



NARODOWY
BANK POLSKI

December 2024

Polish Payment System Oversight Report for 2023

Summary



December 2024

Polish Payment System Oversight Report for 2023

Summary

Prepared by a team led by:
Renata Pawlicka

Authors:
Mateusz Dzicher
Anna Kalinowska-Piech
Katarzyna Maskalan
Anna Oko
Michał Popiołek
Sylwia Roszczyk-Sagan
Marta Wójcik-Dębska

© Copyright Narodowy Bank Polski, 2024

Table of contents

Summary	4
Chapter 1 Oversight in Poland	5
1.1 Payment system oversight in Poland	5
1.2 Scope and model of payment system oversight in Poland	6
1.3 Payment system in Poland	9
Chapter 2 Oversight activities in 2023	14
2.1 Large-value payment systems	14
2.2 Retail payment systems	16
2.3 Payment schemes	20
2.4 Securities clearing and settlement systems	22
2.5 Acquiring service	24
Index of abbreviations	26
Index of tables	29

Summary

Polish Payment System Oversight Report for 2023 (the *Report*) is a cyclical study presenting the activities undertaken by Narodowy Bank Polski (NBP) as a part of the payment system oversight exercised by the Governor of NBP.¹

The oversight activities undertaken by Narodowy Bank Polski serve to ensure the smooth functioning of the payment system infrastructure (PSI) and contribute to ensuring the stability of the financial system. The work carried out in 2023, like in previous years, sought to ensure the safety and efficiency of the payment system infrastructure. To this end, the functioning of the elements constituting the PSI was monitored and analysed, the rules of its functioning were assessed, and – in the event of shortcomings identified – measures were taken to ensure that the overseen infrastructures operated in a manner consistent with the generally recognised standards and applicable legislation. The above activities carried out in 2023 are described in the subsequent chapters of the *Report* according to the different areas of oversight carried out.

The most important oversight activities and events in 2023 include:

1. Conducting administrative proceedings, nine of which were concluded with a decision of the Governor of NBP authorising changes to the rules for the functioning of payment systems and schemes. The decisions were preceded by assessments of the solutions introduced by infrastructure operators with a view to ensuring the safety and efficiency of its operation and compliance with the law.
2. Oversight work related to the evaluation of PSI in terms of their compliance with the *Principles for financial market infrastructures*² and *Cyber resilience oversight expectations for financial market infrastructures* (CROE).³
3. Carrying out a study to assess the correct implementation of the requirements of *Regulation (EU) 2015/751 of the European Parliament and of the Council of 29 April 2015 on interchange fees for card-based payment transactions* (IFR) in the Polish market by payment service providers.
4. Entry into force of the *Act of 16 August 2023 amending certain acts in connection with ensuring the development of the financial market and the protection of interests in this market* (hereinafter the ‘amending act’), which introduced amendments⁴ to the *Payment Services Act* (UUP) revoking the competence of the Governor of NBP to issue an opinion in administrative proceedings conducted by the Polish Financial Supervision Authority (KNF) with regard to the planned manner to provide the acquiring service by the NPIs.

¹ The *Report* is based on data and information provided to NBP under the national law and on the basis of publicly available data and information on the overseen payment system infrastructure.

² *Principles for financial market infrastructures* developed by CPMI-IOSCO, April 2012, <http://www.bis.org/cpmi/publ/d101a.pdf>.

³ *Cyber resilience oversight expectations for financial market infrastructures*, ECB, December 2018, https://www.ecb.europa.eu/paym/pdf/cons/cyberresilience/Cyber_resilience_oversight_expectations_for_financial_market_infrastructures.pdf.

⁴ Pursuant to Article 23(13) and (15) of the Amending Act.

Chapter 1

Oversight in Poland

1.1 Payment system oversight in Poland

One of the primary tasks of central banks is to ensure the stability of the financial system, including the payment system, defined as a condition in which the financial system performs its functions continuously and efficiently, including in the event of unexpected and adverse disruptions.

The prerequisite for the stability of the payment system is the uninterrupted operation of the PSI, which enables the flow of money in non-cash transactions.⁵ The payment system consists of systems, institutions, instruments, rules, procedures, standards and technical means which are used to transfer money. An inefficiently functioning payment system infrastructure may have an adverse effect on the stability of a country's economy by, inter alia, potentially undermining confidence in the financial system and in the use of money itself in economic transactions. Therefore, one of the primary tasks of central banks is to ensure the safe and efficient functioning of key elements of the payment system infrastructure.

Narodowy Bank Polski, like other central banks that form the European System of Central Banks (ESCB), seeks to ensure the adequate and safe flow of money by exercising the oversight of the payment system infrastructure. In order to guarantee the smooth functioning of the payment system and thus reduce systemic risk, the oversight focuses primarily on promoting the safety and efficiency of the infrastructure that constitutes the payment system, as well as ensuring that its various components are organised and operate in a safe and lawful manner.

The exercise of the oversight by the Governor of NBP involves, in particular:

1. issuing opinions and decisions on the rules for the functioning of PSI,
2. monitoring and analysing the functioning of PSI,
3. taking action to introduce necessary changes in the way PSI operate.

⁵ The uninterrupted functioning of the payment system infrastructure also consists in ensuring the ability to perform key functions in critical or stress situations where financial, operational or other risks materially affecting the processes of the infrastructure in question materialise. In this respect, the role of the central bank as an overseer is to verify the implementation and effectiveness of procedures related to ensuring business continuity of the infrastructure or the ability to perform tasks operationally in the case of an adverse event, such as a technological incident.

1.2 Scope and model of payment system oversight in Poland

Payment systems, payment schemes, securities clearing and settlement systems and the provision of the acquiring service are subject to oversight.⁶ Detailed information on the legal basis and sources of payment system oversight standards relating to the individual components of the payment system is contained in the *Narodowy Bank Polski payment system oversight policy (Policy)*, endorsed by the NBP management. The information presented below is only an outline of the individual components of the payment system covered by systemic oversight.

Payment systems

Payment systems mean legal relationships, governed by the Polish law, between at least three institutions⁷ (participants), with common rules, applicable to those participants, for performing clearing or execution of their settlement orders (orders by a participant to transfer a sum of money to the account of a recipient with a settlement agent or other orders which give rise to the execution or discharge of a monetary obligation, in accordance with the rules of the payment system).⁸

Source: own compilation based on Article 1(1) and 12(a) of the UoOR.

An authorisation of the Governor of NBP is required to operate payment systems, except for systems operated by NBP. The authorisation of the Governor of NBP is also required to introduce amendments to the rules for the functioning of a payment system.

NBP is authorised to carry out comprehensive assessments of payment systems in operation. The benchmark for the assessment of payment systems in terms of ensuring the safety and efficiency of their functioning is national legislation, generally recognised international standards and European Union requirements, in particular those formulated by the European Central Bank (ECB).

NBP is authorised to source data and information on the day-to-day operation of payment systems, including information on incidents occurring in these systems, i.e. events disrupting or likely to disrupt their adequate operation. Moreover, the payment system operator is obliged to provide, at the request of the Governor of NBP, the documents and information necessary to perform an assessment.

⁶ As of 29 September 2023 it is no longer a competence of the NBP Governor to issue an opinion on the manner to plan the provision of the acquiring service.

⁷ In accordance with Article 1(1) and 5(a)-(d) of the UoOR, these institutions must comprise at least: Narodowy Bank Polski, the central Bank of another state, a domestic bank or a branch of a foreign bank, an investment firm, a foreign legal entity or a public authority body.

⁸ A slightly different, broader definition of the payment system is included in Article 2(27) of the UUP, pursuant to which payment systems constitute systems of monetary transfers based on formal and standardised rules as well as common principles related to processing, clearing or settlement of payment transactions. In order to ensure the efficiency and security of the payment system, its constituent entities are subject to systemic oversight, with national laws and internationally accepted standards and EU regulations as a benchmark.

If it is determined that a payment system is not functioning safely or efficiently or in accordance with the law, the Governor of NBP is authorised to issue binding recommendations. In specific cases, the Governor of NBP has an authority to suspend temporarily or halt the operation of a particular payment system.

Payment schemes

A payment scheme is a set of rules concerning the execution of payment transactions, issuance and acceptance of payment instruments by payment service providers and processing of payment transactions with the use of payment instruments and a payment card scheme.

Source: own compilation based on Article 2(26)(a) of the UUP.

The principles of exercising the oversight of payment schemes by the Governor of NBP are defined in a manner corresponding to the oversight of payment systems. At the same time, the functioning of a payment scheme, with the exception of three-party payment schemes and schemes subject to the oversight of another EU Member State authority or an EU body, requires the authorisation of the Governor of NBP. The authorisation of the Governor of NBP is also required to introduce amendments in the rules of functioning of a payment scheme. NBP also performs comprehensive assessments of the functioning of a payment scheme and has adequate tools to source current information on the functioning of the scheme.

The benchmarks for the assessment of payment schemes in terms of ensuring their safe and efficient operation include national law, EU law, generally recognised international standards and EU requirements. The payment organisation operating the payment scheme is obligated to provide information on the number and value of processed and cleared domestic payment transactions, information on the interchange fees applied by the four-party payment card scheme and information on incidents (i.e. events disrupting or likely to disrupt their adequate operation).

If it is determined that a card scheme is not functioning safely or efficiently or in accordance with the law, the Governor of NBP is authorised to provide binding recommendations to the entity operating the scheme. In specific cases, the Governor of NBP has the authority to impose financial penalties on the entity operating the scheme or suspend the operation of a particular payment scheme.

Securities clearing and settlement systems

Securities settlement systems are legal relationships governed by Polish law between at least three institutions⁹, in the framework of which common rules for clearing or execution of settlement orders apply in transactions concluded in financial instrument trading, including derivatives (participant's orders related to the transfer of securities by means of relevant entries in the securities registers maintained or otherwise).

Source: own compilation based on Article 1(2) and 12(b) of the UoOR.

The Governor of NBP exercises oversight of securities clearing and settlement systems consisting in an assessment of their functioning in terms of safety, efficiency and compliance with the law. The key instrument for exercising oversight in this area is issuing (upon the request of the KNF as a competent authority) opinions concerning, inter alia, granting authorisations to operate clearing houses and settlement houses as well as approving the rules of KDPW, the subsidiary to which KDPW SA delegated the performance of activities related to certain tasks (currently – KDPW_CCP SA), clearing houses and settlement houses. In addition, cooperation with the KNF also includes granting authorisations to CCPs and CSDs and on-going oversight of the systems operated by these entities.

The benchmark for the assessment of securities clearing and settlement systems against the criteria of ensuring safe and efficient functioning is the national law, EU law, generally recognised international standards and EU requirements. These imply, inter alia, the participation of NBP representatives in the colleges and committees of the European Securities and Markets Authority (ESMA).

In addition, NBP is authorised to collect statistical data and information related to clearing and settlement operations performed in individual systems as well as information concerning incidents occurring in those systems (i.e. events disrupting or likely to disrupt their adequate operation).

NBP, as part of oversight, on the basis of information it obtains in-house and as a result of its cooperation with KNF, conducts also its own oversight analyses to monitor the activities of securities clearing and settlement systems.

⁹ Within the meaning of the UOIF, at least one of those institutions which are participants of the payment system or the securities settlement system and which are responsible for the fulfilment of the obligations stemming from the execution of settlement orders in the system should be the following: NBP, the central bank of another state, a domestic bank, a branch of a foreign bank, a credit institution or its branch, an investment company or a public authority.

Acquiring service

Provision of the acquiring service means the activity enabling the execution of payment transactions, initiated by or through the merchant, using the payer's payment instrument, with the exception of activities entailing clearing and settlement of the payment transaction in the payment system, within the meaning of the Settlement Finality Act. The service consists of processing the authorisation, transferring the payer's or merchant's payment orders to the payment card issuer or payment systems, with the aim of transferring the due funds to the merchant.

Source: own compilation based on Article 3(1)(5) of the UUP.

The Governor of NBP co-participates in the KNF's oversight of national payment institutions providing acquiring services, as the issuance by the KNF of a permit to operate as a national payment institution, including the provision of the above-mentioned service, requires a prior consultation with the Governor of NBP.

The assessment of the provision of the acquiring service is carried out by the Governor of NBP in accordance with the criteria of safety, efficiency and compliance with the national law. The provisions of the national law and international standards serve as a benchmark in the assessment of the acquiring service. The Governor of NBP is also authorised to collect statistical data on the activities of clearing agents and issuers of payment instruments.

On 29 September 2023, the Act of 16 August 2023 amending certain laws in connection with ensuring the development of the financial market and the protection of interests in this market entered into force. The amending Act, pursuant to Article 23(13) and (15), amended the UUP, according to which the jurisdiction of the Governor as a co-participating body in administrative proceedings to issue an opinion on the planned manner to provide the acquiring service referred to in Article 3(1)(5) of the UUP was repealed as of the date of entry into force of the amending Act.

1.3 Payment system in Poland

The payment system is a network of institutional, legal, technical and organisational linkages within a country enabling the circulation of cash and non-cash payments and trading in financial instruments. It provides the basis for the circulation of money in the national economy and is an important element in maintaining financial stability in Poland. Participants in the payment system include both individuals (consumers), businesses, banks, non-bank payment service providers, investment firms, as well as operators of payment systems or securities clearing and settlement systems, entities operating payment schemes and entities performing and ensuring final settlement.

In 2023, the oversight exercised by the Governor of NBP included:

- 2 large-value payment systems:
 - SORBNET2 – a payment system in PLN operated by NBP;

- TARGET2-NBP¹⁰ – a payment system in EUR operated by NBP with regard to legal issues and by four central banks of the euro area on the operational side;
- 6 retail payment systems:
 - 3 systems operated by KIR, i.e. Elixir, Euro Elixir and Express Elixir;
 - BlueCash, operated by Autopay SA¹¹;
 - BLIK Payment System (BLIK system), operated by PSP;
 - KSR, operated by Fiserv Polska SA;
- 11 payment schemes:
 - 3 card schemes: Visa Europe, Mastercard and American Express;
 - 8 non-card payment schemes: the BLIK Payment Scheme (BLIK scheme), YetiPay, mPay, SkyCash, Smoopay¹², Billon, payeye¹³ and PaySpe;
- 5 securities clearing and settlement systems:
 - SKARBNET4 – registration system for NBP money bills and Treasury bills;
 - the settlement system for transactions concluded in financial instruments trading operated by KDPW SA (the settlement system operated by KDPW);
 - the clearing system for transactions in financial instruments pursuant to Rules of Transaction Clearing (organised trading) operated by KDPW_CCP SA and the clearing system for transactions in financial instruments pursuant to Rules of Transaction Clearing (non-organised trading) operated by KDPW_CCP SA (jointly referred to as the clearing systems operated by KDPW_CCP);
 - the securities clearing and settlement system of financial instruments operated by Izba Rozliczeniowa Giełd Towarowych SA (IRGiT SRF).

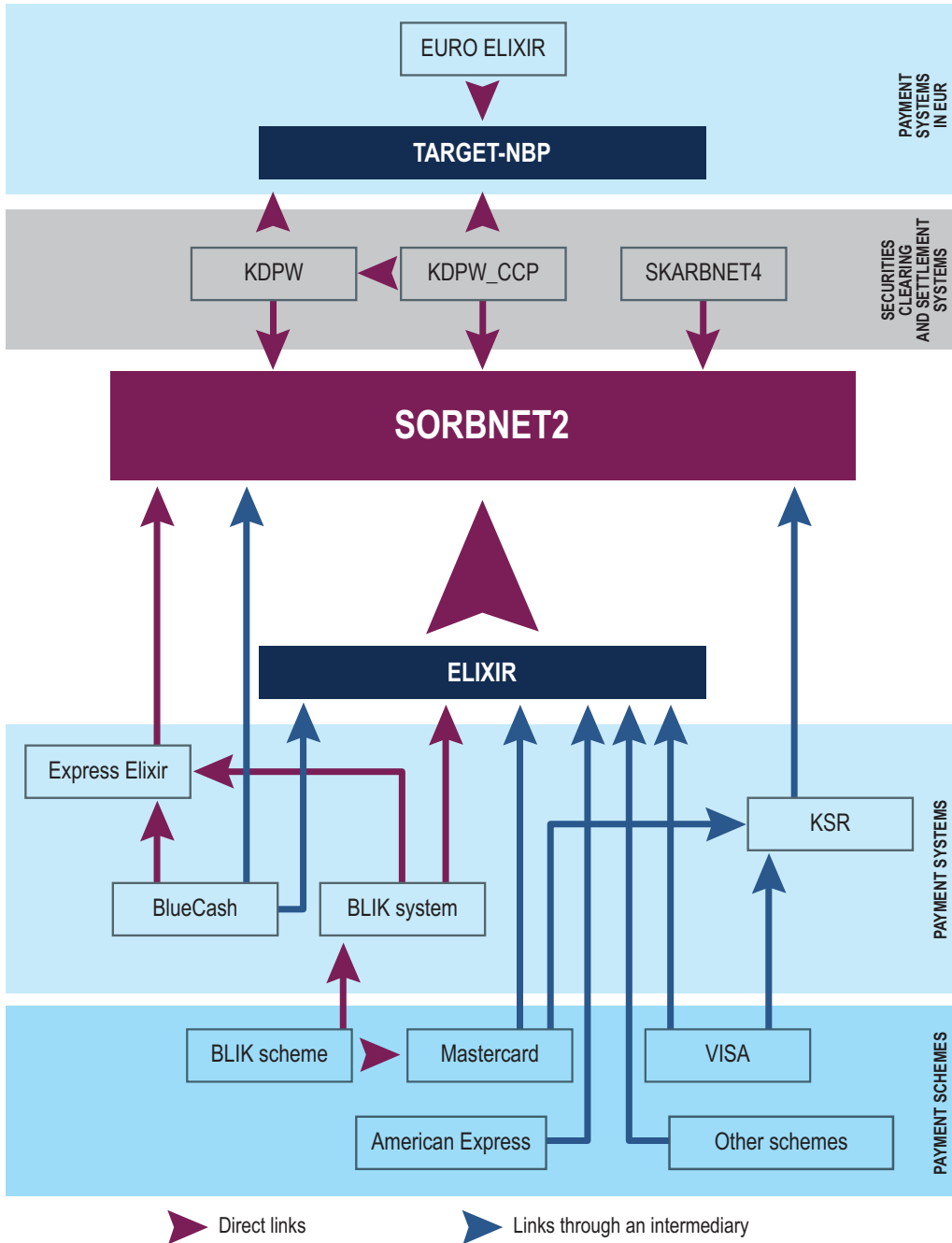
¹⁰ On 20 March 2023, a new TARGET system was launched, replacing TARGET2, in operation since November 2007, as well as the TARGET2-Securities and TIPS systems. The operation of the TARGET system is based on a consolidated platform developed by four central banks of the EU, i.e. France, Germany, Italy and Spain.

¹¹ Until August 2023 Autopay SA operated under the name Blue Media SA.

¹² On 10 October 2023 the Smoopay payment scheme was removed from the NBP list of payment schemes operating in Poland.

¹³ On 9 January 2024 the payeye payment system was removed from the NBP list of payment schemes operating in Poland.

Figure 1.1. Diagram of links in the Polish payment system



All of the above systems and schemes operate in close interdependence both with each other and with other participants in the payment system, such as banks, acquiring service

providers and individual customers. The figure above shows the links between the active¹⁴ systems and schemes overseen by the Governor of NBP at the end of 2023.

The structure of cashflows in the overseen PSI clearly indicates the overriding role of SORBNET2 in the Polish payment system. The amount resulting from each payment order in PLN, irrespective of the system or scheme in which it was initiated, is ultimately transferred to the SORBNET2 system, where real time gross settlement (RTGS) is performed. Considering the foregoing and the fact that SORBNET2 is the only system for large-value payments in PLN in Poland, in accordance with the provisions of the Policy it is classified as one of the systemically important payment systems, while its safe and efficient functioning is crucial for the stability of the entire payment system in Poland.

The second systemically important large-value payment system in Poland is TARGET-NBP. It is the Polish component of TARGET system¹⁵ for the settlement of payment orders in euro executed in the territory of the EU. On 20 March 2023 ECB launched the consolidated TARGET Services platform encompassing Central Liquidity Management (CLM), RTGS (T2, payment settlement), T2S (securities settlement) and TIPS (instant payments) systems¹⁶, replacing existing separate systems: TARGET2, TARGET2-Securities and TARGET Instant Payment Settlement. From the technical point of view, TARGET is a uniform IT system developed and operated by 4 central banks of euro area countries, i.e. France, Germany, Italy and Spain. In performing oversight of TARGET-NBP, NBP cooperates closely in this area with the ESCB central banks participating in TARGET, including the ECB, which plays the leading role in TARGET oversight.

Retail payment orders in EUR from the Polish market are processed in the Euro Elixir system. It is the only payment system in Poland in which retail orders are settled in foreign currency and has therefore been recognised as a systemically important retail payment system. It performs net deferred net settlements¹⁷ (DNS) and has operational links with the TARGET-NBP system and, via NBP¹⁸, with the STEP2 system.

Retail payment orders in PLN, on the other hand, are executed in Poland primarily through the Elixir payment system. It is a systemically important retail payment system in Poland, and the only one where direct and indirect participants include all banks catering for retail customers with operations in Poland. The settlement of the Elixir system is performed on a net basis in three settlement sessions in SORBNET2 using funds in the current accounts of direct participants.

¹⁴ The figure does not include the IRGiT SRF system since it did not settle any financial transactions in the analysed period.

¹⁵ It comprises 21 national RTGS components of euro area Member States (including the ECB's RTGS system) and 4 national RTGS components of non-euro area countries.

¹⁶ It is also planned to launch the ECMS (Eurosystem Collateral Management System) service, i.e. a uniform system for managing assets used as collateral in Eurosystem credit operations.

¹⁷ Using a multilateral compensation mechanism.

¹⁸ STEP-2 is an pan-European system operated by EBA Clearing which processes bulk euro payments. Due to the legal regulations regarding participation in the STEP2-T system, KIR SA as a non-bank entity, is not allowed to independently participate in the exchange of orders within the STEP2 system. Therefore, in order to be able to settle orders transmitted by participants in the Euro Elixir system to and from the STEP2 system, KIR SA must use a central bank or a commercial bank as an intermediary.

Poland stands out from the EU countries in terms of the notable number of retail payment systems in operation. In the EU, an average of two retail payment systems per country was seen in 2023,¹⁹ while in Poland there are six systems in operation, including two instant payment systems and, additionally, one instant mobile payment system (in the perception of users, the BLIK system acts as an instant system).

The number of non-card payment schemes operating in Poland is also notable. In 2023, eight non-card payment schemes operating in Poland were under the oversight of the Governor of NBP, while with regard to card schemes, the Polish payment market was divided between three international schemes with global reach. Two of them formed a duopoly, taking control of almost 100% of the market both in terms of the number and value of completed transactions.

The retail payment systems and schemes operating in Poland form a network. In the systems and schemes offering instant payments, i.e. BlueCash and BLIK for P2P transactions²⁰, Express Elixir is used as the intermediary system for the settlement of transactions. The link is particularly clear when observing the increase in the Express Elixir transactions as a result of the growing popularity of P2P transactions in BLIK. The BLIK system and BLIK scheme have yet another unusual link to an external scheme. BLIK, in cooperation with Mastercard, offers the possibility of contactless payments with a phone anywhere in the world where Mastercard cards are accepted. Clearing of these transactions takes place either via BLIK system or the Mastercard scheme. Other BLIK transactions are transmitted for clearing directly to the Elixir.

The year 2023 saw continued dynamic growth of the market for payment instruments and services, particularly in contactless cards and mobile payments. Poland belongs to the group of countries with the highest share of contactless cards in the world. As at the end of December 2023, they accounted for 97.2% of all payment cards in Poland, and their share in the number and value of card transactions continue to increase. In addition to contactless cards, mobile payments, e.g. those offered by the BLIK system, have been developing very rapidly. The BLIK system allows users to make payments with, inter alia, mobile phones or tablets, both online and in brick-and-mortar shops, service outlets, public transport, public offices and between mobile phone users (P2P), as well as enabling ATM withdrawals and deposits.

In some of the securities clearing and settlement systems operating in Poland, transactions are carried out both in PLN and in EUR (systems operated by GK KDPW entities), and in others only in the domestic currency (SKARBNET4 and IRGiT SFR). All these systems have connections to SORBNET2, to which they transfer for settlement payment orders resulting from operations in securities denominated in PLN, whereas operations denominated in EUR are transferred for settlement by KDPW SA to TARGET.

¹⁹ Own calculations based on ECB data: <https://sdw.ecb.europa.eu/reports.do?node=1000002752>.

²⁰ Person to person transfer of money without knowing the bank account number of the payee, but only using their telephone number. To activate the service, a BLIK system user is only required to link their telephone number with a bank account number in an application.

Chapter 2

Oversight activities in 2023

In 2023, NBP's oversight activities largely focused on assessments of applications submitted by operators of the overseen systems and schemes, as well as conducting comprehensive assessments of the rules for the functioning of these infrastructures. The assessments were carried out in the course of on-going administrative proceedings, by verifying the compliance of the rules for the functioning of the overseen systems with international standards or as part of activities carried out in cooperation with other authorities.

2.1 Large-value payment systems

Oversight activities related to large-value payment systems

In 2023, as part of the cyclical oversight activities, a survey of SORBNET2 was carried out to identify critical participants. Entities considered as critical participants of the SORBNET2 payment system meet the adopted criteria, i.e. they are:

- operators of external systems functioning as: a large-value payment system, systemically important payment system, systemically prominent payment system, central securities depository, central counterparty;
- banks, if their net turnover exceeds 5% of the turnover of the entire system in the preceding calendar year;
- banks that, when a simulation of an all-day non-execution of their payment orders, cause a non-execution of more than 2.5% of the orders in the system.

Critical participants of SORBNET2 jointly accounted for more than 70% of the system's turnover.

Also, as part of oversight activities, a cyclical test of the resilience of the SORBNET2 model to extreme but plausible market conditions was carried out through simulations using five groups of test scenarios. The scenarios involved a temporary shortage of sent payment orders by the largest or three largest participants to the system and a reduction of up to 25% of the value of the intraday credit available to participants in the system.

What is more, in order to assess the risk of payment gridlocks in the system, a study was carried out to verify the potential occurrence of a "free-rider effect" among SORBNET2 participants. Gridlocks may arise as a result of a participant delaying the provision of some of its own or external liquidity to the system, which may result in a lack of immediate matching of the value of incoming and outgoing payment orders in the system.

On 20 March 2023, the ECB launched the new TARGET Services consolidated platform operating in a modular design, which required changes to reporting as well as data

presentation. At the time of the completion of the report, not all the functionalities and predefined reports in the TARGET reporting module, i.e. Data Warehouse, were functioning properly yet.

The fourth edition of the survey on the cyber resilience²¹ of, inter alia, the SORBNET2 large-value payment system was completed. The survey was conducted according to the standard set by the ECB²² and included questions on the level of system's cyber resilience. The assessment of cyber maturity in this round of the survey was slightly modified in comparison to the previous rounds and was to reflect the degree of adjustment to three levels of expectation established by CROE ("evolving", "advancing" and "innovating").

Incidents in large-value payment systems

In 2023, five incidents were recorded in large-value payment systems. The causes of these incidents were independent of the system's operator and can be divided into two groups: technical failures at the telecommunications operator's end and problems at the IT service provider's end. Although these incidents had an impact on the individual large-value payment systems, they did not affect the smooth and efficient functioning of the whole payment system in Poland.

Analysis of statistical data related to large-value payment systems

Both large-value systems operated by NBP, i.e. SORBNET2 and TARGET-NBP, showed stable growth in 2019-2023 both in terms of the number and the value of payment orders. The growth in the number and value of transactions from 2019 to the end of 2023 in SORBNET2 was 28.0% and 69.3%, respectively, while in TARGET it was 62.3% and 131.2% respectively. In 2023, the total number of orders processed in both large-value payment systems amounted to 8.4 million, a rise of 7.7% since 2022. The total value of orders, on the other hand, amounted to PLN 154.0 trillion and showed a growth of 8.9%.

Table 2.1. Data relating to SORBNET2 and TARGET-NBP large-value systems²³

	2019	2020	2021	2022	2023
Number of completed transactions (million)	6.1	6.1	6.7	7.8	8.4
Value of completed transactions (PLN trillion)	87.4	104.5	131.3	141.4	154.0

Source: NBP calculations based on NBP data.

²¹ The survey included SORBNET2, Elixir, Euro Elixir, Express Elixir, BLIK, BlueCash, KSR, SKARBNET4 and the securities settlement systems operated by the KDPW_CCP and the securities settlement system operated by the KDPW.

²² The ECB recommends assessing the systems examined on the basis of the responses to the questionnaires distributed by the overseers.

²³ The value of TARGET2-NBP transactions was converted into PLN at the average NBP exchange rate for each month.

2.2 Retail payment systems

Proceedings concerning retail payment systems

In 2023, five administrative proceedings were conducted which were concluded with decisions issued by the Governor of NBP authorising amendments to:

1. rules for the functioning of Elixir, involving the establishment of the *Principles for limiting credit and liquidity risk in the Elixir system by Krajowa Izba Rozliczeniowa SA*;
2. rules for the functioning of Elixir, involving the introduction of a separate participation agreement template for NBP²⁴;
3. rules for the functioning of Express Elixir, harmonising the rules and regulations of the payment systems operated by KIR, including the changes resulting from the assessment of the functioning of the Elixir payment system conducted by NBP²⁵;
4. rules for the functioning of Express Elixir, involving the introduction of a separate participation agreement template for NBP;
5. rules for the functioning of the BLIK system, regarding modifications to the rules defining when a settlement order is entered into the system and when it can no longer be revoked.

Other oversight activities related to retail payment systems

The fourth round²⁶ was completed of the NBP's survey on the cyber resilience of, inter alia, retail payment systems operated by KIR (Elixir, Express Elixir, Euro Elixir), Autopay SA (BlueCash), Fiserv Polska SA (Krajowy System Rozliczeń) and PSP (BLIK system). The survey was conducted according to the standards set by the ECB²⁷ and included questions on the level of system cyber resilience. The assessment of cyber maturity in this round of the survey was slightly modified in comparison to the previous rounds and was to reflect the degree of compliance with the respective three levels of expectation established by CROE ("evolving", "advancing" and "innovating").

As part of a comprehensive assessment of the three payment systems operated by KIR (Elixir, Express Elixir and Euro Elixir) against CROE requirements that started in March 2022 and after a detailed analysis of the documentation, and responses submitted by KIR, final reports

²⁴ The need to conclude an annex with NBP introducing the amended text of the participation agreement resulted from the KIR's earlier implementation of the guidelines and recommendations made in the Evaluation of the Elixir system for compliance with the *Principles for Financial Market Infrastructures – as at 30 June 2018*.

²⁵ The findings of this assessment were presented in the report: *Assessment of the Elixir system in terms of its compliance with the Principles for Financial Market Infrastructures – as at 30 June 2018*, adopted by the NBP management board in April 2021.

²⁶ In the first and second round, only one retail payment system (Elixir) was assessed.

²⁷ The EBC recommends assessing the systems examined on the basis of the responses to the questionnaires distributed by the overseers.

are being prepared on the compliance of these systems with the development-level CROE requirements.²⁸

Selected recommendations arising from a completed in April 2021 assessment of Elixir against *Principles for Financial Markets Infrastructure* were verified if implemented by the system's operator.

Selected recommendations arising from a completed in June 2022 assessment of BlueCash against *Principles for Financial Markets Infrastructure* were verified if implemented by the system's operator.

Also, recommendations arising from a completed in 2021 NBP's survey on the cyber resilience were verified if implemented by KSR and BlueCash system operators.

Incidents in retail payment systems

In 2023, a total of 14 incidents were recorded in retail payment systems. These incidents were most frequently a result of a hardware failure, a DDoS²⁹ attack on the system infrastructure or problems of a third party (e.g. a service provider). Despite their impact on the smooth operation of individual systems, these incidents were not significant for the proper functioning of the payment system in Poland as a whole.

Analysis of statistical data concerning payment schemes

Retail payment systems play a key role in the payment system infrastructure in terms of the number of executed payment orders, ensuring clearing of low-value client transactions, i.e. these with a value below PLN 1 million.

A total of 4.1 billion orders with the value of PLN 10.5 trillion were executed in all retail payment systems, representing a year-on-year increase of 15.6% in terms of number and 7.2% in terms of value. The upward trend, both for the number and value of orders, continued throughout the five-year period (2019-2023), which is largely due to Poland's growing share of non-cash payments in all Polish payments (from 46% in 2019 to 65% in 2023).³⁰

²⁸ In accordance with the *Policy*, NBP applies CROE requirements defined at the development level to the overseen payment systems. The development stage comprises 155 requirements at the basic level. The advanced stage encompasses requirements defined at the development level and 84 additional requirements, while the innovating stage – the highest one – comprises 50 additional requirements alongside the development and advanced stage requirements.

²⁹ DDoS (distributed denial of service) attack consists in attacking a specific service or account from several computers simultaneously, with the consequence of blocking access to links or web services and interrupting system operation or completely suspending it.

³⁰ Payment habits and the development of card acceptance networks in Poland: consumer survey 2023, 2024 POLASIK Research.

Table 2.2. Data concerning retail payment systems

	2019	2020	2021	2022	2023
Number of completed transactions (billions)	2.3	2.5	3.0	3.5	4.1
Value of completed transactions (PLN trillion)	6.7	6.9	8.1	9.8	10.5

Source: NBP calculations based on NBP data.

Taking the criterion of the number of executed orders as relevant, individual retail payment systems were ranked according to the scale of their operations and, consequently, their importance for the proper functioning of the payment system in Poland.

Elixir

In the entire period under review Elixir ranks first. In 2023, 54% of all payment orders were executed in the system. However, a gradual decrease in its market share (from 85% in 2019) has been observed for a number of years, mainly to the benefit of BLIK system.

Table 2.3. Elixir system share in the retail payments market (%)

	2019	2020	2021	2022	2023
Share in number of executed orders	85	79	71	62	54
Share in the value of executed orders	85	87	84	80	81

Source: NBP calculations based on KIR data.

BLIK

Among retail payment systems an mobile payment system, i.e. BLIK system is distinguished, which share of the retail payment market, both in terms of number and value, has been growing rapidly for last several years. In 2023, the share of transactions in BLIK system in total retail payments amounted to 34% in terms of number and 1.8% in terms of value. Since 2019, both the number and value of executed orders have increased many per cent each year.³¹ As for the end of 2022, BLIK system qualified as a prominently important retail payment system according to the criteria contained in the Policy. This classification of the system results in it being subject to stricter criteria and additional reporting obligations.

Table 2.4. BLIK system share in the retail payments market (%)

	2019	2020	2021	2022	2023
Share in number of executed orders	9	15	22	29	34
Share in the value of executed orders	0.32	0.62	1.04	1.40	1.82

Source: NBP calculations based on PSP data.

³¹ The increase in 2019 was 143% for the number and 129% for the value, followed by 92% and 98% in 2020, 73% and 99% in 2021, 53% and 62% in 2022, and 36% and 39% in 2023.

Euro Elixir

Euro Elixir is recognised as a systemically important payment system, since it is the only retail system where orders are processed in a currency other than PLN, i.e. in EUR. The number of orders processed in this system has remained relatively low, while their share in all retail payment orders in Poland in 2023 amounted to only 1.3% (representing a slight decrease from 1.7% in 2019).

Table 2.5. Euro Elixir system share in the retail payments market (%)

	2019	2020	2021	2022	2023
Share in number of executed orders	1.68	1.30	1.34	1.36	1.27
Share in the value of executed orders	14	11	13	17	15

Source: NBP calculations based on KIR data.

Express Elixir and BlueCash

Among retail payment systems, instant payment systems, i.e. Express Elixir and BlueCash represent a separate group. Instant payments are a retail payment category that, along with mobile payments, have recently been the most rapidly developing part of the payment market. The rise in transactions in the Express Elixir system is largely the effect of the popularity of P2P transactions executed under the BLIK scheme with the use of the Express Elixir.

Table 2.6. Express Elixir and BlueCash system share in the retail payments market (%)

Express Elixir	2019	2020	2021	2022	2023
Share in number of executed orders	1.18	2.32	4.11	6.44	9.04
Share in the value of executed orders	0.66	0.95	1.22	1.5	1.93
BlueCash	2019	2020	2021	2022	2023
Share in number of executed orders	0.52	0.39	0.39	0.40	0.35
Share in the value of executed orders	0.20	0.15	0.16	0.18	0.19

Source: NBP compilation based on KIR and Autopay data.

In 2023, the share of transactions in instant payment systems in overall retail payments amounted to 9.4% in terms of number and 2.1% in terms of value. This means that since 2019 the upward trend in instant payments has continued (in 2019, the share stood at 1.7% of the number and 0.9% of the value of the transactions).

KSR

KSR, i.e. the system for settling payment card transactions, is characterised by a steadily decreasing share in the market for retail payments. In 2023, it processed 1.3% of the number of retail payments, corresponding to 0.15% of the value. Since 2019, the share of transactions completed in KSR in all retail system orders has been declining markedly (from 3.0% in 2019),

while the value of the completed transactions has remained at a similar, although decreasing level (down from 0.2% in 2019).

Table 2.7. KSR system share in the retail payments market (%)

	2019	2020	2021	2022	2023
Share in number of orders executed	2.95	1.85	1.71	1.39	1.26
Share in the value of completed orders	0.24	0.18	0.17	0.15	0.15

Source: Own compilation based on data from Fiserv Polska SA.

2.3 Payment schemes

Proceedings concerning payment schemes

In 2023, the Governor of NBP issued decisions on the functioning of payment schemes:

1. Visa Europe – authorisation to amend the rules for the functioning of the payment scheme which comprised, in particular, a change in the clearing and settlement schedule for domestic transactions in PLN and a change and appointment of an alternative settlement agent for these transactions.
2. BLIK – three decisions authorising the amendments to the rules for the functioning of the scheme, consisting in changes to the configuration of services in the public cloud leading to increased efficiency of the system, the introduction of payments to foundations or associations and entities authorised to accept payments of a legal-administrative nature, and modifications to the functionality of BLIK-C contactless transactions.³²

Other oversight activities concerning payment schemes

In connection with the information submitted by Planet Pay sp. z o.o., based in Warsaw, on the termination of its operations in Poland, the Snoopay payment system was excluded from the list of payment schemes overseen by the Governor of NBP.

Incidents concerning payment schemes

Payment scheme operators reported 8 incidents in 2023. The causes of these incidents were mainly problems of third parties, DDoS attacks and hardware failures. Despite their impact on the smooth operation of individual schemes, these incidents were not significant for the proper functioning of the payment system in Poland as a whole.

³² BLIK-C contactless payment service in POS terminals provided via the BLIK scheme in collaboration with Mastercard.

Analysis of statistical data concerning payment schemes

A clear upward trend in both the number and value of completed transactions can be observed in all payment schemes between 2019 and the end of 2023. During these five years, the market for the schemes nearly doubled. In 2023, there was a further marked increase in cleared transactions. In terms of number, the transactions amounted to 9.6 billion (an increase of 13.4% compared to 2022), and PLN 841.9 billion in terms of value (an increase of 15.7%).

Table 2.8. Data on all payment schemes

	2019	2020	2021	2022	2023
Number of transactions (billion)	5.2	5.7	7.0	8.5	9.6
Value of transactions (PLN billion)	437.9	489.7	592.5	727.7	841.9

Source: Own compilation based on data of payment scheme operators.

In 2023, a total of 8.2 billion transactions worth PLN 648.6 billion were executed in card schemes, representing an increase of 10.4% and 10.4% in terms of number and value, respectively, compared to 2022. In all the non-card schemes, growth was significantly higher in 2023 – a total of 1.4 billion transactions worth PLN 193.3 billion were executed, representing an increase of 34.4% and 37.8% in terms of number and value, respectively, compared to 2022. Among all the schemes, BLIK scheme has for years stood out with its fastest growth. The share of transactions processed in BLIK scheme in all payment scheme transactions in 2023 was 14.4% in terms of number and 22.9% in terms of value respectively. This means a significant increase in BLIK scheme's market share since 2019, when it stood at a mere 3.9% and 6.3%, respectively.

Table 2.9. Data on card and non-card payment schemes

Card schemes	2019	2020	2021	2022	2023
Number of transactions (billion)	5.0	5.3	6.3	7.4	8.2
Value of transactions (PLN billion)	410.0	435.7	498.4	587.5	648.6
Non-card schemes	2019	2020	2021	2022	2023
Number of transactions (billion)	0.2	0.4	0.7	1.1	1.4
Value of transactions (PLN billion)	27.9	54.0	94.1	140.2	193.3

Source: Own compilation based on data of payment scheme operators.

As for the end of 2023, there were 45.4 million payment cards in the market (against 44.5 million cards at the end of 2022, an increase of 2.0%), of which the share of cards issued by payment organisations Visa Europe Ltd. and Mastercard Europe SA jointly accounted for 99.8% of all payment cards issued in Poland.³³ The share of payment cards with the American Express logo did not exceed 0.1% of all cards issued. In addition to the cards issued by the above-mentioned card organisations, there were also issuers' proprietary cards on the Polish market (these are cards of a purely local nature, used mainly for cash withdrawals from

³³ In 2023, Visa Europe Ltd. and Mastercard Europe SA recorded an increase in the number of payment cards issued compared to 2022.

ATMs, issued mostly by cooperative banks), which accounted for approximately 0.1% of all cards issued in Poland.

An analysis was also conducted of the level of interchange fees³⁴ (charged in 2019-2023) by individual card organisations, broken down into debit cards and credit cards.³⁵ No irregularities were found in the application of the interchange fees by the organisations.

In 2023, NBP carried out, jointly with the KNF, a study to assess the due application in the Polish market of the requirements of *Regulation (EU) 2015/751 of the European Parliament and of the Council of 29 April 2015 on interchange fees for card-based payment transactions (IFR)*. The study covered payment service providers, i.e. issuers of payment instruments and settlement agents.

2.4 Securities clearing and settlement systems

Resolutions of the Governor of NBP concerning securities clearing systems and securities settlement systems

In 2023, the Governor of NBP issued one opinion in the form of a resolution concerning the systems for securities clearing and settlement. The opinion issued concerned amendments to the *KDPW Rules* relating to transactions concluded under auctions organised by NBP. The amendments consisted in extending the scope of the regulation to also include other bonds secured by surety or guarantee of the State Treasury than bonds issued by BGK, indicated in the existing wording of the rules.

Other oversight activities regarding securities clearing systems and securities settlement systems

NBP, as a member of the College for KDPW_CCP, in which it participates in its capacity of a central bank of issue with the most significant currency for cleared financial instruments and as a member of the ESCB responsible for the oversight of CCP, participated in the process of the analysis of:

- the material drawn up in connection with the annual review and assessment of KDPW_CCP for the period 1 October 2021 to 30 September 2022;
- recovery plan for KDPW_CCP.

³⁴ The Governor of NBP oversees the operation of payment schemes on the basis of Article 14(2) of the UUP, while the rules on the collection of the interchange fee, i.e. the fee paid to payment card issuers for a payment transaction, stem from the IFR regulation.

³⁵ In accordance with Article 132zq(3) of the UUP, a four-party card organisation or an organisation recognised as a four-party one provides NBP with quarterly information required to check the accuracy of application of the level of the interchange fee (fees levied by the card issuer on its clearing agents for each payment card transaction).

Pursuant to Article 22(1) of the CSDR Regulation, KNF has requested the Governor of NBP, as the relevant authority within the meaning of that regulation, to provide an opinion on the annual review and assessment of the activities of the KDPW SA (as a CSD operating a securities settlement system).

The fourth edition of the NBP's survey on the cyber resilience of the securities clearing and settlement systems comprising the systems operated by KDPW, KDPW_CCP and NBP (SKARBNET4) was concluded. The survey was conducted in compliance with the standards set by the ECB³⁶ and included questions on the level of the systems' cyber resilience. The assessment of cyber maturity was slightly modified in comparison to the previous rounds and was designed to reflect the degree of compliance with the three levels of expectation established by CROE.

Incidents in the securities clearing systems and securities settlement systems

Two incidents were recorded in the securities clearing and settlement systems in 2023, which were due to problems in communication with SORBNET2.

Analysis of statistical data concerning securities clearing systems and securities settlement systems

In 2023, an increase was observed in the value of the operations in all the securities clearing and settlement systems compared to 2022. In terms of the number of transactions, growth was observed in two out of the three systems.

KDPW_CCP systems

In 2023, the total number of cleared transactions in financial instruments in the systems operated by KDPW_CCP increased by 0.9% compared to 2022, while their value increased by 17.1%. In the organised market, an increase was observed in both the number and value of cleared transactions compared to the previous year (of 0.9% and 23.4%, respectively). In contrast, the non-organised market saw decreases in both the number and value of the cleared transactions (by 29.6% and 2.8%, respectively). Since 2019, both the number and the value of the transactions cleared by KDPW_CCP SA have remained at a similar level, with a slight downward trend in the number and an upward trend in the value of orders.

KDPW system and SKARBNET4

In the securities settlement systems operating in Poland, i.e. the SKARBNET4 system and the settlement system operated by the KDPW, an upward trend was observed in the years 2019-2023 both in the number and the value of settlements of transactions in financial instruments. However, the highest reading of the number of settlement operations took

³⁶ The ECB recommends assessing the systems examined on the basis of the responses to the questionnaires distributed by the overseers.

place in 2020 and was largely due to an increase in turnover on the Warsaw Stock Exchange. Since that time, while the number of settlement operations has been declining steadily, their value has been rising consistently. In 2023 the highest level of the value of settled transactions was observed (an increase of 26.1% on 2022 and a more than doubling of the 2019 figure).

Table 2.10. Data concerning securities settlement systems

	2019	2020	2021	2022	2023
Number of completed transactions (million)	6.6	15.0	13.7	10.6	9.6
Value of completed transactions (PLN trillion)	22.1	25.3	33.1	36.0	45.4

Source: NBP calculations based on NBP data.

In SKARBNET4 15.9% more transactions in debt instruments were settled in 2023 than in the previous year, with a 0.2% higher value. In 2023, only NBP bills operations were subject to settlement in the system.

In the settlement system operated by KDPW a decrease of 9.9% in the number of operations was recorded in 2023, with a simultaneous increase of 28.7% in their value compared to the previous year. When analysing the turnover of the organised market, a decrease (of 9.7%) in the number of the settlements performed was noted with a simultaneous marked increase in their value (of 34.3%). The non-organised market also saw a decrease (of 11.4%) in the number of settlement operations and an increase (of 0.9%) in their value. Since 2020, the downward trend in the number continued, with an upward trend in the value of the transactions executed.

In 2023, no transactions on financial instruments were processed in the IRGiT SRF system operated by IRGiT SA.

2.5 Acquiring service

Until 29 September 2023, the Governor of NBP participated in the process of KNF authorising the provision of acquiring services by NPI.

As of 29 September 2023, the *Act of 16 August 2023 amending certain acts in connection with ensuring the development of the financial market and the protection of interests in this market* entered into force and introduced amendments to the UUP, according to which the jurisdiction to issue an opinion on the planned manner of acquiring service was repealed.

Proceedings concerning the provision of the acquiring service

In 2023, the Governor of NBP issued two resolutions expressing opinions on the manner to provide acquiring services by entities that applied to the KNF for a licence to provide payment services as a national payment institution concerning:

- on 24 March 2023, Provema sp. z o.o.,

- on 10 July 2023, Allegro Finance sp. z o.o.,
- on 15 July 2023, First Digital sp. z o.o.

In addition, by resolution of the Governor of the NBP, two proceedings pending at the time of the amending Act taking effect were remitted due to irrelevance.

Analysis of statistical data related to the provision of the acquiring service

As at 29 September 2023, the total number of entities holding the KNF's licence to operate as an NPI amounted to 42, while the number of NPIs authorised to provide acquiring services was 23, i.e. one entity less than at the end of 2022. Moreover, as at 29 September 2023, there were 193 small payment institutions (SPIs) listed in the register of payment service providers, of which 109 were authorised to provide acquiring services.

Table 2.11. Data on NPI and SPI (as at 29 September 2023)

	2019	2020	2021	2022	2023
Total number of NPIs	38	38	40	42	42
Number of NPIs holding the authorisation to provide the acquiring service	25	25	24	24	23
Total number of SPIs	46	82	117	150	193
Number of SPIs authorised to provide acquiring services	22	46	67	85	109

Source: Own compilation based on data made available by the KNF.

Index of abbreviations

Acquiring	a payment service provided by an NPI or SPI, as defined in Article 3(1) (5) of the UUP
BGK	Bank Gospodarstwa Krajowego
BLIK scheme	BLIK Payment Scheme operated by PSP
BLIK system	BLIK Payment System operated by PSP
BlueCash	a payment system operated by Autopay SA, handling instant payments
CCP	central counterparty, i.e. an entity which becomes the sole buyer for all sellers and the sole seller for all buyers
CROE	<i>Cyber resilience oversight expectations for financial market infrastructures</i> , developed by ECB
CSD	central securities depository
CSDR	Central Securities Depository Regulation – Regulation (EU) No 909/2014 of the European Parliament and of the Council of 23 July 2014 on improving securities settlement in the European Union and on central securities depositories and amending Directives 98/26/EC and 2014/65/EU and Regulation (EU) No 236/2012
DDoS	distributed denial of service – a distributed volumetric attack which consists in attacking a given service or account from several computers simultaneously, with the consequence of blocking access to links or web services and interrupting system operation or completely suspending it
EBA	European Banking Authority
EC	European Commission
ECB	European Central Bank – the central bank of the euro area
EMIR	European Market Infrastructure Regulation – Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories
ESBC	European System of Central Banks – a body comprising the ECB, central banks of the Member States of the euro area and the central banks of the EU Member States that do not belong to the euro area
ESMA	European Securities and Markets Authority
EU	European Union
EUR	euro
FMI	financial market infrastructure
GK KDPW	KDPW capital group formed by KDPW SA and KDPW_CCP SA

IFR	Interchange Fee Regulation – Regulation (EU) 2015/751 of the European Parliament and of the Council of 29 April 2015 on interchange fees for card-based payment transactions
IOSCO	International Organization of Securities Commissions
IRGiT	Izba Rozliczeniowa Giełd Towarowych SA (Commodity Clearing House)
IRGiT SRF	a securities clearing and settlement system operated by IRGiT SA
KDPW	Krajowy Depozyt Papierów Wartościowych SA, operator of the securities settlement system
KDPW_CCP	a clearing house providing services as a CCP, operator of the securities clearing systems
KIR	Krajowa Izba Rozliczeniowa SA, operator of the Elixir, Euro Elixir and Express Elixir payment systems
KNF	Polish Financial Supervision Authority
KSR	Krajowy System Rozliczeń operated by Fiserv Polska SA
LVPS	large-value payment system
NBP	Narodowy Bank Polski
NPI	national payment institution
PFMIs	Principles for Financial Market Infrastructures, developed by CPMI-IOSCO ³⁷
PLN	Polish zloty
<i>Policy</i>	<i>Narodowy Bank Polski payment system oversight policy</i> ³⁸ , defining the objectives, scope and basis for oversight in Poland
POS	point of sale
PSI	payment system infrastructure overseen by the Governor of NBP, i.e. payment systems and schemes, securities clearing and settlement systems and, until 29 September 2023 the acquiring service provided by NPIs
PSP	Polski Standard Płatności Sp. z o.o., the operator of the BLIK Payment System and BLIK Payment Scheme
RTGS	real-time gross settlement
SKARBNET4	registration system for NBP money bills and Treasury bills, the securities settlement system operated by NBP
SORBNET2	RTGS system for large-value payments in PLN operated by NBP
SPI	small payment institution

³⁷ CPSS-IOSCO (currently CPMI-IOSCO), April 2012, <http://www.bis.org/cpmi/publ/d101a.pdf>.

³⁸ <https://nbp.pl/wp-content/uploads/2023/01/payment-system-oversight-policy-Oct-2019.pdf>

TARGET	TARGET Services – the euro real-time gross settlement system of the Eurosystem, in operation since 20 March 2023. It is an IT platform (set of services) consisting of T2 (payment settlement), T2S (securities settlement), TIPS (instant payments) and ECMS (collateral management)
TARGET2	Trans-European Automated Real-time Gross Settlement Express Transfer System, a euro gross settlement system of the Eurosystem operating until 17 March 2023
TARGET-NBP	Polish component of the TARGET system
TARGET2-NBP	Polish component of the TARGET2 system
UOIF	Act of 29 July 2005 on Trading in Financial Instruments
UoOR	Act of 24 August 2001 on Settlement Finality in Payment and Securities Settlement Systems and the Rules of Oversight of these Systems
UUP	Act of 19 August 2011 on Payment Services

Index of tables

Table 2.1. Data relating to SORBNET2 and TARGET-NBP large-value systems	15
Table 2.2. Data concerning retail payment systems	18
Table 2.3. Elixir system share in the retail payments market	18
Table 2.4. BLIK system share in the retail payments market	18
Table 2.5. Euro Elixir system share in the retail payments market	19
Table 2.6. Express Elixir and BlueCash system share in the retail payments market	19
Table 2.7. KSR system share in the retail payments market	20
Table 2.8. Data on all payment schemes	21
Table 2.9. Data on card and non-card payment schemes	21
Table 2.10. Data concerning securities settlement systems	24
Table 2.11. Data on NPI and SPI (as at 29 September 2023)	25

nbp.pl

