



NARODOWY
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Polish Payment System Oversight Report for 2022

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Prepared by the team led by:
Renata Pawlicka

Authors:
Mateusz Dzicher
Paula Jurewicz
Anna Kalinowska-Piech
Małgorzata Łopaciuk
Katarzyna Maskalan
Anna Oko
Michał Popiołek
Jarosław Rychlik
Marcin Szelenbaum
Mariusz Szpringer
Maciej Szymański
Marta Wójcik-Dębska

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Summary

Polish Payment System Oversight Report for 2022 (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.

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 overseen payment systems, payment schemes and securities clearing and settlement systems.

In the case of entities providing the acquiring service, data and information from reports of the Polish Financial Supervision Authority (UKNF) was used.

The most important oversight activities and events in 2022 include:

1. Assessing of the SORBNET2 large-value payment system operated by NBP for its compliance with the *Cyber resilience oversight expectations for financial market infrastructures* (CROE). The assessment proved a high level of compliance of the system with the CROE requirements.
2. Assessing of the BlueCash instant retail payment system operated by Blue Media SA¹ for compliance with the *Principles for financial market infrastructures* (PFMIs²) applicable to this system category. The assessment, together with the recommendations, was reflected in the *Final Report* which was submitted to the system's operator.
3. Granting an authorisation to introduce amendments to the rules for the functioning of the Euro Elixir retail payment system operated by Krajowa Izba Rozliczeniowa SA (KIR) which concerned the implementation of a comprehensive procedure for dealing with incidents, including communication with the system's participants during its occurrence.
4. Assessing of the SKARBNET4 securities settlement system operated by NBP for its compliance with the provisions of the CSDR³ which concern the settlement discipline regime. The assessment proved compliance of SKARBNET4 with the settlement discipline regime and related requirements in the scope of the rules of record keeping for settlement instructions and transactions and was accepted by the NBP Management Board.
5. Conducting an annual review and assessment of the activities of KDPW SA, jointly with the KNF Board (KNF).⁴ KNF requested an opinion from the Governor of NBP as the relevant authority within the meaning of the CSDR and, as a result of the assessment of the documentation related to the settlement system operated by KDPW, no indications were identified that would change the current positive assessment of the system operation.

¹ In August 2023, the change of the company name from Blue Media SA to Autopay SA was registered.

² CPSS-IOSCO (now CPMI-IOSCO), April 2012, <http://www.bis.org/cpmi/publ/d101a.pdf>.

³ Central Securities Depositories Regulation – Regulation (EU) 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) 236/2012.

⁴ Pursuant to Article 22(1) of the CSDR.

6. Granting an authorisation to introduce amendments in the single transaction value limit for cash withdrawals during a payment transaction using a card at a point of sale (cashback service) from PLN 300 to PLN 1,000 in the Visa Europe scheme and from PLN 500 to PLN 1,000 in the Mastercard scheme.
7. Notifying Diners Club Polska of the cessation of the oversight by the Governor of NBP and of its removal from the list of overseen schemes in connection with the cessation of the statutory prerequisites for the NBP Governor's oversight of payment schemes (termination by Diners Club Polska sp. z o.o. of its activity in the territory of Poland).

In 2022, NBP's oversight activities focused primarily on pursuing administrative proceedings concerning granting of the authorisation by the Governor of NBP to introduce amendments to the rules for the functioning of systems and schemes which were analysed in terms of compliance with the law, ensuring the safety and efficiency of the functioning of the overseen infrastructures. In addition, comprehensive oversight assessments of these infrastructures were carried out by assessing the compliance of their rules for functioning with international standards or as part of activities undertaken in cooperation with other authorities.

2022 saw a continued dynamic development of the market of innovative payment instruments and payment services, comprising in particular 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 2022, they accounted for 93.5% of all payment cards in Poland, having an increasing share in the number and value of card transactions. In 2022, the share of contactless card transactions in the total number of non-cash card transactions reached 99.1%, which is due, among others, to the fact that starting from the first half of 2019, 100% of POS terminals have been adapted to support payment cards with a contactless feature. In addition to contactless cards, mobile payments such as BLIK have been growing rapidly. The BLIK payment system (BLIK system) allows to make payments using, for example, mobile phones or tablets, both online and in brick-and-mortar shops, service outlets, public transport, public offices and between mobile phone users (P2P).⁵

Activities in the area of oversight undertaken by Narodowy Bank Polski are aimed to ensure the uninterrupted functioning of the payment system infrastructure and contribute to ensuring the stability of the financial system. The work carried out in 2022, as in previous years, was intended to ensure the safety and efficiency of the overseen systems and infrastructures. To this end, monitoring and analysing of the functioning of these systems and infrastructures were conducted, the rules for the functioning of their components (i.e. systems and schemes) were assessed and, where any malfunctioning was identified, action was taken to ensure that the overseen FMIs were functioning in compliance with recognised standards and provisions of law.

⁵ <https://nbp.pl/wp-content/uploads/2023/05/Ocena-funkcjonowania-polskiego-systemu-platniczego-w-II-polroczu-2022-r..pdf>

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, 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 financial system is the uninterrupted operation of the payment system infrastructure that enables the flow of money in non-cash transactions.⁶ The payment system consists of systems, institutions, instruments, rules, procedures, standards and technical means that are used to transfer money. An inefficiently operating payment system infrastructure can have an adverse effect on the stability of a country's economy due to, among others, a potential reduction of confidence in the financial system and 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), takes measures to ensure the adequate and safe flow of money by exercising the oversight of the payment system infrastructure. It is primarily based 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 legally compliant manner in order to guarantee uninterrupted functioning and thus reduce systemic risk.

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

1. monitoring and analysing of the functioning of the systems and infrastructures that make up the payment system infrastructure,
2. assessing the rules for the functioning of the overseen infrastructures,⁷
3. taking action to introduce necessary changes in the way the above systems and entities operate.

⁶ 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 FMIs 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 case of an adverse event, such as a technological incident.

⁷ These assessments may be general assessments in terms of meeting standards, e.g. PFMIs, CROEs, or they may be conducted as part of the administrative proceedings concerning, among others, granting authorisation to operate a payment system and a payment scheme or to introduce amendments to their rules for the functioning.

NBP performs the aforementioned assessments in accordance with the criteria of compliance with the law and in order to ensure the safety and efficiency of the functioning of the overseen infrastructures.

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. Detailed information on the legal basis and sources of payment system oversight standards relating to the individual components of the payment system is described in the Policy. The following description presents only general information on the individual payment system infrastructures subject to oversight.

Payment systems

Payment systems mean legal relationships, governed by the Polish law, between at least three institutions⁸ (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).⁹

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

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 of the functioning of payment systems.

NBP is authorised to carry out comprehensive assessments of payment systems in operation. The benchmark for the assessment of payment systems in accordance with the criteria of ensuring safety and efficiency of their functioning is the 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 in terms of the statutory criteria of safety and efficiency of functioning and compliance with the law.

⁸ In accordance with Article 1(1) and 5(a)-(d) of the UOR, such 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.

⁹ 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 a binding recommendation. In specific cases, the Governor of NBP has a possibility of suspending temporarily or halting the operation of the payment system concerned.

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. The Governor of NBP performs comprehensive assessments of the functioning of a payment scheme and has tools to source current information on the functioning of the scheme.

The benchmarks for the assessment of payment schemes according to the criteria of ensuring safe and efficient operation include the 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.

The payment organisation is also obligated to provide, at the request of the Governor of NBP, the documents and information necessary to perform the assessment in terms of the statutory criteria of safety and efficiency of functioning and compliance with the law.

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 a recommendation to the entity operating a scheme. In specific cases, the Governor of NBP has a possibility of imposing financial penalties on the entity operating a scheme or suspending 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 institutions¹⁰ 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 UOR.

The Governor of NBP exercises oversight of securities clearing and settlement systems, consisting in particular of an assessment of their functioning in terms of safety, efficiency and compliance with the law. The Governor of NBP, in exercising oversight of the abovementioned systems, uses the following oversight tools:

- issuing (upon KNF request as a competent authority) opinions concerning, among others, 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;
- cooperating with KNF in the scope of granting authorisations to CCPs and CSDs and in the scope of an ongoing oversight;
- participating of NBP's representatives in works of ESMA's college and committees;
- collecting statistical data and information related to clearing and settlement performed in individual systems as well as information concerning incidents occurring in those systems (i.e. incidents which may potentially disrupt their adequate functioning);
- tools based on central bank's authority (*moral suasion*).

As part of its oversight, on the basis of information it obtains in-house and as a result of its cooperation with KNF, NBP also conducts its own oversight analyses to monitor the activities of the above systems and entities on an ongoing basis.

¹⁰ 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 facilitating the execution of payment transactions, initiated by the merchant or through it, 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.

As the issuance by KNF of a permit to operate as a national payment institution providing the aforementioned service requires prior consultation with the Governor of NBP, the oversight of the provision of acquiring services exercised by the Governor of NBP consists in issuing opinions, on request of the Chair of the KNF Board, in relation to entities intending to offer acquiring services under their licence of the NPI.

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. In addition, the Governor of NBP is authorised to collect statistical data on the activities of clearing agents and issuers of payment instruments.

Chapter 2

Payment system oversight

2.1. Payment system in Poland

The payment system, understood as a set of instruments, procedures and systems enabling the circulation of money or financial instruments within a country or currency area, is the basis for cash circulation in the national economy and 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 (NBP and KDPW SA).

In 2022, the oversight exercised by the NBP Governor included:

- two large-value payment systems:
 - SORBNET2 – a payment system in PLN operated by NBP;
 - TARGET2-NBP¹¹ – a payment system in EUR operated by NBP as regards legal issues and by three central banks of the euro area (3CBs) as regards the operational side;
- six retail payment systems:
 - three systems operated by KIR SA: Elixir, Euro Elixir and Express Elixir;
 - BlueCash operated by Blue Media SA;
 - BLIK System operated by PSP;
 - KSR operated by Fiserv Polska SA;
- 12 payment schemes:
 - four card schemes: Visa Europe, Mastercard, American Express and Diners Club;¹²
 - eight non-card payment schemes: BLIK Payment Scheme (BLIK Scheme), YetiPay, mPay, SkyCash, Smoopay, Billon, PayEye and PaySpe;¹³
- five securities clearing and settlement systems:
 - SKARBNET4 – a system for registration of NBP bills and Treasury bills;
 - the settlement system of transactions concluded in financial instrument trading operated by KDPW SA (the 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

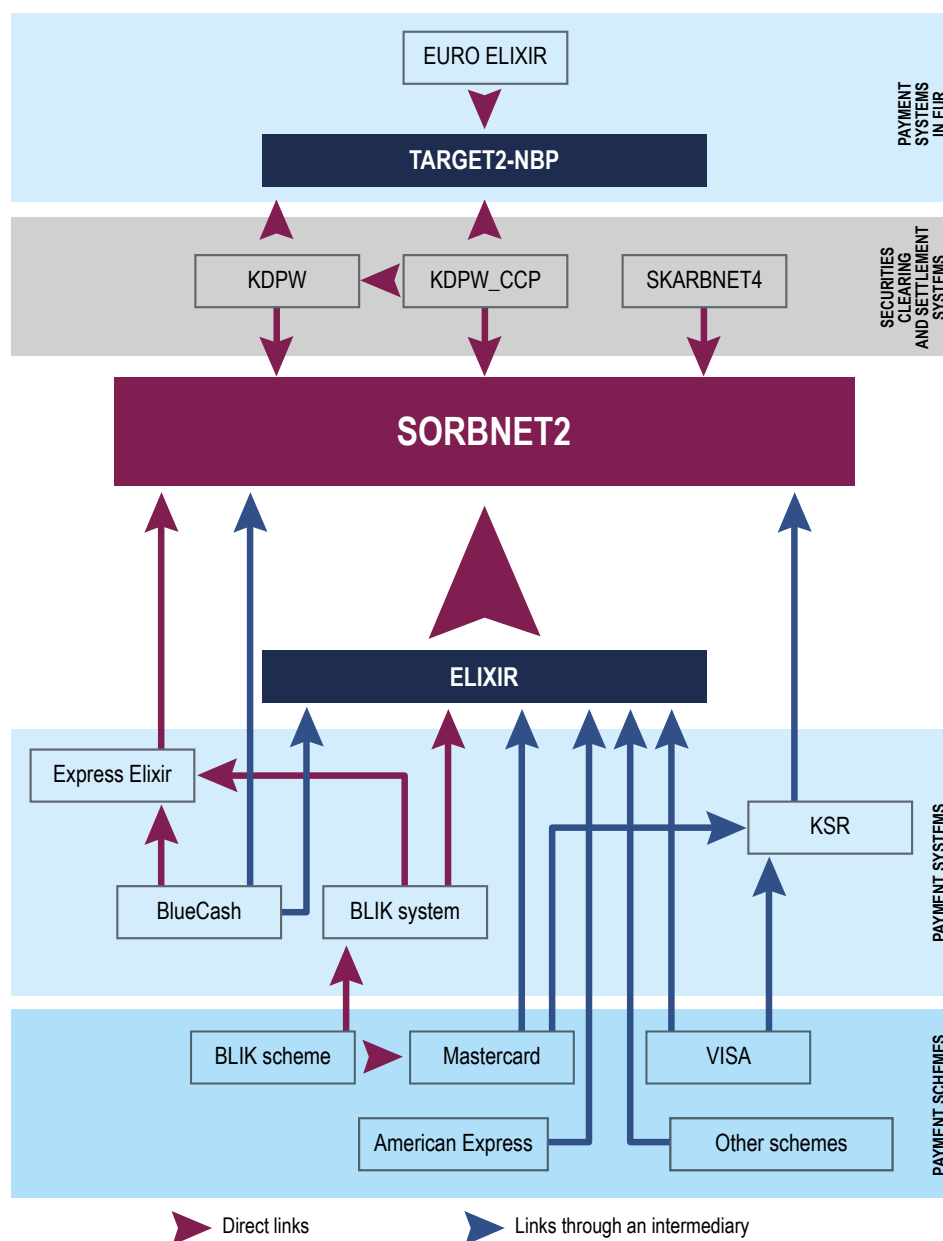
¹¹ The functioning of the TARGET2 system is based on the Single Shared Platform (SSP) developed by three EU central banks (3CB), i.e. the banks of France, Germany and Italy, and currently (after the launching in 2015 of TARGET2-Securities operated by those three banks, and additionally also by the Bank of Spain. On 20 March 2023, the new TARGET system was launched, replacing TARGET2, in operation since November 2007.

¹² The Diners Club payment scheme ceased operating in the territory of the Republic of Poland in 2022 Q3 and was removed from the list of overseen payment schemes.

¹³ Until 2022 Q3 the scheme was referred to as PaySpierience.

- system for transactions in financial instruments pursuant to Rules of Transaction Clearing (non-organised trading) operated by KDPW_CCP SA (jointly referred as the systems operated by KDPW_CCP);
- the securities clearing and settlement system of financial instruments operated by Izba Rozliczeniowa Giełd Towarowych SA (IRGiT SRF).

Figure 2.1. 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 systems and schemes overseen by the Governor of NBP¹⁴ at the end of 2022.

The structure of cashflows in the overseen FMI 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 TARGET2-NBP. It is a Polish component of TARGET2 for the settlement of payment orders in euro executed in the EU territory. It comprises 20 national RTGS components of euro area Member States (including the ECB RTGS system) and five national RTGS components of non-euro area countries. The ECB oversees TARGET2, while NBP oversees only the Polish component.

Retail payment orders in euro from the Polish market are processed in the Euro Elixir system. It has been recognised as a systemically important retail payment system, as it is the only payment system in Poland where retail orders are cleared in foreign currency. Deferred net settlements¹⁵ (DNS) are processed in this system and it has operational links with the TARGET2-NBP system and, via NBP,¹⁶ 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 are all banks conducting their operations in Poland providing service to retail customers. 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.

The functioning of two large-value payment systems is typical of EU countries that are not a part of the euro area – one system processing payment orders in the national currency, the other one for settlements in euro. However, Poland stands out from the EU countries in terms of the significant number of retail payment systems in operation. In the EU, an average of 1.71 retail payment systems per country was recorded in 2022,¹⁷ while in Poland six systems operate, 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 significant. In 2022, eight non-card payment schemes operating in Poland were under the oversight of

¹⁴ The scheme does not include IRGiT SRF, as it did not settle any financial transaction in the period under review, and the Diners Club scheme which ceased its operations in Poland.

¹⁵ Using a multilateral offsetting mechanism.

¹⁶ Due to the legal regulations regarding the 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.

¹⁷ Own calculations based on ECB data: <https://sdw.ecb.europa.eu/reports.do?node=1000002752>.

the Governor of NBP, while in the area of card schemes, the Polish payment market was divided between four international schemes with global coverage. Two card schemes, i.e. Visa Europe and Mastercard, formed a kind of duopoly, as they covered almost 100% of the market in 2022 in terms of both the number and the value of completed transactions (Diners Club and American Express' combined shares accounted for 0.01% of the number and 0.07% of the value of concluded transactions).

The retail payment systems and payment schemes operating in Poland form a network. In the systems and schemes offering instant payments, i.e. BlueCash and BLIK for P2P transactions,¹⁸ 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 scheme have yet another unusual link to another scheme. BLIK, in cooperation with Mastercard, offers the possibility of contactless payment with a phone anywhere in the world where Mastercard cards are accepted. Clearing of these transactions takes place either via BLIK or the Mastercard scheme. Other BLIK transactions are transmitted for clearing directly to the Elixir system.

In some of the securities clearing and settlement systems operating in Poland, transactions are carried out both in zlotys and in euros (systems operated by GK KDPW entities), and in others only in the domestic currency (SKARBNET4 and IRGiT SFR). All these systems have connections to the SORBNET2 system, where they transmit for settlement payment orders resulting from operations in securities denominated in PLN, while operations denominated in euro are transmitted by KDPW SA for settlement in the TARGET2 system.

In 2022, 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 governing the operation of these infrastructures. These assessments were carried out in the course of ongoing administrative proceedings, by verifying the compliance of the rules of the overseen systems with international standards or as part of activities carried out in cooperation with other authorities.

¹⁸ P2P (person to person) means the transfer of money from one person to other people (as opposed to a merchant or institution) without knowing the bank account number of the payee.

2.2. Payment systems

2.2.1. Large-value payment systems

Oversight activities related to large-value payment systems

- In 2022, the assessment of Poland's most important large-value payment system, i.e. SORBNET2, in terms of meeting the CROE requirements was completed and a final report on this assessment was prepared and approved by NBP Management Board. The assessment was carried out in the years 2020-2021 on the basis of a decision of the NBP Management Board. The CROE document, which was adopted by the ECB in 2018, was used to prepare it. This document presents a set of oversight requirements focusing mainly on the technical aspects of global security and IT standards, most notably the *Cybersecurity Guidelines for Financial Market Infrastructures*, which specify the provisions of the *Principles for Financial Market Infrastructures* (PFMIs), the core set of standards used by central banks in the exercise of oversight. The evaluation performed showed a high level of compliance of SORBNET2 with the CROE requirements defined at the development stage.
- As part of the cyclical oversight activities, a survey of SORBNET2 was carried out in 2022 to identify critical participants. Entities meeting the adopted criteria are recognised as critical participants in the SORBNET2 payment system, i.e. entities which are:
 - external systems operating as: large-value payment system (LVPS), systemically important payment system (SIRPS), prominently important retail payment system (PIRPS), central securities depository (CSD), central counterparty (CCP);
 - banks if their net turnover exceeds 5% of the whole system turnover in the preceding calendar year;
 - banks that, when simulating an all-day non-execution of their orders, cause the non-execution of more than 2.5% of the orders in the system.

The entities that met the criteria for critical participants in SORBNET2 in 2022 included:

- banks:
 - Bank Gospodarstwa Krajowego,
 - Bank Handlowy w Warszawie SA,
 - Bank Polska Kasa Opieki SA,
 - mBank SA,
 - Powszechna Kasa Oszczędności Bank Polski SA,
 - ING Bank Śląski SA,
 - Santander Bank Polska SA,¹⁹

¹⁹ The list of critical participants expanded to include Santander Bank Polska SA as a result of a study using the "BoF-PSS3" simulator provided by the Bank of Finland, which allows statistical analysis of historical data and simulation of system model functioning based on theoretical assumptions and scenarios.

- other entities:
 - KDPW SA,
 - KDPW_CCP SA,
 - KIR SA.

- As part of the 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 the temporary absence of the largest or three largest participants sending orders to the system and a reduction of up to 25% in the amount of technical credit available to participants in the system. The results of simulations demonstrated high resilience of the system to the assumptions adopted in the survey.

- In order to assess the risk of payment gridlocks in the system, a study was also carried out to check 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 the basis of simulations of the occurrence of the “free-rider effect” and verification of liquidity management patterns among selected SORBNET2 participants, it was concluded that the observed payment retentions did not have any significant impact on the materialisation of liquidity risk in the system.

Incidents in large-value payment systems

In 2022, four incidents were recorded in large-value payment systems. The causes of these incidents can be divided into two groups: network failure and software error. Although they had an impact on the availability of large-value payment systems, they did not affect the correct 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 TARGET2-NBP, showed a stable growth in terms of both the number and the value of orders in the period 2018-2022. The growth in the number and value of transactions from 2018 till the end of 2022 in SORBNET2 was 25.6% and 62.3%, respectively, while in TARGET2 – 41.2% and 75.0%, respectively. In 2022, the total number of orders processed in both large-value payment systems amounted to 7.8 million and rose by 16.9% compared to 2021. The total value of orders, on the other hand, amounted to PLN 141.4 trillion and showed a growth rate of 7.7%, significantly lower compared to the previous year.

Table 2.1. Data relating to SORBNET2 and TARGET2-NBP large-value systems²⁰

	2018	2019	2020	2021	2022
Number of transactions carried out (million)	5.9	6.1	6.1	6.7	7.9
Value of realised transactions (PLN trillion)	84.7	87.4	104.5	131.3	141.4

Source: Own compilation based on NBP data.

2.2.2. Retail payment systems

With regard to retail payment systems, oversight activities largely focused on analysing and issuing opinions on amendments to system's rules for the functioning of proposed by operators, on-going monitoring of the functioning of the payment systems, including the analysis of incidents and statistical data, as well as assessing systems for their compliance with the PFMIs and the level of cyber resilience.

Proceedings concerning retail payment systems

- In 2022, five administrative proceedings were conducted at the request of KIR concluded with decisions issued by the Governor of NBP authorising amendments to:
 1. rules for the functioning of the Euro Elixir payment system to enable the execution of inter-system orders transmitted to and received from the STEP2-T system in the continuous gross settlement mode;
 2. rules for the functioning of the Euro Elixir payment system adapting the rules of the Euro Elixir payment system to changes related to the consolidation of the TARGET2 and TARGET2-Securities systems into the new TARGET system, as well as changes to align certain regulatory provisions with those of the Elixir payment system;
 3. rules for the functioning of the Elixir payment system concerning informing participants in those systems of circumstances caused by force majeure or the occurrence of an emergency situation that may affect the clearing performed in those systems;
 4. rules for the functioning of the Euro Elixir payment system concerning informing participants in those systems of circumstances caused by force majeure or the occurrence of an emergency situation that may affect the clearing performed in those systems;
 5. rules for the functioning of the Elixir payment system aimed at implementing the recommendations formulated by Narodowy Bank Polski in connection with the assessment of the operation of the Elixir payment system, the results of which were presented in the report entitled *Assessment of the Elixir system in terms of its compliance with the Principles for Financial Market Infrastructures – as at 30 June 2018*.

²⁰ The value of TARGET2-NBP transactions was converted into PLN at the average NBP exchange rate for each month.

Moreover, two proceedings were initiated in 2022 at the request of KIR on:

1. granting the authorisation to introduce amendments to the rules for the functioning of the Elixir payment system involving the introduction of rules of mitigating credit and liquidity risk in the Elixir system by KIR;²¹
2. granting the authorisation to introduce amendments to the rules for the functioning of operation of the Express Elixir payment system harmonising the regulatory provisions of this system with those of other payment systems operated by KIR.²²

Other oversight activities related to retail payment systems

- The third edition of the survey on the cyber resilience of retail payment systems, initiated in 2021 and covering systems operated by KIR (Elixir, Express Elixir, Euro Elixir), Blue Media SA (BlueCash system), Fiserv Polska SA (National Clearing System) and Polski Standard Płatności sp. z o.o. (BLIK system) has been completed. The survey was conducted according to the standard set by the ECB²³ and included questions on the level of system cyber resilience, broken down into the following areas: management, identification, protection, detection, response, resumption, and recovery. All systems were assigned a profile reflecting their level of maturity in the area of cyber resilience.²⁴
- A comprehensive assessment of the compliance of the three payment systems operated by KIR (Elixir, Express Elixir and Euro Elixir) with the CROE requirements defined at the development stage has been initiated. A formal evaluation of the self-assessment forms and documents provided by KIR was carried out. The operator was requested to provide additional clarification and documents.²⁵
- An assessment of the BlueCash payment system for its compliance with the PFMI has been completed. The results of this assessment were presented in the final report, approved by the Governor of NBP, entitled *Assessment of the BlueCash Payment System in terms of its compliance with the Principles for Financial Market Infrastructures – as at 30 June 2020*. Despite the identification of certain shortcomings, the assessment carried out showed a high level of compliance of the BlueCash system with the *Principles for Financial Market Infrastructures* (the assessment concerned was carried out in terms

²¹ The proceedings were concluded in 2023 with the decision issued by the Governor of NBP authorising the amendments.

²² The proceedings were concluded in 2023 with the decision issued by the Governor of NBP authorising the amendments.

²³ The ECB recommends assessing the systems examined on the basis of responses to questionnaires sent out by overseers.

²⁴ The profiles are contained in the range of 1-10, where 1 is the highest level of cyber resilience and 10 is the lowest level.

²⁵ This assessment is continued in 2023. It is scheduled for completion in 2024 Q3.

of nine principles²⁶). Recommendations and guidelines have been issued to the operator regarding the deficiencies identified.

Incidents in retail payment systems

In 2022, a total of 26 incidents were recorded in retail payment systems. These incidents, despite their impact on the adequate operation of individual systems, were not significant for the proper functioning of the payment system in Poland as a whole.

Their causes can be assigned to the following categories:

- hardware failure,
- software error,
- DDoS attack,²⁷
- third party problem.

Measures undertaken by system operators in connection with the aforementioned incidents were mostly assessed by NBP as appropriate.

Analysis of statistical data related to retail payment systems

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. those with the value below PLN 1 million.

A total of 3.5 billion orders with the value of PLN 9.8 trillion were executed in all retail payment systems, which means a year-on-year increase of 17.8% in terms of number and 21.1% in terms of value. The upward trend, both for the number and value of orders, continues throughout the five-year period (2018-2022), which is largely due to Poland's growing use of and access to banking services (approx. 96% of Poles had a bank account at the end of 2021)²⁸ and the increasing share of non-cash payments in all Polish payments (from 43% in 2018 to 62% in 2022).²⁹

²⁶ The subject of the aforementioned assessment was the verification of compliance by Blue Media SA, as operator of the BlueCash payment system, with the PFMI rules applicable to payment systems categorised as "other retail payment systems", in accordance with the classification adopted in the Policy. Consequently, the assessment comprised nine PFMI principles, i.e.: Principle 1: *Legal basis*, Principle 2: *Governance*, Principle 3: *Framework for the comprehensive risk management*, Principle 8: *Finality of settlement*, Principle 13: *Participant-default rules and procedures*, Principle 17: *Operational risk*, Principle 18: *Access and participation requirements*, Principle 21: *Efficiency and Effectiveness* and Principle 23: *Disclosure of rules, key procedures, and market data*.

²⁷ DDoS attack (distributed denial of service) consists of attacking a specific service or account from several computers simultaneously at the same time, with the consequence of blocking access to links or web services and interrupting system operation or completely suspending it.

²⁸ <https://www.bankier.pl/smart/ubankowienie-w-polsce-96-proc-polakow-ma-konto-w-ktorych-bankach-najchetniej-otwieramy-rachunki>

²⁹ Payment habits and the development of card acceptance networks in Poland: consumer survey 2022, 2023 POLASIK Research, Cashless Congress, 31.05.2023.

Table 2.2. Data concerning retail payment systems

	2018	2019	2020	2021	2022
Number of transactions carried out (billion)	2.1	2.3	2.5	3.0	3.5
Value of realised transactions (PLN trillion)	6.1	6.7	6.9	8.1	9.8

Source: Own compilation based on data from NBP.

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.

- Among retail payment systems, the Elixir system has been continuously ranked first for many years, with 62% of all payment orders executed in 2022, although a gradual decrease in its market share (from 90% in 2018) has been noticeable for several years.

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

	2018	2019	2020	2021	2022
Share in number of orders executed	90	85	79	71	62
Share in the value of completed orders	86	85	87	84	80

Source: Own compilation based on data from KIR.

- Also prominent among retail payment systems is the BLIK mobile payment system, whose share of the retail payment market, both in terms of number and value, has been growing rapidly for several years, also indirectly contributing to the growth in Express Elixir transactions (due to the fact that the processing of most P2P transactions via BLIK is carried out in the Express Elixir system). In 2022, the share of the number of transactions in the BLIK system in the number of all retail payments amounted to 29% and at the same time, 1.4% in terms of value (compared to 4.0% and 0.2% in 2018). Since 2018, both the number and value of completed orders have increased by at least several tens of per cent each year.³⁰ BLIK exceeding the 25 per cent share in the number of all retail payments at the end of 2022 has resulted in the system being classified as a significant retail payment system according to the criteria in the *Policy*.³¹

³⁰ The increase in 2019 was 143% for number and 129% for value, followed by 92% and 98% in 2020, 73% and 99% in 2021, 53% and 62% in 2022, respectively.

³¹ A letter with this information was sent to the system operator in March 2023.

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

	2018	2019	2020	2021	2022
Share in number of orders executed	4	9	15	22	29
Share in the value of completed orders	0.15	0.32	0.62	1.04	1.40

Source: Own compilation based on data from PSP.

- The Euro Elixir system has been recognised as a systemically important system since it is the only retail system where orders are processed in a currency other than zloty, i.e. in euro. The number of orders processed in this system remained at a low level, while their share in all retail payment orders in Poland in 2022 amounted to only 1.36% (registering a slight decrease from 1.6% in 2018).

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

	2018	2019	2020	2021	2022
Share in the number of orders executed	1.57	1.68	1.30	1.34	1.36
Share in the value of completed orders	13	14	11	13	17

Source: Own compilation based on data from KIR.

- Among retail payment systems, instant payment systems, i.e. Express Elixir and BlueCash, which credit the recipient's account within seconds, represent a separate group. Instant payments represent a retail payment category belonging, besides mobile payments, to the recently most rapidly developing part of the payment market.

Table 2.6. Express Elixir and BlueCash system shares in the retail payment market (%)

Express Elixir	2018	2019	2020	2021	2022
Share in the number of orders executed	0.61	1.18	2.32	4.11	6.44
Share in the value of completed orders	0.49	0.66	0.95	1.22	1.5
BlueCash	2018	2019	2020	2021	2022
Share in the number of orders executed	0.40	0.52	0.39	0.39	0.40
Share in the value of completed orders	0.16	0.20	0.15	0.16	0.18

Source: Own compilation based on KIR and Blue Media data.

In 2022, the share of transactions in instant payment systems in the number of all retail payments amounted to 6.8% and at the same time – 1.7% in terms of value (in 2018, this share was 1.0% and 0.6%, respectively).

- The system with a regularly declining share of the retail payments market is the KSR, i.e. the system in which payment card transactions are settled. In 2022, it processed 1.4% of the number of retail payments, corresponding to 0.15% of the value. Since 2018, the share of transactions executed in this system in the number of transactions in all retail system orders has been declining markedly (from 3.5% in 2018), while the value of cleared transactions has remained at a similar, although decreasing level (change from 0.3% in 2018).

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

	2018	2019	2020	2021	2022
Share in the number of orders executed	3.50	2.95	1.85	1.71	1.39
Share in the value of completed orders	0.30	0.24	0.18	0.17	0.15

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

2.3. Payment schemes

In 2022, oversight activities carried out in relation to payment schemes consisted of issuing decisions by the Governor of NBP on granting authorisations to introduce amendments to the rules for the functioning of the schemes, conducting an assessment of the schemes in operation, monitoring the accuracy of their functioning, including incident analysis as well as collecting and analysing statistical data.

Proceedings concerning payment schemes

- As part of the oversight activities carried out in 2022, two decisions of the Governor of NBP were issued with a similar scope, authorising an increase in the single transaction limit for cash withdrawals made during a transaction at a point of sales in the territory of the Republic of Poland. The first decision enabled an increase of the aforementioned limit from PLN 500 to PLN 1,000 for transactions under the Mastercard payment scheme operated by Mastercard Europe SA. On the other hand, the second decision approved, among others, an increase in this limit from PLN 300 to PLN 1,000 and concerned the Visa Europe payment scheme operated by Visa Europe Limited.
- In 2022, two administrative proceedings were conducted relating to the BLIK scheme, based on PSP requests for authorisation to introduce amendments to the rules for the functioning of the scheme by the Governor of NBP. One concerned a new category of participant in this scheme from the publisher side and was suspended at the request of the PSP, while the other was continued in 2023 and included in its scope, among other things, the implementation of technical and organisational solutions aimed at protection against DDoS attacks on the IT infrastructure of the BLIK scheme.³²

³² In 2023, the Governor of NBP issued a partial decision authorising some of the amendments concerning this request, i.e., among others, the implementation of technical and organisational solutions in the public cloud. The proceedings are continued in the remaining scope.

Other oversight activities concerning payment schemes

- The activities related to the assessments of the operating rules of the Visa Europe and Mastercard payment schemes with regard to compliance with the requirements under the RTS on unbundling,³³ concerning the areas of accounting, organisation and decision-making procedure, continued.
- In relation to the information provided by Diners Club Polska sp. z o.o., with its registered office in Warsaw concerning the termination of its operations in the territory of the Republic of Poland, the Diners Club payment scheme was excluded from the list of payment schemes overseen by the Governor of NBP.

Incidents concerning payment schemes

Payment scheme operators reported 14 incidents in 2022. The causes of these incidents were mainly problems of third parties, DDoS attacks and hardware failures. These incidents, despite their impact on the adequate operation of payment schemes, were not significant for the proper functioning of the payment system in Poland as a whole. Measures undertaken by operators of payment schemes in connection with the aforementioned incidents were mostly assessed by NBP as appropriate.

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 2018 and the end of 2022. During these five years, the market for schemes nearly doubled. In 2022, there was a further marked increase in cleared transactions. In terms of number, the transactions amounted to 8.5 billion (an increase of 21.8% compared to 2021), and in terms of value – PLN 727.7 billion (an increase of 22.8% compared to 2021).

Table 2.8. Data on all payment schemes

	2018	2019	2020	2021	2022
Number of transactions (billion)	4.3	5.2	5.7	7.0	8.5
Value of transactions (PLN billion)	366.4	437.9	489.7	592.5	727.7

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

- In 2022, a total of 7.4 billion transactions worth PLN 587.5 billion were executed in card schemes, which means an increase in terms of number and value by 18.4% and 17.9%,

³³ Commission Delegated Regulation (EU) 2018/72 of 4 October 2017 supplementing Regulation (EU) 2015/751 of the European Parliament and of the Council on interchange fees for card-based payment transactions with regard to regulatory technical standards establishing the requirements to be complied with by payment card schemes and processing entities to ensure the application of independence requirements in terms of accounting, organisation and decision-making process.

respectively, compared to 2021. In the BLIK scheme and the other payment schemes, the growth rate in 2022 was significantly higher – a total of 1.1 billion transactions worth PLN 140.2 billion were executed, which means an increase in terms of number and value by 53.2% and 49.0%, respectively, compared to 2021. Among all schemes, the BLIK scheme has stood out for years with the highest growth rate. The percentage amounted to 12.1% in the number of transactions of all schemes in 2022 and 19.2% in value, representing a significant expansion in market share from 2018, when it reached only 2.0% and 3.2%, respectively.

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

Card schemes	2018	2019	2020	2021	2022
Number of transactions (billion)	4.2	5.0	5.3	6.3	7.4
Value of transactions (PLN billion)	354.3	410.0	435.7	498.4	587.5
Non-card schemes	2018	2019	2020	2021	2022
Number of transactions (billion)	0.1	0.2	0.4	0.7	1.1
Value of transactions (PLN billion)	12.2	27.9	54.0	94.1	140.2

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

- At the end of 2022, there were 44.5 million payment cards in the market (against 43.3 million cards at the end of 2021, an increase of 2.9%), 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.³⁴ 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 ATMs, issued mostly by cooperative banks), which accounted for approximately 0.1% of all cards issued in Poland.
- The analysis of the level of interchange fees³⁵ charged in 2018-2022 by individual card organisations was also conducted, broken down into debit cards and credit cards.³⁶ No irregularities were found in the scope of application of the interchange fees by the organisations, i.e. the value of the fees did not exceed the statutory limit for cards issued to individual clients of 0.2% for debit cards and 0.3% for credit cards, however, it was almost equal to the applicable limits in the entire period.

³⁴ In 2022, Visa Europe Ltd. and Mastercard Europe SA recorded an increase in the number of payment cards issued compared to 2021.

³⁵ 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 for payment card issuers paid for a payment transaction, stem from the IFR regulation.

³⁶ In accordance with Article 132zq(3) of the UUP, a four-party card organisation or an organisation recognised as four-party 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).

The recorded increase in the number of transactions carried out in 2022 in payment schemes was largely due to the changing payment habits of Poles (growing popularity of transactions carried out in the e-commerce channel, usefulness and convenience of cashless payments), digital transformation trends and the steadily increasing number of entities accepting card payments, the so-called network effect³⁷ (at the end of 2022, the number of points of sale accepting card payments amounted to 618,500, an increase of 11.7% compared to the end of 2021). The increase in the share of non-cash transactions was also due to the increased intensity of payment by people who were already using non-cash methods, i.e. there was the so-called payment polarisation and the progressive digital transformation of society.³⁸

2.4. Securities clearing and settlement systems

The oversight activities in 2022 involved mainly issuing opinions on the requested amendments to the rules for the functioning of the securities clearing systems and securities settlement systems, monitoring of the functioning of these systems and the analysis of quantitative data.

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

In 2022, the Governor of NBP issued five opinions in the form of resolutions concerning the market of financial instruments.

- Two opinions concerned KDPW_CCP SA, i.e.:
 1. amendments to the *Rules of Transaction Clearing (organised trading)* consisting of extending the scope of services provided by KDPW_CCP SA to include clearing services for repo transactions, as well as adapting the provisions of these Rules to the RTS provisions on settlement discipline, including those concerning the principles of operation of the buy-in mechanism in the open market;
 2. amendments to the *Rules of Settlement Fund* by editorially aligning their wording with the changes introduced in the *Rules of Transaction Clearing (organised trading)*.
- Three opinions concerned KDPW SA in the scope of amendments to the *KDPW Rules* and consisted of:
 1. relaxing the formal requirements in the scope of the obligations of deposit participants and introducing rules to prevent breaches of the CSDR;
 2. adapting its provisions to the RTS provisions on settlement discipline and applicable anti-money laundering and combating the financing of terrorism regulations;
 3. editorial changes to certain provisions in connection with the planned launch of the TARGET system as a replacement for the existing TARGET2 system.³⁹

³⁷ Payment habits and the development of card acceptance networks in Poland: consumer survey 2022, 2023 POLASIK Research, Cashless Congress, 31.05.2023.

³⁸ Ibid.

³⁹ On 20 March 2023, the ECB launched the new TARGET system, which is a consolidated platform incorporating Central Liquidity Management (CLM), RTGS (T2), T2S and TIPS services, and replacing the previously separate systems: TARGET2, TARGET2-Securities and TARGET Instant Payment Settlement.

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 as the central bank of issue with the most significant currency for cleared financial instruments and as a member of the ESCB responsible for CCP oversight, was involved, in accordance with Article 19 of the EMIR Regulation, in the process of evaluating KDPW_CCP SA's proposed extension of its services to include the service of clearing repo transactions in organised trading. As a result of the analyses performed, the College for KDPW_CCP expressed a positive opinion on the requested extension of the clearing house's authorisation.
- NBP also participated, in accordance with the provisions of Article 25(2) of the EMIR Regulation, in the process conducted by the ESMA on the recognition of third-country CCPs, which referred to the authorisation request of Chicago Mercantile Exchange Inc (CME Inc). As a result of the analysis of the submitted documentation, NBP did not identify any rationale that might constitute an obstacle to the authorisation of CME Inc as a third-country CCP and the provision of clearing services by this clearing house in the EU.
- In view of the requirements of the CSDR and the Commission Regulation (EU) on settlement discipline and certain record-keeping requirements,⁴⁰ NBP conducted an assessment of the SKARBNET4 system in terms of compliance of its operating rules with the settlement discipline provisions and a review of the SKARBNET4 operating rules for 2019-2021. The completed assessment showed that SKARBNET4 fulfils its obligations in the scope of compliance with the settlement discipline and the associated record-keeping requirements for settlement instructions and executed transactions.
- Pursuant to Article 22(1) of the CSDR, the KNF requested the Governor of NBP as the competent authority within the meaning of this regulation, to provide an opinion on the annual review and evaluation of activities of KDPW SA (as a CSD operating the securities settlement system). NBP has not identified any indications that would change the previous positive assessment of the system operation.

Incidents in the securities clearing systems and securities settlement systems

Two incidents were recorded in the securities clearing and settlement systems in 2022, which were due to software problems. Measures undertaken by the operator in connection with those incidents were assessed by NBP as appropriate.

⁴⁰ Commission Delegated Regulation (EU) 2018/1229 of 25 May 2018 supplementing Regulation (EU) 909/2014 of the European Parliament and of the Council with regard to regulatory technical standards on settlement discipline (OJ L 230 of 13 September 2018, p. 1); Commission Regulation (EU) 2017/389 of 11 November 2016 supplementing Regulation (EU) 909/2014 of the European Parliament and of the Council as regards the parameters for the calculation of fines for failure to maintain an account and for the operation of CDPW in a host Member State (OJ L 65 of 10 March 2017, p.1); Commission Delegated Regulation (EU) 2017/392 of 11 November 2016 supplementing Regulation (EU) 909/2014 of the European Parliament and of the Council with regard to regulatory technical standards on authorisation, supervisory and operational requirements for central securities depositories (OJ L 65 of 10 March 2017, p. 48).

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

The statistical data show that in 2022, the securities clearing and settlement area was dominated by decreases in the number of the operations and slight increases in their values compared to 2021.

The total number of cleared transactions in financial instruments in the systems operated by KDPW_CCP in 2022 decreased by 1.6% compared to 2021, while their value increased by 7.2%. In both the organised and non-organised markets, decreases in the number of cleared transactions occurred compared to the previous year (by 1.6% and 21.6%, respectively). The value of clearings performed increased in the organised market (by 14.6%) and decreased in the non-organised market (by 11.0%). Since 2020, both the number and the value of transactions cleared by KDPW_CCP SA has remained at a similar level with a downward trend in the number and an upward trend in the value of orders.

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 2018-2022 regarding both the number and the value of settlements of transactions in financial instruments. However, the highest reading concerning the number of settlement operations took place in 2020 and was largely due to an increase in turnover on the WSE. One of the reasons for the increase in investment activity in the market was the increased volatility of the mapped indices (i.e. the segment of the most liquid assets) caused by the effects of the COVID-19 pandemic. Since then, the number of settlement operations has been decreasing year on year, but their value has been steadily increasing.

Table 2.10. Data concerning securities settlement systems

	2018	2019	2020	2021	2022
Number of transactions carried out (million)	7.8	6.6	15.0	13.7	10.6
Value of realised transactions (PLN trillion)	22.2	22.1	25.3	33.1	36.0

Source: Own compilation based on NBP data.

In SKARBNET4, 17.6% more debt instrument transaction settlements were carried out in 2022 than in the previous year, while at the same time their value was 0.2% higher. At the same time, only Treasury bill operations were settled in the system in 2022 (the last settlement of Treasury bill operations was performed in 2021 Q1).

In the settlement system operated by KDPW, a decrease of 22.3% in the number of operations was recorded, accompanied by a simultaneous increase of 28.7% in their value compared to the previous year. When analysing the turnover of the organised market, a decrease in the number (by 24.2%) and value (by 8.1%) of the settlements performed was noted, while the non-organised market saw a decrease in the number (by 6.2%) but at the same time a marked increase in the value (by 32.9%) of settlement operations. Since 2020, when a large increase in the number and a decrease in the value of transactions settled by KDPW SA was

recorded, a downward trend in the number and an upward trend in the value of transactions has been continuing.

In 2022, no transactions in financial instruments were processed in the IRGiT SRF system operated by the IRGiT SA company.

2.5. Acquiring service

The oversight of the provision of acquiring services exercised by the Governor of NBP consists mainly in issuing opinions (in the form of resolutions), on request of the Chair of the KNF Board, in relation to entities intending to offer acquiring services under their licence of the NPI.

Proceedings concerning the provision of the acquiring service

In 2022, the Governor of NBP issued two resolutions expressing opinions on the manner in which acquiring services are provided by entities that applied to the KNF for a licence to provide payment services as a national payment institution, concerning:

- the application by IdoPayments sp. z o.o., with its registered office in Szczecin, submitted to NBP in June 2021;
- the application by PayPo sp. z o.o., with its registered office in Warsaw, submitted to NBP in March 2022.

In both the above-mentioned cases, the Governor of NBP has concluded that the planned method of providing the acquiring service meets the requirements of legality, efficiency and security of providing this service.

Moreover, in 2022, proceedings were initiated and conducted for the issuance of an opinion of the Governor of NBP in the scope of the manner in which the acquiring service was to be provided in connection with the applications for the authorisation of the KNF to provide payment services as a national payment institution submitted by:

- Litpay sp. z o.o. with its registered office in Poznań,⁴¹
- First Digital sp. z o.o. with its registered office in Warsaw,⁴²
- Mobilum Pay sp. z o.o. with its registered office in Warsaw,⁴³

⁴¹ The proceedings were concluded with a negative opinion of the Governor of NBP in 2023 in the form of a resolution. Subsequently, as a result of the filing of the application for reconsideration by Litpay sp. z o.o., this decision was revoked and new proceedings in the case were discontinued due to the entry into force of legislation revoking the competence of the Governor of NBP to issue an opinion on the evaluation of the manner in which the acquiring service is provided.

⁴² The proceedings were concluded with a positive opinion of the Governor of NBP issued in 2023 in the form of a resolution.

⁴³ The proceedings were discontinued in 2023 due to the entry into force of legislation repealing the competence of the Governor of NBP to issue an opinion on the assessment of the manner in which the acquiring service is provided.

- Provema sp. z o.o. with its registered office in Katowice,⁴⁴
- Allegro Finance sp. z o.o. with its registered office in Poznań.⁴⁵

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

At the end of 2022, 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 24, i.e. no change occurred⁴⁶ compared to the status as at the end of 2021. Moreover, as at 31 December 2022, there were 150 small payment institutions (SPIs) registered in the register of payment service providers, of which 85 were authorised to provide acquiring services.

Table 2.11. Data on NPI and SPI

	2018	2019	2020	2021	2022
Total number of NPIs	40	38	38	40	42
Number of NPIs holding the authorisation to provide the acquiring service	25	25	25	24	24
Total number of SPIs	10	46	82	117	150
Number of SPIs authorised to provide acquiring services	4	22	46	67	85

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

⁴⁴ The proceedings were concluded with a negative opinion of the Governor of NBP issued in 2023 in the form of a resolution.

⁴⁵ The proceedings were concluded with a positive opinion of the Governor of NBP issued in 2023 in the form of a resolution.

⁴⁶ In 2022, IdoPayments sp. z o.o. was granted the authorisation, while Diners Club Polska sp. z o.o. lost its authorisation.

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Acquiring	a payment service provided by an NPI or SPI, as defined in Article 3(1) (5) of the UUP
BlueCash	a payment system owned and operated by Blue Media SA ⁴⁷
CCP	central counterparty, i.e. the entity which becomes the sole buyer for all sellers and the sole seller for all buyers
CPMI	Committee on Payments and Market Infrastructures
CPSS	Committee on Payment and Settlement Systems
CROE	<i>Cyber resilience oversight expectations for financial market infrastructures</i> , ECB
CSD	central securities depository
CSDR	<i>Central Securities Depositories Regulation</i> – Regulation (EU) 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
DNS	deferred net settlement
EBA	European Banking Authority
ECB	European Central Bank
EMIR	<i>European Market Infrastructure Regulation</i> – Regulation (EU) 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories
ESCB	European System of Central Banks
ESMA	European Securities and Markets Authority
EU	European Union
EUR	euro
GK KDPW	KDPW capital group formed by KDPW SA and KDPW_CCP SA
IFR	<i>Interchange Fee Regulation</i> – Regulation (EU) 2015/751 of the European Parliament and of the Council of 29 April 2015 on interchange fees for card-based payment transactions

⁴⁷ In August 2023, the change of the company name from Blue Media SA to Autopay SA was registered.

IOSCO	International Organization of Securities Commissions
FMI	financial market infrastructure
IRGiT SA	Izba Rozliczeniowa Giełd Towarowych SA
IRGiT SRF	a securities clearing and settlement system operated by IRGiT SA
KDPW SA	Krajowy Depozyt Papierów Wartościowych SA; a part of the GK KDPW
KDPW_CCP SA	a clearing house pursuing activity in the scope of clearing of transactions concluded on the domestic financial market, with the status of a central counterparty (CCP); a part of the GK KDPW
EC	European Commission
NPI	national payment institution
KIR	Krajowa Izba Rozliczeniowa SA
KNF	the KNF Board
KSR	Krajowy System Rozliczeń – a retail payment system owned and operated by Fiserv Polska SA
LVPS	large-value payment system
SPI	small payment institution
NBP	Narodowy Bank Polski
PFMIs	<i>Principles for Financial Market Infrastructures</i> ⁴⁸
PIRPS	Prominently Important Retail Payment System
Policy	<i>Narodowy Bank Polski payment system oversight policy</i> ⁴⁹
POS	point of sale
PSP	Polski Standard Płatności sp. z o.o.
RTS on settlement discipline	Commission Delegated Regulation (EU) 201/1229 of 25 May 2018 supplementing Regulation (EU) 909/2014 of the European Parliament and of the Council with regard to regulatory technical standards on settlement discipline
RTGS	real-time gross settlement
RTS on unbundling	Commission Delegated Regulation (EU) 2018/72 of 4 October 2017 supplementing Regulation (EU) 2015/751 of the European Parliament and of the Council on interchange fees for card-based payment transactions with regard to regulatory technical standards establishing the requirements to be complied with by payment card schemes and processing entities to ensure the application of independence requirements in terms of accounting, organisation and decision-making process

⁴⁸ CPSS-IOSCO (now CPMI-IOSCO), April 2012, <http://www.bis.org/cpmi/publ/d101a.pdf>

⁴⁹ <https://nbp.pl/wp-content/uploads/2022/07/polityka.pdf>

BLIK Scheme	BLIK Payment Scheme operated by PSP
SKARBNET4	registration system for NBP money bills and Treasury bills, i.e. the securities settlement system operated by NBP
SORBNET2	RTGS system for large-value payments in PLN operated by NBP
SSP	Single Shared Platform – common technology platform of TARGET2
BLIK System	BLIK payment system owned and operated by PSP
TARGET2	Trans-European Automated Real-Time Gross Settlement Express Transfer System
TARGET2-NBP	Polish component of the TARGET2 system
T2S	TARGET2-Securities – a single platform enabling settlement of securities transactions in Europe, integrated with TARGET2
UKNF	the Polish Financial Supervision Authority
UOIF	Act of 29 July 2005 on Trading in Financial Instruments
UOR	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

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