 477.4	44.2
February	427	621 616.4	10.5	1 999.9	2 141.4	4 589.5	5 020.3	18 249.8	19 228.4	27 137.0	48.3
March	426	656 315.7	9.2	2 133.1	2 052.7	4 778.1	4 544.4	19 714.1	18 848.9	43 807.7	72.6
April	422	594 458.1	8.0	1 858.1	2 036.3	4 370.2	4 625.7	18 557.0	19 362.8	22 874.1	44.6
May	421	585 793.3	7.2	1 842.9	1 785.6	4 349.0	4 267.6	18 167.5	17 973.7	24 252.5	47.7
June	420	554 543.6	6.8	1 696.0	1 738.4	4 069.4	4 124.0	17 284.3	17 423.5	17 732.8	35.6
July	419	565 859.3	6.9	1 721.1	1 676.5	4 151.3	4 003.1	17 312.9	17 019.5	20 806.4	43.2
August	419	507 806.1	6.1	1 528.2	1 662.7	3 838.6	4 091.6	17 077.5	17 680.4	19 367.6	38.5
September	419	465 698.5	5.6	1 377.9	1 483.5	3 552.5	3 786.7	15 895.2	16 581.5	21 402.5	47.3
October	417	508 534.1	6.2	1 536.3	1 427.0	3 824.0	3 639.0	16 562.0	16 085.2	19 644.9	45.5
November	416	565 381.6	7.5	1 736.3	1 691.5	4 108.8	3 972.3	17 730.0	17 167.1	24 100.0	49.9
December	415	574 669.5	7.7	1 792.0	1 760.8	4 154.3	4 098.0	17 496.2	17 824.8	17 038.7	33.3

**Table III. PLN/USD and PLN/EUR daily exchange rates**

Days	December 2021			January 2022			February 2022		
	NBP average exchange rates		USD/EUR	NBP average exchange rates		USD/EUR	NBP average exchange rates		USD/EUR
	PLN/USD	PLN/EUR		PLN/USD	PLN/EUR		PLN/USD	PLN/EUR	
	1	2	3	4	5	6	7	8	9
1	4.1051	4.6494	1.1326	4.0600	4.5994	1.1329	4.0689	4.5820	1.1261
2	4.0625	4.6002	1.1324	4.0600	4.5994	1.1329	4.0283	4.5500	1.1295
3	4.0653	4.5934	1.1299	4.0424	4.5889	1.1352	4.0267	4.5439	1.1284
4	4.0653	4.5934	1.1299	4.0468	4.5737	1.1302	3.9657	4.5459	1.1463
5	4.0653	4.5934	1.1299	4.0396	4.5672	1.1306	3.9657	4.5459	1.1463
6	4.0619	4.5889	1.1297	4.0396	4.5672	1.1306	3.9657	4.5459	1.1463
7	4.0788	4.5991	1.1276	4.0279	4.5576	1.1315	3.9872	4.5550	1.1424
8	4.0710	4.5941	1.1285	4.0279	4.5576	1.1315	3.9693	4.5274	1.1406
9	4.0837	4.6226	1.1320	4.0279	4.5576	1.1315	3.9530	4.5167	1.1426
10	4.0887	4.6129	1.1282	4.0064	4.5377	1.1326	3.9218	4.4879	1.1443
11	4.0887	4.6129	1.1282	4.0106	4.5454	1.1333	3.9665	4.5163	1.1386
12	4.0887	4.6129	1.1282	3.9879	4.5332	1.1367	3.9665	4.5163	1.1386
13	4.1003	4.6204	1.1268	3.9463	4.5270	1.1472	3.9665	4.5163	1.1386
14	4.1088	4.6436	1.1302	3.9597	4.5372	1.1458	4.0439	4.5743	1.1312
15	4.0999	4.6214	1.1272	3.9597	4.5372	1.1458	3.9740	4.5091	1.1347
16	4.0938	4.6315	1.1313	3.9597	4.5372	1.1458	3.9478	4.4916	1.1377
17	4.0882	4.6334	1.1334	3.9567	4.5201	1.1424	3.9687	4.5088	1.1361
18	4.0882	4.6334	1.1334	3.9734	4.5275	1.1395	3.9798	4.5256	1.1371
19	4.0882	4.6334	1.1334	3.9930	4.5279	1.1340	3.9798	4.5256	1.1371
20	4.1182	4.6381	1.1262	3.9833	4.5201	1.1348	3.9798	4.5256	1.1371
21	4.0937	4.6238	1.1295	3.9953	4.5303	1.1339	3.9769	4.5193	1.1364
22	4.0984	4.6244	1.1283	3.9953	4.5303	1.1339	4.0120	4.5416	1.1320
23	4.0950	4.6359	1.1321	3.9953	4.5303	1.1339	3.9937	4.5352	1.1356
24	4.0785	4.6252	1.1340	4.0049	4.5358	1.1326	4.1281	4.6284	1.1212
25	4.0785	4.6252	1.1340	4.0593	4.5821	1.1288	4.1683	4.6608	1.1182
26	4.0785	4.6252	1.1340	4.0684	4.5920	1.1287	4.1683	4.6608	1.1182
27	4.0889	4.6239	1.1308	4.0830	4.5713	1.1196	4.1683	4.6608	1.1182
28	4.0620	4.6028	1.1331	4.1048	4.5697	1.1133	4.1965	4.6909	1.1178
29	4.0779	4.5997	1.1280	4.1048	4.5697	1.1133			
30	4.0631	4.5915	1.1300	4.1048	4.5697	1.1133			
31	4.0600	4.5994	1.1329	4.1147	4.5982	1.1175			
Average monthly rate	4.0834	4.6163	X	4.0239	4.5548	X	4.0156	4.5539	X

Table III. PLN/USD and PLN/EUR daily exchange rates, cont'd

Days	March 2022			April 2022			May 2022		
	NBP average exchange rates		USD/EUR	NBP average exchange rates		USD/EUR	NBP average exchange rates		USD/EUR
	PLN/USD	PLN/EUR		PLN/USD	PLN/EUR		PLN/USD	PLN/EUR	
	10	11	12	13	14	15	16	17	18
1	4.2193	4.7241	1.1196	4.1978	4.6428	1.1060	4.4072	4.6582	1.0570
2	4.3302	4.7989	1.1082	4.1978	4.6428	1.1060	4.4454	4.6806	1.0529
3	4.3257	4.7931	1.1081	4.1978	4.6428	1.1060	4.4454	4.6806	1.0529
4	4.3910	4.8363	1.1014	4.2073	4.6373	1.1022	4.4456	4.6777	1.0522
5	4.3910	4.8363	1.1014	4.2233	4.6317	1.0967	4.4017	4.6658	1.0600
6	4.3910	4.8363	1.1014	4.2606	4.6539	1.0923	4.4502	4.6979	1.0557
7	4.5722	4.9647	1.0858	4.2727	4.6478	1.0878	4.4502	4.6979	1.0557
8	4.5115	4.9121	1.0888	4.2703	4.6405	1.0867	4.4502	4.6979	1.0557
9	4.4147	4.8429	1.0970	4.2703	4.6405	1.0867	4.4784	4.7059	1.0508
10	4.3482	4.8013	1.1042	4.2703	4.6405	1.0867	4.4223	4.6761	1.0574
11	4.3694	4.7924	1.0968	4.2586	4.6451	1.0908	4.4190	4.6700	1.0568
12	4.3694	4.7924	1.0968	4.2926	4.6626	1.0862	4.4863	4.6841	1.0441
13	4.3694	4.7924	1.0968	4.2872	4.6460	1.0837	4.4849	4.6679	1.0408
14	4.3221	4.7465	1.0982	4.2581	4.6447	1.0908	4.4849	4.6679	1.0408
15	4.2992	4.7311	1.1005	4.2865	4.6378	1.0820	4.4849	4.6679	1.0408
16	4.2828	4.7055	1.0987	4.2865	4.6378	1.0820	4.4785	4.6724	1.0433
17	4.2403	4.6876	1.1055	4.2865	4.6378	1.0820	4.4379	4.6558	1.0491
18	4.2707	4.7221	1.1057	4.2865	4.6378	1.0820	4.4279	4.6528	1.0508
19	4.2707	4.7221	1.1057	4.2887	4.6361	1.0810	4.4231	4.6429	1.0497
20	4.2707	4.7221	1.1057	4.2708	4.6295	1.0840	4.3832	4.6366	1.0578
21	4.2444	4.6930	1.1057	4.2596	4.6523	1.0922	4.3832	4.6366	1.0578
22	4.2720	4.6975	1.0996	4.2935	4.6361	1.0798	4.3832	4.6366	1.0578
23	4.2772	4.7036	1.0997	4.2935	4.6361	1.0798	4.3369	4.6171	1.0646
24	4.3310	4.7589	1.0988	4.2935	4.6361	1.0798	4.3071	4.6107	1.0705
25	4.3125	4.7459	1.1005	4.3188	4.6405	1.0745	4.3069	4.5955	1.0670
26	4.3125	4.7459	1.1005	4.3469	4.6429	1.0681	4.3189	4.6135	1.0682
27	4.3125	4.7459	1.1005	4.4453	4.7076	1.0590	4.2966	4.6102	1.0730
28	4.2784	4.7020	1.0990	4.4613	4.6915	1.0516	4.2966	4.6102	1.0730
29	4.2917	4.7144	1.0985	4.4072	4.6582	1.0570	4.2966	4.6102	1.0730
30	4.1688	4.6507	1.1156	4.4072	4.6582	1.0570	4.2617	4.5869	1.0763
31	4.1801	4.6525	1.1130				4.2651	4.5756	1.0728
Average monthly rate	4.3207	4.7603	X	4.2899	4.6465	X	4.3987	4.6503	X

**Table III. PLN/USD and PLN/EUR daily exchange rates, cont'd**

Days	June 2022			July 2022			August 2022		
	NBP average exchange rates		USD/EUR	NBP average exchange rates		USD/EUR	NBP average exchange rates		USD/EUR
	PLN/USD	PLN/EUR		PLN/USD	PLN/EUR		PLN/USD	PLN/EUR	
	19	20	21	22	23	24	25	26	27
1	4.2817	4.5891	1.0718	4.5106	4.7176	1.0459	4.6290	4.7475	1.0256
2	4.2931	4.5876	1.0686	4.5106	4.7176	1.0459	4.5984	4.7092	1.0241
3	4.2689	4.5908	1.0754	4.5106	4.7176	1.0459	4.6164	4.7032	1.0188
4	4.2689	4.5908	1.0754	4.5032	4.7002	1.0437	4.6340	4.7230	1.0192
5	4.2689	4.5908	1.0754	4.5947	4.7358	1.0307	4.6024	4.7053	1.0224
6	4.2675	4.5880	1.0751	4.6796	4.7942	1.0245	4.6024	4.7053	1.0224
7	4.2935	4.5855	1.0680	4.7029	4.7965	1.0199	4.6024	4.7053	1.0224
8	4.2904	4.5817	1.0679	4.7417	4.7958	1.0114	4.6127	4.7013	1.0192
9	4.2764	4.5826	1.0716	4.7417	4.7958	1.0114	4.5919	4.7021	1.0240
10	4.3363	4.6030	1.0615	4.7417	4.7958	1.0114	4.6112	4.7138	1.0223
11	4.3363	4.6030	1.0615	4.7416	4.7976	1.0118	4.5206	4.6745	1.0340
12	4.3363	4.6030	1.0615	4.8284	4.8337	1.0011	4.5459	4.6832	1.0302
13	4.4209	4.6313	1.0476	4.8221	4.8399	1.0037	4.5459	4.6832	1.0302
14	4.4478	4.6548	1.0465	4.8274	4.8371	1.0020	4.5459	4.6832	1.0302
15	4.4455	4.6642	1.0492	4.7966	4.8115	1.0031	4.5459	4.6832	1.0302
16	4.4455	4.6642	1.0492	4.7966	4.8115	1.0031	4.6282	4.6928	1.0140
17	4.4630	4.6951	1.0520	4.7966	4.8115	1.0031	4.6119	4.6921	1.0174
18	4.4630	4.6951	1.0520	4.7152	4.7770	1.0131	4.6468	4.7244	1.0167
19	4.4630	4.6951	1.0520	4.6594	4.7731	1.0244	4.7061	4.7480	1.0089
20	4.4400	4.6731	1.0525	4.6524	4.7603	1.0232	4.7061	4.7480	1.0089
21	4.3917	4.6460	1.0579	4.6682	4.7578	1.0192	4.7061	4.7480	1.0089
22	4.4338	4.6590	1.0508	4.6920	4.7643	1.0154	4.7427	4.7493	1.0014
23	4.4881	4.7096	1.0494	4.6920	4.7643	1.0154	4.8030	4.7706	0.9933
24	4.4656	4.7094	1.0546	4.6920	4.7643	1.0154	4.8029	4.7772	0.9946
25	4.4656	4.7094	1.0546	4.6171	4.7196	1.0222	4.7546	4.7584	1.0008
26	4.4656	4.7094	1.0546	4.6222	4.7183	1.0208	4.7465	4.7413	0.9989
27	4.4369	4.6965	1.0585	4.7142	4.7811	1.0142	4.7465	4.7413	0.9989
28	4.4377	4.7004	1.0592	4.6952	4.7973	1.0217	4.7465	4.7413	0.9989
29	4.4533	4.6809	1.0511	4.6365	4.7399	1.0223	4.7821	4.7529	0.9939
30	4.4825	4.6806	1.0442	4.6365	4.7399	1.0223	4.7210	4.7328	1.0025
31				4.6365	4.7399	1.0223	4.7360	4.7265	0.9980
Average monthly rate	4.3876	4.6457	X	4.6831	4.7712	X	4.6578	4.7216	X



Table III. PLN/USD and PLN/EUR daily exchange rates, cont'd

Days	September 2022			October 2022			November 2022			December 2022		
	NBP average exchange rates		USD/EUR	NBP average exchange rates		USD/EUR	NBP average exchange rates		USD/EUR	NBP average exchange rates		USD/EUR
	PLN/USD	PLN/EUR		PLN/USD	PLN/EUR		PLN/USD	PLN/EUR		PLN/USD	PLN/EUR	
	28	29	30	31	32	33	34	35	36	37	38	39
1	4.6959	4.7133	1.0037	4.9533	4.8698	0.9831	4.7340	4.7089	0.9947	4.4911	4.6892	1.0441
2	4.7276	4.7144	0.9972	4.9533	4.8698	0.9831	4.7485	4.7039	0.9906	4.4492	4.6850	1.0530
3	4.7276	4.7144	0.9972	4.9207	4.8272	0.9810	4.8291	4.7101	0.9754	4.4492	4.6850	1.0530
4	4.7276	4.7144	0.9972	4.8615	4.8007	0.9875	4.7975	4.6898	0.9776	4.4492	4.6850	1.0530
5	4.7690	4.7263	0.9910	4.8380	4.8128	0.9948	4.7975	4.6898	0.9776	4.4415	4.6898	1.0559
6	4.7367	4.7168	0.9958	4.8989	4.8445	0.9889	4.7975	4.6898	0.9776	4.4787	4.6995	1.0493
7	4.7584	4.7137	0.9906	4.9588	4.8606	0.9802	4.6926	4.6858	0.9986	4.4834	4.6968	1.0476
8	4.7268	4.7244	0.9995	4.9588	4.8606	0.9802	4.6893	4.6912	1.0004	4.4760	4.6976	1.0495
9	4.6599	4.7098	1.0107	4.9588	4.8606	0.9802	4.6817	4.7037	1.0047	4.4351	4.6821	1.0557
10	4.6599	4.7098	1.0107	5.0239	4.8677	0.9689	4.7328	4.7146	0.9962	4.4351	4.6821	1.0557
11	4.6599	4.7098	1.0107	5.0171	4.8711	0.9709	4.7328	4.7146	0.9962	4.4351	4.6821	1.0557
12	4.6225	4.7113	1.0192	5.0014	4.8536	0.9704	4.7328	4.7146	0.9962	4.4424	4.6912	1.0560
13	4.6363	4.7082	1.0155	4.9905	4.8468	0.9712	4.7328	4.7146	0.9962	4.4527	4.6945	1.0543
14	4.7233	4.7195	0.9992	4.9569	4.8330	0.9750	4.5383	4.6794	1.0311	4.3973	4.6886	1.0662
15	4.7202	4.7164	0.9992	4.9569	4.8330	0.9750	4.5143	4.6985	1.0408	4.4100	4.6843	1.0622
16	4.7384	4.7176	0.9956	4.9569	4.8330	0.9750	4.5050	4.6942	1.0420	4.4227	4.6934	1.0612
17	4.7384	4.7176	0.9956	4.9522	4.8229	0.9739	4.5387	4.7039	1.0364	4.4227	4.6934	1.0612
18	4.7384	4.7176	0.9956	4.8929	4.8092	0.9829	4.5337	4.7067	1.0382	4.4227	4.6934	1.0612
19	4.7255	4.7142	0.9976	4.8892	4.7997	0.9817	4.5337	4.7067	1.0382	4.4153	4.6886	1.0619
20	4.7118	4.7165	1.0010	4.9024	4.7955	0.9782	4.5337	4.7067	1.0382	4.4001	4.6804	1.0637
21	4.7919	4.7449	0.9902	4.9000	4.7804	0.9756	4.5991	4.7035	1.0227	4.3947	4.6648	1.0615
22	4.8343	4.7758	0.9879	4.9000	4.7804	0.9756	4.5844	4.7075	1.0269	4.3726	4.6551	1.0646
23	4.8796	4.7591	0.9753	4.9000	4.7804	0.9756	4.5480	4.6958	1.0325	4.3700	4.6364	1.0610
24	4.8796	4.7591	0.9753	4.8669	4.7866	0.9835	4.5101	4.6993	1.0420	4.3700	4.6364	1.0610
25	4.8796	4.7591	0.9753	4.8499	4.7805	0.9857	4.5111	4.6884	1.0393	4.3700	4.6364	1.0610
26	4.9113	4.7566	0.9685	4.7538	4.7723	1.0039	4.5111	4.6884	1.0393	4.3700	4.6364	1.0610
27	4.9476	4.7616	0.9624	4.7216	4.7504	1.0061	4.5111	4.6884	1.0393	4.3671	4.6558	1.0661
28	5.0381	4.8147	0.9557	4.7477	4.7199	0.9941	4.4827	4.6835	1.0448	4.4127	4.6938	1.0637
29	5.0328	4.8637	0.9664	4.7477	4.7199	0.9941	4.5164	4.6813	1.0365	4.4078	4.6969	1.0656
30	4.9533	4.8698	0.9831	4.7477	4.7199	0.9941	4.5066	4.6684	1.0359	4.4018	4.6899	1.0655
31				4.7340	4.7089	0.9947				4.4018	4.6899	1.0655
Average monthly rate	4.7784	4.7390	X	4.8939	4.8088	X	4.6226	4.6977	X	4.4209	4.6798	X

**Table IV. Average MFI interest rates on outstanding amounts, PLN denominated (in %)**

	Sector	Category	Original maturity	No.	December 2021	January	February	March	
						2022			
Deposits in PLN	households and non-profit institutions serving households	overnight		1	0.1	0.1	0.1	0.1	
		with agreed maturity	up to 2 years	2	0.3	0.4	0.5	0.7	
			over 2 years	3	1.1	1.9	2.0	2.0	
			total	4	0.4	0.6	0.7	0.9	
		total, overnight included		5	0.1	0.1	0.2	0.2	
	non-financial corporations	overnight		6	0.1	0.1	0.2	0.4	
		with agreed maturity	up to 2 years	7	0.5	0.8	1.1	1.7	
			over 2 years	8	0.4	0.4	0.4	0.5	
			total	9	0.5	0.8	1.1	1.7	
		total, overnight included		10	0.2	0.2	0.3	0.6	
	<b>Total, overnight excluded</b>				11	0.4	0.6	0.8	1.1
	<b>Total, overnight included</b>				12	0.1	0.2	0.2	0.3
Loans in PLN	households and non-profit institutions serving households	revolving loans and overdrafts		13	6.6	7.3	7.9	8.7	
		credit cards		14	6.7	7.8	8.4	9.3	
		for consumption	up to 1 year	15	3.5	3.7	3.9	4.1	
			over 1 and up to 5 years	16	6.3	6.7	7.0	7.2	
			over 5 years	17	7.4	7.8	8.4	8.6	
			total	18	7.0	7.5	8.0	8.2	
		for house purchases	up to 1 year	19	n/a	n/a	n/a	n/a	
			over 1 and up to 5 years	20	3.4	4.1	4.5	4.9	
			over 5 years	21	3.1	3.7	4.3	4.8	
			total	22	3.1	3.7	4.3	4.8	
		for other purposes	up to 1 year	23	5.8	6.3	7.0	7.4	
			over 1 and up to 5 years	24	5.1	5.8	7.0	7.3	
			over 5 years	25	4.7	5.4	6.1	6.5	
			total	26	4.8	5.5	6.3	6.7	
		total, overdrafts included		27	4.4	5.0	5.6	6.0	
		non-financial corporations	revolving loans and overdrafts		28	3.3	3.8	4.2	5.1
			credit cards		29	4.3	5.6	5.9	5.5
			up to 1 year		30	2.9	3.5	3.9	4.4
	over 1 and up to 5 years		31	3.6	4.3	4.7	5.2		
	over 5 years		32	3.5	4.3	4.8	5.1		
total			33	3.5	4.3	4.7	5.1		
total, overdrafts included			34	3.4	4.1	4.5	5.1		
<b>Total, overdrafts included</b>				35	4.1	4.8	5.3	5.8	

n/a – category not available due to confidentiality issues.

**Table IV. Average MFI interest rates on outstanding amounts, PLN denominated (in %), cont'd**

April	May	June	July	August	September	October	November	December
2022								
0.2	0.3	0.4	0.5	0.5	0.6	0.7	0.7	0.8
0.9	1.4	2.3	3.1	3.9	4.2	4.4	4.9	5.2
2.9	3.2	3.6	4.5	4.5	4.6	4.6	4.6	4.7
1.2	1.6	2.4	3.3	3.9	4.3	4.5	4.9	5.2
0.4	0.6	0.8	1.1	1.4	1.6	1.7	2.0	2.1
0.4	0.5	0.7	0.8	0.9	0.9	1.1	1.1	1.2
2.6	3.4	4.2	4.8	5.2	5.7	5.7	5.7	5.7
0.7	0.9	1.0	1.1	1.2	1.2	1.2	1.3	1.2
2.6	3.4	4.1	4.8	5.2	5.7	5.6	5.7	5.7
0.9	1.2	1.5	1.9	2.2	2.4	2.6	2.7	2.6
1.6	2.1	2.9	3.7	4.3	4.7	4.8	5.1	5.3
0.5	0.7	1.0	1.3	1.6	1.8	1.9	2.1	2.3
9.8	10.8	11.7	12.4	12.8	13.1	13.3	13.5	13.4
10.2	11.5	12.1	12.8	13.9	14.0	14.3	14.2	14.0
4.2	4.5	4.8	5.1	5.3	5.4	5.5	5.5	5.6
8.1	8.4	8.8	9.3	9.6	9.8	10.1	10.2	10.1
9.5	10.0	10.6	11.1	11.3	11.5	11.8	11.9	11.9
9.1	9.5	10.0	10.5	10.7	10.9	11.2	11.3	11.3
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5.7	6.4	7.1	8.1	7.7	7.6	7.8	7.8	8.2
5.6	6.3	7.2	7.9	5.1	3.4	4.8	3.9	5.3
5.6	6.3	7.2	7.9	5.1	3.4	4.8	3.9	5.3
8.8	9.8	10.7	11.2	10.8	11.0	11.1	11.0	11.1
8.4	9.5	10.5	10.8	11.0	11.2	11.6	11.9	11.7
7.6	8.2	8.9	9.8	9.9	10.2	10.1	10.3	10.2
7.8	8.6	9.3	10.0	10.1	10.4	10.4	10.6	10.5
6.9	7.6	8.4	9.0	7.4	6.5	7.5	7.0	7.7
6.0	7.0	7.4	8.1	8.3	8.5	8.6	8.8	8.5
6.7	7.8	8.0	8.2	8.8	9.0	8.7	8.4	8.3
5.4	6.5	7.2	7.9	7.9	8.0	8.2	8.5	8.4
6.2	6.9	7.9	8.6	8.7	9.0	9.0	9.1	9.1
6.3	7.1	7.7	8.6	8.9	9.1	9.2	9.3	9.3
6.2	7.0	7.7	8.6	8.8	9.0	9.1	9.2	9.2
6.1	7.0	7.6	8.4	8.6	8.8	8.9	9.1	8.9
6.7	7.4	8.2	8.9	7.8	7.2	7.9	7.5	8.1

**Table V. Average MFI interest rates on new and renegotiated business, PLN denominated (in %)**

	Sector	Category	Original maturity, initial rate fixation	No.	December 2021	January	February	March	
					2022				
Deposits in PLN	households and non-profit institutions serving households	with agreed maturity	up to 1 month	1	0.3	0.4	0.6	0.9	
			over 1 and up to 3 months	2	0.6	0.9	1.0	1.5	
			over 3 and up to 6 months	3	0.9	1.2	1.5	1.7	
			over 6 months and up to 1 year	4	1.3	1.7	1.9	1.9	
			over 1 year	5	n/a	2.2	1.1	2.4	
			total	6	0.7	1.0	1.2	1.5	
	non-financial corporations	with agreed maturity	up to 1 month	7	0.8	1.2	1.4	2.2	
			over 1 and up to 3 months	8	0.8	1.3	1.6	2.6	
			over 3 and up to 6 months	9	1.0	1.3	1.8	2.7	
			over 6 months and up to 1 year	10	1.2	1.1	1.6	2.9	
			over 1 year	11	0.7	0.8	0.7	0.8	
			total	12	0.8	1.2	1.5	2.3	
	Total			13	0.8	1.1	1.4	2.1	
Loans in PLN	households and non-profit institutions serving households	for consumption	floating rate and up to 3 months initial rate fixation	14	8.9	9.7	9.9	10.3	
			over 3 months and up to 1 year initial rate fixation	15	4.3	4.2	3.6	3.8	
			over 1 year up to 5 years initial rate fixation	16	4.8	6.7	7.0	7.1	
			over 5 years initial rate fixation	17	8.6	9.0	9.3	9.6	
			total	18	7.5	8.8	9.0	9.2	
		annual percentage rate of charge (APRC)			19	11.2	12.8	12.9	12.9
		for house purchases	floating rate and up to 3 months initial rate fixation	20	4.5	5.1	5.5	6.2	
			over 3 months and up to 1 year initial rate fixation	21	n/a.	n/a.	n/a.	n/a.	
			over 1 year initial rate fixation	22	4.6	5.0	5.6	5.7	
			total	23	4.6	5.1	5.5	6.0	
		annual percentage rate of charge (APRC)			24	5.0	5.3	5.8	6.2
		for sole proprietors and unincorporated partnerships	floating rate and up to 3 months initial rate fixation	25	6.1	7.3	8.2	8.4	
			over 3 months and up to 1 year initial rate fixation	26	n/a	n/a	n/a	n/a	
			over 1 year initial rate fixation	27	8.9	8.6	10.0	10.6	
			total	28	6.3	7.5	8.3	8.6	
		for other purposes	floating rate and up to 3 months initial rate fixation	29	5.6	6.2	6.7	7.5	
			over 3 months and up to 1 year initial rate fixation	30	n/a	n/a	n/a	n/a	
			over 1 year initial rate fixation	31	n/a	n/a	6.6	8.0	
			total	32	5.6	6.3	6.7	7.5	
	Total			33	5.8	6.8	7.3	7.4	
	non-financial corporations	up to PLN 1 million, overdrafts excluded	floating rate and up to 3 months initial rate fixation	34	3.5	4.0	4.4	5.4	
			over 3 months and up to 1 year initial rate fixation	35	4.2	4.5	5.3	6.2	
			over 1 year initial rate fixation	36	4.8	5.0	5.8	n/a	
			total	37	3.5	4.0	4.5	5.5	
		floating rate and up to 1 year initial rate fixation, with original maturity over 1 year			38	4.0	4.4	4.6	5.8
		over PLN 1 million up to PLN 4 million, overdrafts excluded	floating rate and up to 3 months initial rate fixation	39	4.3	4.4	5.2	6.1	
			over 3 months and up to 1 year initial rate fixation	40	n/a	n/a	4.6	5.7	
			over 1 year initial rate fixation	41	n/a	n/a	n/a	2.1	
			total	42	4.3	4.4	5.1	6.0	
		floating rate and up to 1 year initial rate fixation, with original maturity over 1 year			43	5.1	4.9	5.9	6.7
		over PLN 4 million, overdrafts excluded	floating rate and up to 3 months initial rate fixation	44	3.8	4.3	4.6	5.7	
			over 3 months and up to 1 year initial rate fixation	45	n/a	4.6	n/a	n/a	
			over 1 year initial rate fixation	46	n/a	n/a	n/a	n/a	
total			47	3.9	4.3	4.6	5.7		
floating rate and up to 1 year initial rate fixation, with original maturity over 1 year			48	4.0	4.5	4.7	5.8		
Total			49	3.8	4.2	4.6	5.7		
Total			50	4.7	5.5	5.7	6.5		

n/a – category not available due to confidentiality issues.

Table V. Average MFI interest rates on new and renegotiated business, PLN denominated, cont'd

April	May	June	July	August	September	October	November	December
2022								
1.6	3.1	3.9	4.1	4.1	4.5	4.6	5.8	6.2
1.9	3.3	4.6	5.0	5.2	5.6	5.9	6.2	6.3
2.4	3.8	4.8	5.5	5.9	6.2	6.0	6.1	6.4
2.5	3.6	4.6	5.2	5.8	6.3	6.4	6.8	6.5
1.9	4.4	5.4	n/a	3.6	n/a	n/a	n/a	n/a
2.0	3.4	4.6	4.9	5.3	5.6	5.7	6.1	6.3
3.1	3.8	4.7	5.1	5.4	5.4	5.5	5.5	5.4
3.8	4.6	5.4	5.8	6.2	6.2	6.2	6.5	6.0
3.8	4.9	5.4	5.5	5.9	6.1	6.2	6.5	6.5
2.7	3.8	5.1	4.4	4.8	4.1	5.1	5.2	5.9
2.2	2.0	2.4	4.3	2.0	4.0	2.8	4.4	4.5
3.3	4.1	4.8	5.3	5.6	5.6	5.7	5.7	5.5
3.0	3.8	4.7	5.2	5.5	5.6	5.7	5.8	5.7
10.7	11.2	11.7	12.1	12.4	12.6	12.6	12.6	13.0
4.0	4.2	4.7	5.2	5.0	5.1	5.0	5.2	5.9
7.9	8.4	9.5	10.1	8.9	9.9	10.8	8.3	9.1
10.3	11.2	12.0	12.5	13.0	13.0	13.4	13.6	13.6
9.8	10.3	10.9	11.3	11.2	11.7	11.8	11.1	11.6
13.5	14.4	15.1	15.5	15.2	15.7	16.0	14.8	15.5
6.7	7.0	8.1	8.8	9.2	9.3	9.4	9.5	9.4
7.9	9.0	9.2	9.6	9.6	9.4	9.5	9.7	9.4
6.3	7.2	8.2	8.6	9.1	8.6	8.7	9.1	9.0
6.6	7.2	8.2	8.8	9.2	9.0	9.0	9.3	9.2
6.8	7.6	8.6	9.3	9.6	9.5	9.6	10.0	10.0
9.8	10.7	11.9	11.7	10.8	11.4	11.4	12.1	12.0
n/a.	n/a.	n/a.	n/a.	n/a	n/a	n/a	n/a	n/a
10.0	11.5	11.9	11.8	11.9	11.8	12.3	11.9	11.7
10.0	10.8	11.9	11.7	11.0	11.5	11.5	12.1	11.9
8.2	8.4	9.2	10.1	10.0	10.0	10.4	10.5	10.4
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
7.9	8.2	8.8	9.9	10.7	10.2	9.6	10.4	10.0
8.2	8.4	9.1	10.0	10.1	10.0	10.4	10.5	10.4
8.1	9.0	9.8	10.4	10.6	10.9	11.0	10.8	11.0
6.4	7.2	7.8	8.3	8.4	8.5	8.5	8.5	8.4
7.5	8.2	9.0	9.3	9.2	9.3	9.6	9.5	9.4
7.9	8.7	n/a	8.2	n/a	n/a	n/a	n/a	9.1
6.5	7.3	7.9	8.4	8.4	8.5	8.6	8.5	8.4
6.6	7.8	8.3	8.7	8.7	8.9	8.8	8.8	8.7
6.7	7.6	8.2	8.7	8.8	8.8	8.9	8.9	9.1
n/a	n/a	n/a	n/a	8.7	9.4	9.3	9.3	9.0
2.8	5.0	9.3	10.4	6.9	n/a	n/a	–	–
6.6	7.6	8.3	8.8	8.7	8.9	8.9	8.9	9.1
6.7	8.0	8.6	9.0	9.3	9.2	9.1	9.3	9.4
6.6	7.6	8.4	8.9	8.9	9.2	8.9	9.3	8.9
8.1	7.9	n/a	n/a	n/a	9.8	n/a	n/a	n/a
n/a	n/a	n/a	–	n/a	–	n/a	n/a	n/a
6.6	7.6	8.5	8.9	8.9	9.2	8.9	9.3	8.9
6.7	7.8	8.6	9.1	9.2	9.6	8.9	9.4	9.1
6.6	7.5	8.3	8.7	8.7	8.9	8.8	8.9	8.7
7.3	8.2	9.0	9.5	9.6	9.8	9.7	9.8	9.7

**Table VI. Average MFI interest rates on new and renegotiated business, EUR denominated (in %)**

	Sector	Category	Original maturity, initial rate fixation	No.	December 2021	January	February	March
						2022		
Deposits in EUR	households and non-profit institutions serving households	overnight*		1	0.0	0.0	0.0	0.0
		with agreed maturity	up to 1 month	2	n/a	0.1	0.1	0.1
			over 1 and up to 3 months	3	n/a	0.0	n/a	n/a
			over 3 and up to 6 months	4	0.1	0.1	0.1	0.2
			over 6 months and up to 1 year	5	0.2	0.2	0.2	0.4
			over 1 year	6	n/a	0.0	n/a	n/a
		total	7	0.1	0.1	0.1	0.1	
	non-financial corporations	overnight*		8	0.0	0.0	0.0	0.0
		with agreed maturity	up to 1 month	9	n/a	n/a	0.1	n/a
			over 1 and up to 3 months	10	0.1	0.0	0.0	0.0
			over 3 and up to 6 months	11	0.1	n/a	0.0	n/a
			over 6 months and up to 1 year	12	0.0	0.0	0.1	0.1
			over 1 year	13	n/a	n/a	n/a	n/a
		total	14	0.1	0.0	0.0	0.1	
total, overnight excluded				15	0.1	0.1	0.1	0.1
Loans in EUR	households and non-profit institutions serving households	revolving loans and overdrafts*		16	0.8	0.9	0.9	0.9
		for consumption	total	17	–	n/a	–	n/a
			annual percentage rate of charge (APRC)	18	–	n/a	–	n/a
		for house purchases	total	19	4.1	3.7	3.8	3.9
			annual percentage rate of charge (APRC)	20	7.3	6.5	6.6	6.4
		for other purposes		21	1.7	1.7	2.0	1.6
		total, overdrafts excluded		22	2.9	2.6	3.2	2.8
	non-financial corporations	revolving loans and overdrafts*		23	1.3	1.4	1.3	1.4
		up to EUR 1 million		24	1.7	1.5	1.5	1.6
		over EUR 1 million		25	2.0	1.9	1.9	2.6
		total, overdrafts excluded		26	1.9	1.9	1.8	2.3
total, overdrafts excluded				27	2.0	1.9	1.9	2.4

\* Category calculated on a basis of an outstanding amounts, Excluded from “total” average.

n/a – category not available due to confidentiality issues.

**Table VI. Average MFI interest rates on new and renegotiated business, EUR denominated (in %), cont'd**

April	May	June	July	August	September	October	November	December
2022								
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.4	0.5
n/a	0.1	0.1	0.1	0.1	n/a	0.2	0.5	0.3
0.2	0.2	0.2	0.2	0.3	0.5	0.7	0.8	1.0
0.4	0.5	0.3	0.5	0.6	1.3	1.4	1.4	1.3
n/a	1.0	1.2	1.0	1.0	n/a	n/a	n/a	n/a
0.2	0.1	0.2	0.1	0.2	0.5	0.7	0.6	0.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.1	n/a	n/a	n/a	n/a	0.3	n/a	n/a	n/a
0.0	0.1	0.1	0.0	0.1	0.5	0.7	0.6	1.1
0.0	0.1	0.1	0.0	0.1	0.4	0.9	1.2	n/a
0.0	0.0	n/a	0.1	0.0	1.6	0.9	n/a	1.0
n/a	n/a	0.0	0.0	0.0	0.0	n/a	n/a	0.1
0.0	0.1	0.1	0.1	0.1	0.3	0.5	0.8	n/a
0.1	0.1	0.1	0.1	0.2	0.4	0.6	0.8	n/a
1.0	1.1	1.1	1.3	1.4	1.6	2.0	2.6	2.7
–	–	n/a	–	n/a	–	–	–	–
–	–	n/a	–	n/a	–	–	–	–
4.0	4.2	n/a	4.2	4.1	5.1	5.7	n/a	6.2
6.5	6.8	n/a	7.2	6.4	8.2	9.3	n/a	10.0
2.0	n/a	2.6	2.7	2.3	3.1	3.0	3.4	3.8
2.7	n/a	n/a	3.0	3.1	3.7	3.9	4.8	4.8
1.4	1.4	1.4	1.3	1.4	1.6	2.1	2.7	2.9
1.6	1.5	1.9	1.7	2.0	2.5	2.6	3.4	3.5
2.0	2.1	2.1	2.3	2.2	2.6	3.3	3.4	3.8
1.9	1.9	2.0	2.2	2.2	2.6	3.1	3.4	3.7
2.0	1.7	2.0	2.3	2.2	2.6	3.2	3.5	3.8

**Table VII. Aggregated balance sheet of other monetary financial institutions (PLN million)**  
**ASSETS**

Period	Cash in other monetary institutions' vaults	Loans and other claims on domestic residents	Monetary financial institutions	General government	Other domestic residents <sup>1</sup>	Debt securities	Monetary financial institutions	General government	Other domestic residents <sup>1</sup>
	1		3	4	5		7	8	9
	2	6							
December 2021	14 837.6	1 557 004.0	168 904.0	94 163.0	1 293 937.0	710 135.8	232 162.7	414 178.3	63 794.8
January 2022	13 601.6	1 521 959.4	134 120.5	92 945.8	1 294 893.1	755 901.1	276 150.0	416 398.6	63 352.5
February	25 265.2	1 561 733.9	157 610.1	93 117.8	1 311 006.1	717 931.8	236 804.0	417 984.9	63 142.9
March	17 031.2	1 558 960.0	145 387.3	92 809.8	1 320 762.8	702 696.0	227 710.7	412 987.1	61 998.3
April	15 689.8	1 550 489.7	122 118.8	92 835.2	1 335 535.7	707 565.0	241 609.1	402 868.5	63 087.3
May	15 287.6	1 577 967.6	153 741.6	92 466.1	1 331 759.9	690 387.6	224 245.1	402 914.1	63 228.4
June	15 205.6	1 586 120.8	154 284.7	93 847.8	1 337 988.4	709 082.9	243 378.9	405 508.9	60 195.2
July	14 838.4	1 564 585.8	124 016.8	95 032.4	1 345 536.7	721 206.4	267 504.1	394 658.8	59 043.5
August	14 677.4	1 607 536.5	154 625.9	94 951.0	1 357 959.6	700 004.3	246 679.8	395 038.7	58 285.9
September	14 360.0	1 644 451.4	193 662.2	95 353.9	1 355 435.3	662 874.3	215 796.7	388 331.0	58 746.6
October	14 979.9	1 623 327.1	182 329.9	93 893.1	1 347 104.2	676 851.3	230 131.9	386 744.1	59 975.3
November	14 389.4	1 596 649.9	164 440.3	98 552.6	1 333 657.0	717 248.3	277 160.3	381 126.6	58 961.3
December	14 588.6	1 564 312.5	143 182.2	106 908.5	1 314 221.8	759 781.2	308 881.6	388 738.5	62 161.2

Period	Money market fund shares/ units	Equity and non-MMF investment fund shares or units	Monetary financial institutions	Other domestic residents <sup>1</sup>	External assets	Fixed assets <sup>2</sup>	Remaining assets	Total assets
	10		12	13				
	11	14	15	16	17			
December 2021	0.0	24 227.6	8 489.0	15 738.6	124 265.2	62 678.2	166 849.8	2 659 998.4
January 2022	0.0	24 295.0	8 541.8	15 753.2	133 520.8	62 791.9	170 539.9	2 682 609.9
February	0.0	24 176.0	8 344.4	15 831.7	142 696.2	62 931.2	181 476.1	2 716 210.4
March	0.0	24 154.2	8 377.7	15 776.5	163 421.2	63 069.1	189 939.9	2 719 271.7
April	0.0	23 956.1	8 170.6	15 785.5	164 371.6	63 240.2	201 676.8	2 726 989.1
May	0.0	23 952.5	8 134.7	15 817.8	169 315.8	63 371.8	200 467.7	2 740 750.6
June	0.0	21 960.6	8 046.0	13 914.6	185 982.7	63 396.2	204 222.3	2 785 971.2
July	0.0	21 455.6	7 721.7	13 733.9	215 495.3	63 522.9	191 469.1	2 792 573.5
August	0.0	21 434.8	7 671.9	13 762.9	220 995.2	63 800.1	198 152.2	2 826 600.4
September	0.0	22 254.2	7 768.5	14 485.8	221 487.7	63 930.5	199 712.9	2 829 070.9
October	0.0	21 725.0	7 967.1	13 757.8	227 722.2	64 151.7	203 997.0	2 832 754.2
November	0.0	22 022.5	8 023.1	13 999.4	234 417.9	64 165.5	197 112.7	2 846 006.2
December	0.0	22 093.2	8 064.7	14 028.5	218 288.5	64 537.7	199 747.3	2 843 349.0

<sup>1</sup> Non-monetary financial institutions and non-financial sector.

<sup>2</sup> Excluding financial fixed assets, included in column 11.



**Table VII. Aggregated balance sheet of other monetary financial institutions (PLN million)**  
**LIABILITIES**

Period							
	Deposits and other liabilities to domestic residents	Monetary financial institutions	Central government	Other domestic residents <sup>1</sup>	overnight	with agreed maturity	repurchase agreements
	1	2	3	4	5	6	7
December 2021	1 832 152.0	70 697.0	104 244.4	1 657 210.6	1 375 640.4	275 748.9	5 821.3
January 2022	1 848 082.5	70 756.8	138 186.5	1 639 139.1	1 356 428.8	278 197.7	4 512.6
February	1 859 148.2	76 852.6	135 468.0	1 646 827.6	1 345 217.0	296 836.8	4 773.9
March	1 850 484.6	75 963.7	123 601.9	1 650 919.0	1 340 389.2	305 601.9	4 928.0
April	1 836 515.0	73 071.5	110 980.0	1 652 463.5	1 308 033.3	339 020.7	5 409.5
May	1 861 780.5	77 215.9	122 505.5	1 662 059.1	1 292 559.8	364 399.9	5 099.4
June	1 890 623.5	79 718.5	159 111.2	1 651 793.8	1 259 160.5	387 927.0	4 706.3
July	1 904 266.3	77 401.3	159 457.4	1 667 407.7	1 228 998.1	433 202.4	5 207.1
August	1 926 638.1	80 913.5	146 935.6	1 698 789.0	1 234 209.5	459 343.2	5 236.3
September	1 927 602.9	77 950.6	128 309.8	1 721 342.4	1 221 422.3	495 285.8	4 634.4
October	1 933 197.6	72 441.0	134 058.9	1 726 697.7	1 208 249.5	513 718.6	4 729.6
November	1 945 259.6	73 841.9	128 471.0	1 742 946.6	1 212 529.1	524 948.1	5 469.4
December	1 933 355.2	73 691.7	108 771.8	1 750 891.7	1 225 865.7	520 105.8	4 920.2

Period						
	Money market fund shares/units	Debt securities issued	Capital and reserves	External liabilities	Remaining liabilities	Total liabilities
	8	9	10	11	12	13
December 2021	0.0	219 327.5	296 889.3	203 730.5	107 899.1	2 659 998.4
January 2022	0.0	218 655.3	299 202.0	202 757.8	113 912.3	2 682 609.9
February	0.0	219 601.7	301 697.4	213 544.0	122 219.0	2 716 210.4
March	0.0	223 276.4	294 785.5	226 720.5	124 004.8	2 719 271.7
April	0.0	223 150.5	289 854.4	238 564.3	138 904.9	2 726 989.1
May	0.0	225 359.6	291 603.2	229 238.5	132 768.8	2 740 750.6
June	0.0	222 811.8	293 356.0	237 186.8	141 993.0	2 785 971.2
July	0.0	227 421.1	292 648.7	234 825.1	133 412.3	2 792 573.5
August	0.0	227 908.1	294 218.0	239 974.5	137 861.8	2 826 600.4
September	0.0	230 684.4	291 553.9	241 558.1	137 671.7	2 829 070.9
October	0.0	230 290.9	292 734.8	232 073.7	144 457.3	2 832 754.2
November	0.0	229 711.9	303 621.7	223 339.5	144 073.6	2 846 006.2
December	0.0	234 840.2	304 564.2	224 872.7	145 716.7	2 843 349.0

<sup>1</sup> Non-monetary financial institutions, local government, social security funds and non-financial sector.

**Table VIII. Balance sheet of Narodowy Bank Polski (PLN million)**  
**ASSETS**

Period	Domestic assets		External assets	Total assets
			2	3
	1			
December 2021	152 270.9		692 440.0	844 711.0
January 2022	156 364.8		681 808.0	838 172.8
February	158 025.1		692 470.3	850 495.5
March	165 288.2		679 069.9	844 358.1
April	162 282.0		688 920.5	851 202.5
May	160 499.5		685 333.2	845 832.8
June	163 536.1		709 921.8	873 457.9
July	157 794.3		748 919.8	906 714.1
August	166 975.8		752 017.9	918 993.6
September	175 784.1		770 285.3	946 069.4
October	171 872.2		737 150.7	909 022.9
November	165 685.8		751 063.9	916 749.7
December	143 382.0		752 860.1	896 242.1

**LIABILITIES**

Period	Currency in circulation	Deposits and other liabilities to domestic residents				Debt securities issued	Capital and reserves	External liabilities	Remaining liabilities	Total liabilities
		Other monetary financial institutions	Central government	Other domestic residents <sup>1</sup>						
					1					
December 2021	355 244.1	144 396.8	99 098.2	36 558.7	8 739.9	184 512.1	70 332.9	87 848.0	2 376.9	844 711.0
January 2022	352 010.0	101 519.3	64 098.3	32 925.8	4 495.2	227 862.8	71 951.1	82 797.8	2 031.9	838 172.8
February	379 353.4	109 983.0	81 939.2	23 198.9	4 844.9	187 227.3	86 736.5	84 708.5	2 486.8	850 495.5
March	389 412.7	98 820.8	70 713.3	22 030.3	6 077.3	176 549.0	87 565.3	89 565.4	2 444.8	844 358.1
April	391 640.8	81 379.9	49 754.1	26 869.8	4 756.0	189 706.1	102 651.4	83 143.8	2 680.7	851 202.5
May	385 096.5	119 118.7	77 360.4	37 340.4	4 417.9	172 107.5	81 646.0	85 572.6	2 291.5	845 832.8
June	379 021.0	114 494.4	75 100.6	35 080.3	4 313.6	190 650.8	86 549.4	100 067.8	2 674.6	873 457.9
July	377 539.7	92 819.2	46 830.6	41 775.4	4 213.1	218 027.9	105 868.8	108 821.7	3 636.9	906 714.1
August	373 393.8	129 211.4	74 397.8	46 904.1	7 909.6	197 010.3	106 006.7	109 853.8	3 517.7	918 993.6
September	373 318.5	177 666.8	116 062.0	57 924.9	3 680.0	157 924.3	118 222.5	115 930.4	3 007.0	946 069.4
October	373 737.5	156 153.5	109 939.4	42 477.6	3 736.5	175 207.0	92 600.5	109 064.3	2 260.0	909 022.9
November	369 004.8	139 175.3	90 993.6	44 720.8	3 461.0	221 723.2	77 221.1	107 869.1	1 756.2	916 749.7
December	368 288.8	125 536.6	69 628.3	50 591.8	5 316.4	252 086.8	40 631.9	107 246.9	2 451.1	896 242.1

<sup>1</sup> Non-monetary financial institutions, local government, social security funds and non-financial sector.

**Table IX. Consolidated balance sheet of monetary financial institutions (PLN million)**  
ASSETS

Period	Loans and other claims on domestic residents			Debt securities			Equity and non-MMF investment fund shares or units <sup>1</sup>	External assets	Fixed assets <sup>2</sup>	Remaining assets <sup>3</sup>	Total assets
	General government	Other domestic residents <sup>1</sup>		General government	Other domestic residents <sup>1</sup>						
December 2021	1 388 122.3	94 163.0	1 293 959.3	584 875.9	501 130.9	83 745.0	15 867.5	816 705.3	65 037.0	167 288.7	3 037 896.6
January 2022	1 387 860.6	92 945.8	1 294 914.8	586 753.4	503 435.7	83 317.7	15 882.1	815 328.8	65 151.0	174 903.1	3 045 878.9
February	1 404 145.2	93 117.8	1 311 027.4	588 239.1	505 105.9	83 133.2	15 960.5	835 166.5	65 285.1	187 332.5	3 096 128.9
March	1 413 594.5	92 809.8	1 320 784.6	582 217.6	500 201.2	82 016.4	15 905.4	842 491.2	65 425.9	202 960.1	3 122 594.6
April	1 428 393.1	92 835.2	1 335 557.9	565 549.3	482 478.1	83 071.2	15 914.3	853 292.2	65 598.6	219 685.0	3 148 432.5
May	1 424 248.3	92 466.1	1 331 782.3	565 691.1	482 610.0	83 081.1	15 946.7	854 649.0	65 730.3	216 667.9	3 142 933.3
June	1 431 859.0	93 847.8	1 338 011.2	565 282.0	485 288.7	79 993.3	14 043.5	895 904.5	65 768.4	223 580.2	3 196 437.5
July	1 440 592.0	95 032.4	1 345 559.7	552 223.4	473 354.2	78 869.2	13 862.8	964 415.1	65 894.9	206 110.8	3 243 098.9
August	1 452 933.6	94 951.0	1 357 982.6	551 959.2	473 820.0	78 139.2	13 891.8	973 013.0	66 175.7	221 788.3	3 279 761.7
September	1 450 811.4	95 353.9	1 355 457.5	545 822.4	467 195.7	78 626.7	14 614.6	991 773.0	66 310.7	231 976.1	3 301 308.1
October	1 441 019.5	93 893.1	1 347 126.5	544 717.6	464 834.6	79 883.0	13 886.7	964 872.9	66 531.4	233 025.1	3 264 053.3
November	1 432 232.0	98 552.6	1 333 679.4	538 195.4	459 299.5	78 895.9	14 128.3	985 481.8	66 547.7	219 775.0	3 256 360.1
December	1 421 152.2	106 908.5	1 314 243.7	549 120.2	466 996.6	82 123.6	14 157.3	971 148.5	66 950.1	199 892.8	3 222 421.2

<sup>1</sup> Non-monetary financial institutions and non-financial sector.

<sup>2</sup> Excluding financial fixed assets, incorporated in column 7.

<sup>3</sup> Including rights issues.

## LIABILITIES

Period	Currency in circulation	Deposits and other liabilities to central government	Deposits and other liabilities to other domestic residents <sup>1</sup>				Money market fund shares/units	Debt securities issued	Capital and reserves	External liabilities	Remaining liabilities	Excess of inter-MFI liabilities	Total liabilities
				overnight	with agreed maturity	repurchase agreements							
				4	5	6							
December 2021	340 406.5	140 803.1	1 665 950.5	1 384 380.3	275 748.9	5 821.3	0.0	129 257.6	358 733.3	291 578.5	110 276.0	891.2	3 037 896.6
January 2022	338 408.3	171 112.4	1 643 634.3	1 360 923.9	278 197.7	4 512.6	0.0	127 878.6	362 611.3	285 555.6	115 944.2	734.2	3 045 878.9
February	354 088.2	158 666.9	1 651 672.5	1 350 061.9	296 836.8	4 773.9	0.0	127 472.0	380 089.6	298 252.5	124 705.8	1 181.4	3 096 128.9
March	372 381.5	145 632.2	1 656 996.3	1 346 466.5	305 601.9	4 928.0	0.0	129 586.6	373 973.2	316 285.9	126 449.6	1 289.4	3 122 594.6
April	375 951.0	137 849.8	1 657 219.5	1 312 789.2	339 020.7	5 409.5	0.0	129 077.0	384 335.2	321 708.0	141 585.6	706.5	3 148 432.5
May	369 808.9	159 845.9	1 666 477.0	1 296 977.7	364 399.9	5 099.4	0.0	130 981.4	365 114.5	314 811.1	135 060.3	834.1	3 142 933.3
June	363 815.4	194 191.5	1 656 107.4	1 263 474.0	387 927.0	4 706.3	0.0	128 007.7	371 859.3	337 254.6	144 667.5	534.1	3 196 437.5
July	362 701.3	201 232.8	1 671 620.8	1 233 211.2	433 202.4	5 207.1	0.0	135 837.5	390 795.8	343 646.9	137 049.1	214.8	3 243 098.9
August	358 716.4	193 839.6	1 706 698.6	1 242 119.1	459 343.2	5 236.3	0.0	136 061.5	392 552.8	349 828.3	141 379.5	685.0	3 279 761.7
September	358 958.6	186 234.7	1 725 022.4	1 225 102.2	495 285.8	4 634.4	0.0	130 567.5	402 007.9	357 488.4	140 678.6	350.0	3 301 308.1
October	358 757.6	176 536.5	1 730 434.1	1 211 985.9	513 718.6	4 729.6	0.0	133 051.2	377 368.2	341 138.1	146 717.3	50.3	3 264 053.3
November	354 615.4	173 191.8	1 746 407.6	1 215 990.1	524 948.1	5 469.4	0.0	131 892.4	372 819.7	331 208.6	145 829.8	394.8	3 256 360.1
December	353 700.2	159 363.6	1 756 208.1	1 231 182.1	520 105.8	4 920.2	0.0	135 592.8	337 131.4	332 119.6	148 167.8	137.7	3 222 421.2

<sup>1</sup> Non-monetary financial institutions, local government, social security funds and non-financial sector.

**Table Xa. M3 and counterparts (PLN million)**

Period											M1
	Currency in circulation (excluding MFIs' vault cash)	Currency in circulation (including MFIs' vault cash)	Cash in monetary institutions' vaults	Overnight deposits and other liabilities	Households	Other financial corporations	Non-financial corporations	Non-profit institutions serving households	Local government	Social security funds	
December 2021	340 406.5	355 244.1	14 837.6	1 384 380.3	898 210.7	37 769.5	340 366.9	28 310.7	67 733.1	11 989.5	1 724 786.8
January 2022	338 408.3	352 010.0	13 601.6	1 360 923.9	891 968.8	36 567.5	330 023.9	28 979.0	67 351.1	6 033.5	1 699 332.3
February	354 088.2	379 353.4	25 265.2	1 350 061.9	882 932.2	36 888.8	327 694.6	28 921.9	63 965.9	9 658.5	1 704 150.1
March	372 381.5	389 412.7	17 031.2	1 346 466.5	863 952.2	37 273.4	335 950.6	29 812.2	68 601.9	10 876.2	1 718 847.9
April	375 951.0	391 640.8	15 689.8	1 312 789.2	862 818.1	35 028.9	315 889.2	29 599.9	61 977.9	7 475.3	1 688 740.2
May	369 808.9	385 096.5	15 287.6	1 296 977.7	841 094.0	36 173.0	321 045.5	29 581.9	60 339.0	8 744.4	1 666 786.6
June	363 815.4	379 021.0	15 205.6	1 263 474.0	818 081.1	36 199.6	312 148.7	29 522.1	58 284.2	9 238.3	1 627 289.4
July	362 701.3	377 539.7	14 838.4	1 233 211.2	799 232.2	41 410.5	304 786.3	30 115.4	51 993.0	5 673.8	1 595 912.6
August	358 716.4	373 393.8	14 677.4	1 242 119.1	785 983.2	47 685.2	312 006.4	30 020.8	52 410.4	14 013.2	1 600 835.4
September	358 958.6	373 318.5	14 360.0	1 225 102.2	785 521.0	41 049.1	304 613.7	29 867.9	56 899.3	7 151.1	1 584 060.8
October	358 757.6	373 737.5	14 979.9	1 211 985.9	779 115.4	33 347.4	309 644.4	29 825.2	53 588.2	6 465.4	1 570 743.5
November	354 615.4	369 004.8	14 389.4	1 215 990.1	770 700.9	33 966.3	319 618.5	29 130.7	53 715.3	8 858.3	1 570 605.5
December	353 700.2	368 288.8	14 588.6	1 231 182.1	776 518.3	33 554.1	325 014.5	28 174.0	57 903.0	10 018.2	1 584 882.4

Period											M2	Repurchase agreements	Debt securities issued with maturity up to 2 years	Money market fund shares	M3
	Deposits and other liabilities with agreed maturity up to 2 years	Households	Other financial corporations	Non-financial corporations	Non-profit institutions serving households	Local government	Social security funds								
								12	13	14					
December 2021	249 710.0	147 789.6	18 283.4	74 747.0	3 178.0	4 332.3	1 379.6	1 974 496.8	5 821.3	4 498.2	0.0	1 984 816.2			
January 2022	252 683.4	151 243.3	18 740.4	67 999.4	3 447.5	9 827.1	1 425.8	1 952 015.7	4 512.6	3 897.4	0.0	1 960 425.8			
February	271 343.2	152 996.3	20 304.9	75 830.1	3 801.9	17 117.4	1 292.7	1 975 493.3	4 773.9	3 969.7	0.0	1 984 236.9			
March	280 419.8	155 628.4	23 064.0	79 693.2	4 045.3	16 449.2	1 539.6	1 999 267.7	4 928.0	5 370.6	0.0	2 009 566.3			
April	313 829.4	165 154.4	25 909.3	92 738.1	4 860.8	21 490.7	3 676.1	2 002 569.6	5 409.5	5 265.5	0.0	2 013 244.6			
May	338 301.1	179 204.2	26 754.1	100 077.9	5 422.6	24 105.1	2 737.1	2 005 087.7	5 099.4	4 947.5	0.0	2 015 134.6			
June	361 941.8	202 881.8	26 863.1	102 308.3	5 975.1	21 976.4	1 937.1	1 989 231.2	4 706.3	4 906.0	0.0	1 998 843.5			
July	406 550.8	223 635.6	28 855.9	116 689.0	6 899.2	25 915.4	4 555.7	2 002 463.4	5 207.1	5 022.4	0.0	2 012 692.9			
August	432 921.6	243 976.1	32 927.4	123 936.8	7 017.7	23 518.7	1 544.9	2 033 757.0	5 236.3	5 029.8	0.0	2 044 023.1			
September	468 390.2	258 746.3	33 309.3	143 484.2	7 295.2	23 585.4	1 969.9	2 052 451.0	4 634.4	5 001.9	0.0	2 062 087.3			
October	487 128.7	274 249.6	31 386.3	142 830.4	7 496.7	26 280.4	4 885.3	2 057 872.2	4 729.6	8 656.4	0.0	2 071 258.2			
November	498 072.6	289 504.6	31 071.7	139 213.0	7 752.6	25 412.5	5 118.2	2 068 678.1	5 469.4	7 854.1	0.0	2 082 001.5			
December	493 334.5	302 447.3	30 796.5	138 262.7	7 320.9	9 189.6	5 317.4	2 078 216.9	4 920.2	8 177.9	0.0	2 091 314.9			

Table Xb. M3 and counterparts (PLN million)

Period	Net external assets	External assets	External liabilities	Credit to other domestic residents	Loans and other claims on domestic residents	Households	Other financial corporations	Non-financial corporations	Non-profit institutions serving households
December 2021	525 126.8	816 705.3	291 578.5	1 452 454.2	1 327 635.5	826 552.3	96 150.4	362 897.7	8 358.9
January 2022	529 773.2	815 328.8	285 555.6	1 452 636.2	1 328 209.8	825 028.9	94 657.5	366 861.7	8 366.7
February	536 914.0	835 166.5	298 252.5	1 468 173.4	1 343 930.8	826 312.6	98 480.4	377 871.3	8 363.2
March	526 205.3	842 491.2	316 285.9	1 476 090.3	1 353 005.8	823 620.8	107 697.2	381 108.1	8 358.5
April	531 584.1	853 292.2	321 708.0	1 491 535.3	1 367 354.8	821 397.5	111 011.3	394 760.0	8 389.1
May	539 837.9	854 649.0	314 811.1	1 487 438.1	1 363 358.7	816 946.7	112 142.8	394 285.1	8 407.7
June	558 649.9	895 904.5	337 254.6	1 488 027.3	1 369 206.0	817 827.9	115 412.1	396 344.5	8 426.7
July	620 768.2	964 415.1	343 646.9	1 494 469.6	1 376 708.2	817 495.9	116 959.5	402 639.3	8 464.9
August	623 184.8	973 013.0	349 828.3	1 506 281.6	1 389 029.3	814 771.8	116 549.8	418 173.5	8 487.6
September	634 284.6	991 773.0	357 488.4	1 504 617.2	1 386 222.2	816 567.1	115 283.0	415 114.0	8 493.4
October	623 734.8	964 872.9	341 138.1	1 496 953.9	1 377 721.6	805 795.7	118 262.2	414 562.8	8 505.9
November	654 273.2	985 481.8	331 208.6	1 482 445.5	1 364 164.6	801 385.9	117 641.5	406 138.5	8 513.4
December	639 028.9	971 148.5	332 119.6	1 470 373.4	1 346 078.3	794 283.6	113 396.7	398 067.1	8 496.3

Period	Local government	Social security funds	Debt securities	of which issued by:			Equity and non-MMF investment fund shares or units	of which:	
				other financial corporations	non-financial corporations	local government		other financial corporations	non-financial corporations
December 2021	33 676.3	0.0	108 951.2	66 654.5	17 090.4	25 206.2	15 867.5	13 702.5	2 158.3
January 2022	33 295.0	0.0	108 544.4	65 859.8	17 457.9	25 226.7	15 882.1	13 718.4	2 157.0
February	32 903.4	0.0	108 282.1	65 400.4	17 732.7	25 148.9	15 960.5	13 817.9	2 135.8
March	32 221.1	0.0	107 179.2	64 323.7	17 692.7	25 162.8	15 905.4	13 802.1	2 096.5
April	31 796.9	0.0	108 266.1	65 237.6	17 833.6	25 194.9	15 914.3	13 830.1	2 077.4
May	31 576.4	0.0	108 132.7	65 283.7	17 797.4	25 051.6	15 946.7	13 867.4	2 072.4
June	31 194.8	0.0	104 777.7	63 801.3	16 192.0	24 784.4	14 043.5	12 090.2	1 946.4
July	31 148.5	0.0	103 898.6	62 731.0	16 138.2	25 029.4	13 862.8	11 889.2	1 966.7
August	31 046.7	0.0	103 360.5	62 115.0	16 024.2	25 221.3	13 891.8	11 917.4	1 967.4
September	30 764.7	0.0	103 780.3	62 458.6	16 168.1	25 153.6	14 614.6	11 880.2	2 727.4
October	30 595.1	0.0	105 345.6	63 224.3	16 658.8	25 462.5	13 886.7	11 876.0	2 002.2
November	30 485.2	0.0	104 152.6	62 341.2	16 554.7	25 256.7	14 128.3	12 230.1	1 889.6
December	31 834.5	0.0	110 137.8	65 692.0	16 431.6	28 014.2	14 157.3	12 306.9	1 849.0

**Table Xb. M3 and counterparts (PLN million), cont'd**

Period	Credit to central government. net	Credit to central government	of which:		Deposits of central government	Longer-term financial liabilities	Deposits and other liabilities with agreed maturity over 2 years	Households
			loans	debt securities				
			19	20				
December 2021	388 064.5	536 411.4	1 614.4	475 924.7	148 347.0	501 987.7	26 038.9	23 333.8
January 2022	359 661.2	537 859.8	1 590.7	478 209.0	178 198.6	505 020.5	25 514.3	22 978.0
February	375 038.0	540 171.4	1 544.5	479 957.0	165 133.4	522 618.9	25 493.5	23 073.3
March	383 774.1	535 627.1	1 553.8	475 038.4	151 853.0	517 150.4	25 182.1	22 790.5
April	374 125.0	518 321.5	1 584.3	457 283.2	144 196.5	526 991.3	25 191.3	22 864.0
May	352 494.5	518 448.1	1 586.6	457 558.4	165 953.5	511 139.6	26 098.8	23 740.7
June	323 029.2	523 157.2	1 589.9	460 504.2	200 127.9	515 009.8	25 985.2	23 988.8
July	301 432.8	512 208.6	1 608.4	448 324.8	210 775.8	538 719.4	26 651.5	24 615.9
August	309 186.4	512 503.0	1 529.9	448 598.7	203 316.6	540 529.2	26 421.7	24 355.4
September	319 623.0	506 631.2	1 538.5	442 042.0	187 008.3	553 695.5	26 895.6	24 707.7
October	323 558.1	502 670.0	1 553.1	439 372.1	179 111.9	525 777.5	26 589.9	24 445.1
November	325 904.6	502 110.2	1 490.3	434 042.8	176 205.5	520 719.9	26 875.5	24 754.5
December	351 592.8	514 056.3	1 624.5	438 982.4	162 463.6	488 217.7	26 771.3	24 605.1

Period							Debt securities issued with maturity over 2 years	Capital and reserves	Fixed assets (excluding financial fixed assets)	Other items (net)
	Other financial corporations	Non-financial corporations	Non-profit institutions serving households	Local government	Social security funds					
	27	28	29	30	31	32				
December 2021	1 242.6	1 311.1	126.1	25.4	0.0	117 215.5	358 733.3	65 037.0	56 121.5	
January 2022	1 172.3	1 213.7	125.0	25.2	0.0	116 895.0	362 611.3	65 151.0	58 224.7	
February	1 101.6	1 172.2	120.9	25.5	0.0	117 035.8	380 089.6	65 285.1	61 445.3	
March	1 044.8	1 203.6	121.1	22.1	0.0	117 995.2	373 973.2	65 425.9	75 221.1	
April	976.9	1 211.9	112.0	26.5	0.0	117 464.8	384 335.2	65 598.6	77 392.9	
May	903.0	1 307.2	121.3	26.6	0.0	119 926.4	365 114.5	65 730.3	80 773.4	
June	835.0	1 018.4	116.7	26.3	0.0	117 165.2	371 859.3	65 768.4	78 378.6	
July	767.4	1 096.2	145.6	26.4	0.0	121 272.1	390 795.8	65 894.9	68 846.8	
August	663.5	1 231.4	145.0	26.3	0.0	121 554.7	392 552.8	66 175.7	79 723.8	
September	647.2	1 366.3	144.9	29.5	0.0	124 792.1	402 007.9	66 310.7	90 947.4	
October	642.8	1 335.0	137.8	29.3	0.0	121 819.4	377 368.2	66 531.4	86 257.5	
November	633.2	1 326.4	137.3	24.2	0.0	121 024.6	372 819.7	66 547.7	73 550.3	
December	630.3	1 375.6	137.0	23.4	0.0	124 314.9	337 131.4	66 950.1	51 587.4	

**Table XI. Reserve money and counterparts (PLN million)**

Period	Currency in circulation (including MFIs' vault cash)	Banks' current accounts	Required reserves	Reserve money	Net external assets	Credit to central government, net	Other items, net
	1	2	3	4	5	6	7
December 2021	355 244.1	96 186.5	337.6	451 768.2	604 592.0	42 850.0	-195 673.9
January 2022	352 010.0	60 937.9	332.6	413 280.4	599 010.2	47 025.0	-232 754.7
February	379 353.4	77 772.0	328.7	457 454.1	607 761.8	57 455.7	-207 763.3
March	389 412.7	64 345.2	569.3	454 327.3	589 504.5	58 963.0	-194 140.3
April	391 640.8	44 742.8	569.6	436 953.1	605 776.8	46 393.1	-215 216.8
May	385 096.5	73 066.5	609.0	458 772.0	599 760.7	36 247.9	-177 236.6
June	379 021.0	68 419.8	594.0	448 034.8	609 854.0	38 763.0	-200 582.2
July	377 539.7	42 343.8	607.0	420 490.5	640 098.1	27 376.9	-246 984.5
August	373 393.8	64 750.1	565.9	438 709.7	642 164.1	22 400.3	-225 854.7
September	373 318.5	99 875.3	504.1	473 697.9	654 355.0	20 166.2	-200 823.3
October	373 737.5	92 267.0	519.4	466 523.9	628 086.4	33 037.5	-194 599.9
November	369 004.8	75 241.7	556.3	444 802.8	643 194.8	30 438.4	-228 830.4
December	368 288.8	54 030.8	589.2	422 908.8	645 613.2	24 566.4	-247 270.8

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# Methodological notes

## TABLE I. Basic statistical data

Information contained in Table I is derived from the “Statistical Bulletin” of the Statistics Poland (GUS). Definitions of the categories presented in the Table can be found in the GUS publications.

1. Data presented in pts. 1, 2, 6, 7, 10 and 12 comprise national economy entities regardless of their ownership type.
2. The corporate sector comprises entities, which conduct their economic activities in the fields of: forestry, including the provision of services; marine fishing; mining and quarrying, manufacturing; electricity, water, gas and conditioned air production and supply; sanitation management and other sanitation services; construction; repair of motor vehicles, motorcycles; transport, storage and communication; wholesale and retail trade; hotels and restaurants; information and communication; real estate market services; legal services; accounting and tax services for head offices, management solutions; architecture and engineering services; technological research and analysis; advertising; market and public opinion polls; other professions, technical or academic activity; administration and support; recreational, cultural, sporting and other services computer repair and maintenance for individual clients; other business activities.
3. According to the Polish Statistical Classification of Economic Activities (PKD 2007), the notion of “industry” applies to the following sections: “mining and quarrying”, “manufacturing” and “electricity, gas and water production and supply” as well as water supply sanitation management and other sanitation services.
4. Data on the sold production of industry (pt. 1), and the construction and assembly production (pt. 2) refer to economic entities with of more than 9 employees.
5. Data on the value of the sold production of industry (pt. 1) and the construction and assembly production (pt. 2) are disclosed net without the due value added tax (VAT) and the excise tax, while they include subsidies for specific purposes to products and services in the so-called base prices.
6. Construction and assembly production data (pt. 2) refer to works performed in Poland on commission (i.e. for third-party) and directly (i.e. without subcontractors) by the business entities of the construction sector, i.e. classified under “construction” according to the PKD 2007.
7. Information on the sold production of industry (pt. 1) and the construction assembly production (pt. 2) are disclosed without seasonal adjustments.
8. Data on employed persons include persons employed on a full and part-time basis in the main place of work. Employed persons include: persons employed on the basis of a labour contract; owners and co-owners of units engaged in economic activities



including contributing family members; outworkers; agents and persons employed by agents; members of agricultural production co-operatives. Data presented in the Bulletin do not include private farmers or employees of budget entities conducting activity within the scope of national defence and public safety.

9. Unemployment rate (pt. 9) is calculated as a percentage share of the unemployed in the total of employed and unemployed persons over 15 years of age.
10. Revenues from privatisation do not constitute the current revenues of the state budget; instead they finance the budget deficit (pt. 11).
11. Data on financial results of enterprises (pt. 12) pertain to business units that keep accounting books (except for the following units, classified according to PKD 2007 under “agriculture, forestry hunting and fishing” and “financial and insurance services”) with more than 49 employees.

## TABLE II. Financial market – basic information

Information comprised in Table II has been derived from Narodowy Bank Polski (save for the data in pt. 7, supplied by the Warsaw Stock Exchange).

1. Interest rates in Table II are presented on an annual basis at the level which was binding on the last day of a given month. The average monthly interest rate has been given only for the weighted average yield on purchased T-bills or the NBP money-market bills.
2. Pursuant to the provisions of the MPC Resolution, setting of the national bank rediscount rate has been resumed, beginning from March 2020 (pt. 1, col. 5).
3. Total reserve requirements (pt. 2, col. 12) pertain to the volumes declared by banks and binding on the last day of the month.
4. Information on Treasury bill tenders (pt. 3, except for the stocks of bills in circulation at the end of the month – col. 18) comprises data from tenders conducted within one month. The average yield on bills purchased is weighted by the share of the sales of bills with different maturities in the total value of bills purchased. The stock of bills in circulation at month end has been determined on the basis of the agreed maturity, calculated from the day after the tender which resulted in the sale of the bill. The above stock does not include bills in circulation which do not stem from tenders.
5. Information on tenders for the NBP money-market bills (pt. 4, except for the stock of bills in circulation at month end – col. 24) comprises data from tenders conducted within one month. The average yield on bills purchased is weighted by the share of the sales of bills with different maturities in the total value of bills purchased.
6. Information on the NBP’s outright buy (pt. 6) of securities on the secondary market refer to structural open market operations influencing the long-term liquidity of the banking sector, which has been affected by the aftermath of the COVID-19 pandemics.

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7. The below presentation of indices comprises precise data involving the situation of the largest (WIG 20), medium (mWIG40) and small stock companies (sWIG80).
    - **WIG20 index** has been calculated since 16 April 1994 based on the value of portfolio with shares in 20 major and most liquid companies in the main stock market. The initial value of WIG20 index was 1,000 points. It is an price index and thus when it is calculated it accounts only for prices of underlying shares whereas dividend income is excluded. The WIG20 index may not include more than 5 companies from a single exchange sector.
    - **mWIG40 index** is successor of MIDWIG index and has been calculated since 31 December 1997 and comprises 40 medium size companies listed at WSE. The initial value of index was 1,000 points. mWIG40 is an price index and thus when it is calculated it accounts only for prices of underlying shares whereas dividend income is excluded. The mWIG40 index excludes WIG20 and sWIG80 index participants and foreign companies listed at WSE and other markets with the market capitalization at the ranking date above EUR 1 billion.
    - **sWIG80 index** is successor of WIRR index that has been calculated since 31 December 1994 and comprised 1% of smaller companies listed at WSE. The initial value of index was 1,000 points. sWIG80 is an price index and thus when it is calculated it accounts only for prices of underlying shares whereas dividend income is excluded. The sWIG80 index excludes WIG20 and mWIG40 index participants and foreign companies listed at WSE and other markets with the market capitalization at the ranking date above EUR 100 million.
  8. The indices comprise companies from all the quotation markets.
  9. Capitalization refers only to domestic companies.
  10. The P/E ratio shows the relation of the market price to net earnings and is calculated as a quotient of the total market value of companies at month end to their aggregated profits and losses generated within the last four quarters, for which financial data are available.
  11. The turnover ratio shows the relation between the value of sold shares to the average value of shares quoted in a given month.
  12. The monthly turnover value and the turnover ratio comprise the continuous quotation and fixing.

### TABLE III. PLN/USD and PLN/EUR daily exchange rates

The information has been based on the data of Narodowy Bank Polski.

1. NBP average exchange rate is the official exchange rate used for statistical and accounting purposes.

2. The average PLN/USD and PLN/EUR exchange rates and the USD/EUR ratio were calculated as the arithmetic average of NBP average exchange rates for a month (based on daily exchange rates).

### Monetary statistics

Narodowy Bank Polski releases monetary statistics based on data received from monetary financial institutions (MFI).

### Sectoral classification

The below sectoral classification of institutional units of the economy is compliant with the rules set forth in the regulation (EU) No. 549/2013 of the European Parliament and of the Council of 21 May 2013 on the European system of national and regional accounts in the European Union. The details in NBP website <https://www.nbp.pl/en/statystyka/m3/Sectoral-classification-of-the-economy-in-monetary-statistics.pdf>.

Financial sector comprises the following sub-sectors:

- monetary financial institutions (MFIs) – include banks, credit unions and money market funds (MMFs),
- non-MMF investment funds,
- insurance corporations,
- pension funds,
- other financial intermediaries – include financial leasing companies, factoring companies, brokerage offices, and financial companies created for securitization of assets,
- financial auxiliaries and captive financial institutions and money lenders – include bureaux de change, bourses, hire purchase institutions.

Non-financial sector comprises the following sub-sectors:

- non-financial corporations – include state-owned corporations, private corporations, co-operatives and individual entrepreneurs employing more than 9 persons;
- households comprising:
  - individuals,
  - farmers,
  - individual entrepreneurs employing up to 9 persons;
- non-profit institutions serving households.

General government sector comprises the following sub-sectors:

- central government – includes among others public authorities, government administration, state control and law enforcement institutions, courts and tribunals, state colleges and universities, state cultural institutions, etc.);
- local government – includes, among others, self-government bodies, public schools run by local government units, local state cultural institutions, institutions of social assistance);

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– social security funds – comprises Zakład Ubezpieczeń Społecznych (ZUS – Social Insurance Institution) and Kasa Rolniczego Ubezpieczenia Społecznego (KRUS – Agricultural Social Insurance Fund), and funds managed by them, Narodowy Fundusz Zdrowia (National Healthcare Fund) and its regional branches.

#### **TABLE IV. Average MFI interest rates on outstanding amounts, PLN denominated**

Data on zloty denominated businesses refer to all businesses at the end of the reporting month, these concluded prior to the reporting month and still binding as well as new businesses. This interest rate is a quotient of interest on average zloty denominated business by average volume of businesses per reporting month, commissions and other charges excluded.

The interest rate is calculated based on data received from the following banks:

1. Powszechna Kasa Oszczędności Bank Polski SA
2. Bank Handlowy w Warszawie SA
3. ING Bank Śląski SA
4. Santander Bank Polska SA
5. mBank SA
6. Bank Millennium SA
7. Bank Polska Kasa Opieki SA
8. Bank Ochrony Środowiska SA
9. Bank Polskiej Spółdzielczości SA
10. Credit Agricole Bank Polska SA
11. BNP Paribas Bank Polska SA
12. Santander Consumer Bank SA
13. mBank Hipoteczny SA
14. Alior Bank SA
15. Polski Bank Spółdzielczy w Ciechanowie
16. Krakowski Bank Spółdzielczy
17. Wielkopolski Bank Spółdzielczy
18. Bank Spółdzielczy w Brodnicy.

At the end-December 2022, the above banks held 82% of deposits of residents and 82% of credit to households and non-financial corporations. From December 2014 onwards, new methodology for calculating average weighted interest has been applied. New method involves using data on reporting agent's homogenous groups (layers). For more information please refer to [http://www.nbp.pl/en/statystyka/oproc/mir\\_new/manual\\_mir.pdf](http://www.nbp.pl/en/statystyka/oproc/mir_new/manual_mir.pdf).

#### **TABLE V. Average MFI interest rates on new and renegotiated business, PLN denominated**

Information refers to agreements carried out in a given reporting month. Renegotiated existing agreements shall be deemed new businesses.

Interest rates in the statistics on new businesses differ from those in Table IV. The formula is applied to statistical information on new businesses, also known as Narrowly Defined Effective

Rate (NDER). The concept of Narrowly Defined Effective Rate was coined as an opposite to widely understood effective interest rate or Real Interest Rate (RIR). The NDER included, the new business statistics provides RIR for the second category of consumer and house purchase loans. As opposed to the NDER, which covers for interest costs of capital the real interest rate incorporates all charges paid by the borrower. These charges are most of all commissions (brokers included) but also compulsory loan insurance premiums against death or unemployment of the borrower.

For the Table V data are collected from the same sample of banks as in case of Table IV. Weighted average is calculated with the use of the same method.

### **TABLE VI. Average MFI interest rates on new and renegotiated business, EUR denominated**

General rule of calculating interest rate are the same as for Table IV (see star-marked lines) and Table V. The Table IV and V sample of banks applies as well.

### **General comments on Tables VII, VIII, IX**

1. The figures refer to the end of each reporting month and have been derived from balance sheets received from the banks and from the balance sheet of Narodowy Bank Polski and credit unions.
2. The presentation is structured in accordance with the ECB standards.
3. Assets in Tables VII, VIII, IX are shown gross of provisions, accumulated depreciation (except for debt securities presented at the carrying amount).

### **TABLE VII. Aggregated balance sheet of other monetary financial institutions – assets and liabilities**

1. Cash in other MFIs' vaults (assets col. 1) banknotes and coins (excluding commemorative banknotes and coins) issued by NBP held in other MFIs' vaults.
2. Loans and other claims on domestic residents (assets col. 2) loans granted, debt purchased, realised guarantees and sureties, other claims and claims on repurchase agreements.
3. Debt securities (assets col. 6) are debt securities issued by domestic residents and held by other monetary financial institutions.
4. Money market funds shares/units<sup>1</sup> purchased by other MFIs (assets col. 10).

<sup>1</sup> During the period covered by the report there were no investment funds in Poland meeting the criteria of money market funds, hence the zero-sum in the "Money market shares/units".

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5. Equity and non-MMF investment fund shares or units (assets col. 11) include shares, and fixed financial assets issued by domestic residents.
  6. External assets (assets col. 14) include all assets of non-residents denominated in zloty and foreign currencies.
  7. Fixed assets (assets col. 15) include total fixed assets except for financial fixed assets.
  8. Remaining assets (assets col. 16) other cash equivalents held at other monetary financial institutions, vault cash excluded, as well as other claims and interest due and not due on loans and other claims, settlement accounts, claims on third parties, deferred income and expenditure, claims on financial derivatives positions, valuation adjustments, rights issue, other assets.
  9. Deposits and other liabilities to domestic residents (liabilities col. 1) comprise overnight deposits, deposits with agreed maturity, blocked deposits, loans received, claims from cash collateral (classified to “with agreed maturity”), other liabilities and claims on repurchase agreements, subordinated loans except for those in the form of securities issued.
  10. Money market funds shares/units issued<sup>2</sup> are liabilities of money market funds against shares/units issued (liabilities col. 8).
  11. Debt securities issued (liabilities col. 9) are liabilities on own debt securities issued by other monetary financial institutions and subordinated claims in the form of securities issued (purchased by residents and non-residents).
  12. Capital and reserves (liabilities col. 10) comprise share paid-in capital, called-up capital unpaid, own shares, accumulated reserves, general risk provisions, reserve capital and retained earnings, supplementary funds provisions, including specific provisions, impairment allowances, mortgage notes reserves, specific provisions for off-balance liabilities, general risk provisions.
  13. External liabilities (liabilities col. 11) include all liabilities of non-residents denominated in zloty and foreign currencies, except for debt securities issued.
  14. Remaining liabilities (liabilities col. 12) include interest not due on deposits and other liabilities and interest on debt securities issued, suspense and transit items, liabilities against third parties, deferred income and expenditure, liabilities from financial derivatives positions, other liabilities, valuation adjustments.

#### **TABLE VIII. Balance sheet of Narodowy Bank Polski**

1. Domestic assets (zloty and foreign currency, col. 1) loans and other receivables from resident sectors, debt securities issued by resident sectors, equity and non-MMF investment shares/units, fixed assets and remaining assets.

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<sup>2</sup> See footnote 1. Zero-sum in “Money market fund shares/units” results from change indicated in the footnote 1.

2. External assets (col. 2) NBP receivables from nonresidents denominated in zloty and foreign currencies.
3. Currency in circulation (col. 1) banknotes and coins (excluding commemorative banknotes and coins) issued by NBP.
4. Deposits and other liabilities to domestic residents (zloty and foreign currency, col. 2) funds of resident sectors placed with NBP on overnight deposits, deposits with agreed maturity, required reserve deposits, repos and other liabilities.
5. Debt securities issued (col. 6) – debt securities issued by NBP.
6. Capital and reserves (col. 7) statutory fund, reserve fund, profit/loss of the current year and reserves.
7. External liabilities (col. 8) NBP liabilities to nonresidents denominated in zloty and foreign currencies.
8. Remaining liabilities (col. 9) liabilities not included elsewhere (which may include accrued interest on deposits, financial derivative positions, suspense items, transit items).

**TABLE IX. Consolidated balance sheet of monetary financial institutions  
– assets and liabilities**

1. Table IX comprises consolidated balance sheet of monetary financial institutions.
2. In the assets and liabilities of the above-mentioned balance sheet, domestic inter-MFI operations have been netted out.
3. Remaining assets (assets col. 10) and currency in circulation (liabilities col. 1) were decreased by cash in vaults of other monetary financial institutions.

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## List of the most important abbreviations

BFG	Bank Guarantee Fund (Bankowy Fundusz Gwarancyjny)
BIS	Bank for International Settlements
bps	basis points
EBA	European Banking Authority
EBRD	European Bank for Reconstruction and Development
ECB	European Central Bank
ECOFIN	Economic and Financial Affairs Council
ESCB	European System of Central Banks
ESRB	European Systemic Risk Board
EU	European Union
FSC	Financial Stability Committee (Komitet Stabilności Finansowej)
GDP	Gross Domestic Product
GUS	Statistics Poland (Główny Urząd Statystyczny)
IMF	International Monetary Fund
KDPW SA	National Depository for Securities (Krajowy Depozyt Papierów Wartościowych SA)
KIR SA	National Clearing House (Krajowa Izba Rozliczeniowa SA)
KNF	Polish Financial Supervision Authority (Komisja Nadzoru Finansowego)
MPC	Monetary Policy Council (Rada Polityki Pieniężnej)
NBP	Narodowy Bank Polski
OECD	Organisation for Economic Co-operation and Development
PFR	Polish Development Fund (Polski Fundusz Rozwoju)
RTGS	Real-Time Gross Settlement
SDR	Special Drawing Rights
SEPA	Single Euro Payments Area
SORBNET2 SORBNET3	Real-Time Gross Settlement System [RTGS] at the NBP Head Office
TARGET2	Trans-European Automated Real-Time Gross Settlement Express Transfer System
UKNF	Office of the Polish Financial Supervision Authority (Urząd Komisji Nadzoru Finansowego)





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