



NARODOWY
BANK POLSKI

13 March 2024

SORBNET2

Rules of the system operation

*in accordance with the Rules concerning the provision
of information by entities of the financial market
infrastructure*

NBP Payment Systems Department
Warsaw, 2024

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List of abbreviations and terms

A2A	<i>Application-to-Application</i> – a form of direct connection of a participant with the central module of the SORBNET2 system; requires the participant to have their own internal application which interacts with the system
BIC	<i>Business Identifier Code</i> (in accordance with ISO 9362:2009 standard) – an international code assigned by SWIFT enabling explicit identification of the financial and non-financial institution. It is an open, permanent and unchangeable code of a given institution.
CCP	Central Counterparty – a legal person operating between counterparties of contracts traded on at least one financial market, becoming a purchaser for each seller and a seller for each purchaser
CUG SORBNET2	Closed User Group - a dedicated group of SORBNET2 system users created in the SWIFT system, within which the transfer of payment orders executed in the SORBNET2 system is possible. The list of CUG SORBNET2 participants is published on the website www.nbp.pl under the tab dedicated to the SORBNET2 system
Elixir	System of net settlement of retail payments in zloty operated by KIR S.A.
ESMA	European Securities and Markets Authority
Express Elixir	System of immediate payment settlement operated by KIR S.A.
FMI	Financial Market Infrastructure – in this document, the FMI shall be understood as SORBNET2 system
KDPW S.A.	(Krajowy Depozyt Papierów Wartościowych S.A.) - Central Securities Depository of Poland
KDPW_CCP S.A.	a clearing house which operates settlements of financial instrument transactions using mechanisms allowing for systemic reduction of the risk of the failure of the parties to fulfil their obligations arising from transactions concluded
kdpw_stream	a deposit and clearing system operated by KDPW S.A. ensuring full operation of clearing and settlement of transactions for a wide range of financial instruments
KGU SORBNET2	National Group of Users of SORBNET2 system – a working group established at the ZBP consisting of representatives of the domestic banking community, dedicated to the analysis of SORBNET2-related issues (the group comprises banks, KIR S.A., KDPW S.A. and KDPW_CCP S.A.)
KIR S.A.	(Krajowa Izba Rozliczeniowa S.A.) - Polish Clearing House
PFSA	Polish Financial Supervision Authority
KSKOK	(Krajowa Spółdzielcza Kasa Oszczędnościowo-Kredytowa) National Credit Union
MMS2	the monitoring module of the SORBNET2 system
MT	a standard for payment and information messages adopted in SWIFT

MX	a standard for XML messages adopted in SWIFT
NBP	Narodowy Bank Polski (Polish central bank)
PAR-SORBNET2	an IT system constituting an analytical and reporting platform of the SORBNET2 system
PFMIs	Principles for financial market infrastructures. CPSS-IOSCO document (now CPMI-IOSCO) at the Bank for International Settlements of April 2012
PSC	Payment System Council, an opinion-making and advisory body at the NBP Management Board. Its main objective is to coordinate operations of NBP, Polish Bank Association, banks operating on the Polish banking market and other domestic institutions associated with the payment system.
RTGS	<i>Real-Time Gross Settlement System</i> – a system for gross settlements in real time
SKARBNET4	System for registration of Treasury bills and NBP money bills, in which accounts and deposit accounts for such bills are operated by NBP and securities transactions are executed
SORBNET	System for servicing banks' accounts in zloty operated by NBP until 7 June 2013 (it was replaced by the SORBNET2 system)
SORBNET2	System for servicing banks' accounts in zloty operated by NBP – a successor of the SORBNET system – in operation since 10 June 2013
SPUT	Specification of the Level of ICT Services for the Portfolio of Payment System Services. The internal NBP document regulating issues related to operation and maintenance of services from the Portfolio of Payment System Services, including the SORBNET2 system.
SWG SORBNET2	Specification of SORBNET2 System Owner's Requirements
SWIFT	<i>Society for Worldwide Interbank Financial Telecommunication</i>
TARGET2	real time gross settlement system (RTGS) for payments in central bank money, settlement of payments in euro, consisting of domestic components maintained by individual central banks from EU Member States, in line with the legal framework related to the TARGET2 system
TARGET2-NBP	Polish component of the TARGET2 system
U2A	User-to-Application – mode of user's access to the monitoring module of the SORBNET2 (MMS2) system, with the use of an internet browser
EU	European Union
SORBNET2 Agreement	SORBNET2 System Participation Agreement
ZBP	Polish Bank Association

1. Introduction

On 10 June 2013, Narodowy Bank Polski launched SORBNET2, a large-value payment system, which is the main channel for the exchange of domestic interbank large-value orders in zloty.

In the SORBNET2 system, banks' current accounts are maintained and the interbank *Real-Time Gross Settlement* (RTGS) is performed for payments in zloty. This system replaced the SORBNET system, in operation from 1996.

In this system, mainly monetary policy operations, interbank transactions from the financial market and client orders are cleared and the settlement is carried out for other payment systems and clearing systems, such as Elixir and Express Elixir operated by KIR S.A.. For Express Elixir, a dedicated fiduciary account accumulating banks' funds is maintained in SORBNET2.

As at 31 December 2023, participants of the SORBNET2 system included:

- NBP,
- 46 commercial banks,
- KSKOK,
- KIR S.A.,
- KDPW S.A.,
- KDPW_CCP S.A.

In 2023, the total number of 5,644,230 orders were executed in the SORBNET2 system (on average, 22,487 per day), with the total value of PLN 136.4 trillion (on average, PLN 543.3 billion per day). The average value of a single order amounted to PLN 24.2 million.

The SORBNET2 system is a key element of the Polish payment system which enables efficient and productive flow of money in the economy. The basic advantage of its use from the point of view of a customer, both individual and institutional, is the speed and security of order execution. Due to the fact that orders are accepted continuously, only a few minutes pass between the sending of an order by the originator's bank and its receipt by the payee's bank. Another important advantage of the system is the lack of limitations regarding the amount of the order, which enables settlement of mutual obligations between natural persons and economic entities as needed.

The owner and operator of the SORBNET2 system is NBP which takes care of the system development, manages the legal issues related to it and supervises its operation. The NBP Management Board is the ultimate decision-making body competent for the most important issues related to the operation of the SORBNET2 system. NBP is responsible for the technical service and operation of the SORBNET2 system. Preparation of this document by NBP as the operator of the SORBNET2 payment system is the fulfilment of Principle 23 of the PFMIs, *Disclosure of rules, key procedures and market data*, which, among others, imposes the obligation on the operator of the financial market infrastructure to draw up, on the basis of the *Disclosure framework for financial market infrastructures*,¹ and publish operational information (so-called Disclosure

¹ Principles for financial market infrastructures: Disclosure framework and Assessment methodology, CPSS-IOSCO, 2012, BIS.

Framework).

The first part of the document contains general information concerning the SORBNET2 system, including its description and the markets, the legal and regulatory framework the system services, as well as presents the system architecture and types of operations performed therein. The subsequent part of the document presents descriptive information concerning the compliance of the system with individual PFMI. The principle was adopted to review the content of this document every two years.

2. General information on the SORBNET2 system

2.1. General description of the SORBNET2 system

The SORBNET2 system is the most important Polish payment system performing functions related to the service of interbank settlements in zloty, carried out on banks' and National Credit Union's current accounts operated by NBP and on accounts operated for external systems (KIR S.A., KDPW S.A. and KDPW_CCP S.A.). Other participants' accounts are also operated in the system, including among others, accounts of deposits and credits granted to banks and accounts of minimum reserve requirements (for banks which are not members of the SORBNET2 system) as well as NBP's own accounts.

SORBNET2 is the RTGS type system, which means that payment orders are executed in accordance with the gross settlement principle (processing of single orders, i.e. without their mutual offsetting) and in real time (processing of orders on an on-going basis during the day, instead of on pre-determined moments of a day).

Transactions

Settlements performed in the SORBNET2 system result from the execution of payment orders issued by participants of this system, in particular due to:

- interbank money market operations,
- operations on the market of securities (including orders submitted by KDPW and KDPW_CCP),
- operations on the interbank foreign currency market,
- settlement arising from the exchange of payment orders performed via KIR in the ELIXIR system,
- operations with the central bank, among others, related to:
 - purchase and sale of domestic banknotes and coins by a participant at NBP,
 - settlement of interest as well as commissions and fees charged to system participants by NBP, etc.

Participation

The prerequisite of participation in the SORBNET2 system is the fulfilment of specific legal, technical and organisational requirements. In accordance with the provisions of the regulation of the Governor of Narodowy Bank Polski on the manner of performing interbank clearing and interbank settlements, the following entities may be participants of the SORBNET2 system:

- NBP,
- banks other than NBP,
- entities managing an external system,
- central banks of other states,
- National Credit Union (Krajowa Spółdzielcza Kasa Oszczędnościowo-Kredytowa),
- Bank Guarantee Fund.

The SORBNET2 system offers only one type of participation in the system, i.e. direct participation. Banks which do not hold a current account in the SORBNET2 system may perform clearing through another bank which maintains a current account in this system, playing the role of a correspondent bank for a given bank in the SORBNET2 system.

Statistical data

In 2023, 0.3 million interbank orders and 5.4 million client orders were executed in the SORBNET2 system.

The total value of executed interbank orders amounted to PLN 87.8 trillion (which constituted 64.4% of the system turnover), whereas the total value of executed client orders amounted to almost PLN 48.5 trillion (which constituted 35.6% of the system turnover). Detailed data concerning the number and value of orders executed in the SORBNET2 system which took place in 2023 are presented in Table 1.

Table 1. Number and value of orders executed in the SORBNET2 system in 2023

	2023			
	Number of orders	Share %	Value of orders (in PLN trillion)	Share %
TOTAL	5,644,230	100%	136.4	100%
1/ including:				
=> interbank	264,439	4.7%	87.8	64.4%
=> client	5,379,791	95.3%	48.5	35.6%
2/ including:				
=> banks' orders	5,316,119	94.2%	48.0	35.2%
=> KIR orders	28,540	0.5%	3.5	2.6%
=> KDPW and KDPW_CCP orders	73,471	1.3%	5.7	4.2%
=> NBP orders	226,100	4.0%	79.2	58.1%
Average daily number of orders	22,487			
Average daily turnover			PLN 543.3 billion	
Average value per order			PLN 24.2 million	

Source: NBP own calculations

2.2. Legal and regulatory framework

In accordance with Article 3(2)(1) and (6) of the Act of 29 August 1997 on Narodowy Bank Polski, one of the basic tasks of NBP is to organise payments and create conditions necessary for the development of the banking system. At the same time, in accordance with Article 51(1) of this Act, NBP is required to operate banks' accounts. NBP fulfils the above mentioned obligation, among others, through opening and operating banks' accounts in the SORBNET2 system.

Legal documentation of the SORBNET2 system consists of the NBP legal acts and the agreements concluded between NBP and system participants. The aforementioned NBP legal acts comprise Regulation No. 30/2017 of the Governor of Narodowy Bank Polski on the manner of performing interbank clearing and interbank settlements and Resolution No. 9/2013 of the Management Board of Narodowy Bank Polski of 24 May 2013 on the terms and conditions of opening and maintaining banks' accounts by Narodowy Bank Polski.

Agreements concluded between NBP and participants of the system define the principles of participation in the SORBNET2 system and the rules of operating bank accounts for individual entities by NBP in the SORBNET2 system, in particular, each of them defines: the subject and scope of the agreement, the procedure of applying for participation, obligations of the parties, entities authorised to issue payment orders in the SORBNET2 system, types of operations performed by authorised entities, principles of submission and execution of payment orders, principles of account monitoring, rules of parties' liability and rules of system security, rules of agreement termination and account closure. The agreements in question also oblige to comply with the requirements set forth in the "Functional specification of the SORBNET2 system for participants", including the attachments.

2.3. Architecture of the system and operations

From the point of view of IT infrastructure, the SORBNET2 system consists of:

- the central module of the SORBNET2 system (MCS2) through which accounts of system participants and other accounts (NBP's own accounts) are operated,
- the monitoring module of the SORBNET2 system (MMS2) enabling monitoring of SORBNET2 system participant's own account and management of payment orders.

Communication in the SORBNET2 system is based on the web and on standards of specific SWIFT messages. In order to exchange messages in the system, a dedicated group of SORBNET2 users (CUG SORBNET2) was established at the SWIFT level.

The SORBNET2 system provides participants with a possibility to monitor clearing and manage order queue. This functionality is optional and available in two variants:

- U2A mode – through MMS2 making available relevant screens,
- A2A mode – consisting in linking an internal participant's application directly with MMS2, with the use of the network and selected SWIFTNet services.

The SORBNET2 system works on all operating days, i.e. Monday to Friday, except on public holidays, from 7.30 a.m. to 6.00 p.m.² The cut-off time for client orders is 4.00 p.m. (for orders sent via MT103(+) or MT202COV) and 4.15 p.m. (for orders sent via MT202). Interbank orders are serviced until 6.00 p.m. In the standard procedure, on each operating day, settlement sessions of the Elixir system and settlement sessions of the kdpw_stream system are carried out, in accordance with their agreed schedules. The settlement of orders from the SKARBNET4 system is also performed in the SORBNET2 system.

The basic areas of SORBNET2 system operations include:

- maintaining and management of participants' accounts and NBP own accounts,
- performing interbank settlements (including the service of payment orders and Elixir clearing files),
- execution of operations performed by participants with the central bank,
- monitoring settlement by participants, liquidity management, order queue management,
- bookkeeping (SORBNET2 subsidiary ledger).

The provider of web services for the SORBNET2 system is the international SWIFT telecommunication network. It guarantees network reliability by means of ensuring access to emergency connections. Nevertheless, in emergency situations the SORBNET2 system provides participants with a possibility to transmit urgent interbank orders by means of using emergency routes (outside the SWIFT network).

² On 24 December and the last operating day of the year, the system operates from 7.30 a.m. to 4 p.m.

The architecture of the system and the way of its operation is presented in the system documentation (functional specification of the system and technical specifications).

3. Descriptive information concerning the compliance with individual financial market infrastructure principles

Table 2 presents a list of principles related to payment systems and the list of principles applicable to the SORBNET2 system.

Table 2. List of principles related to payment systems and principles applicable to the SORBNET2 system.

Principles related to payment systems	Principles related to SORBNET2 system
1. Legal basis	Yes
2. Governance	Yes
3. Framework for the comprehensive management of risks	Yes
4. Credit risk	Yes
5. Collateral	Yes
7. Liquidity risk	Yes
8. Settlement finality	Yes
9. Money settlements	Yes
12. Exchange-of-value settlement systems	not applicable
13. Participant-default rules and procedures	Yes
15. General business risk	Yes
16. Custody and investment risks	Yes
17. Operational risk	Yes
18. Access and participation requirements	Yes
19. Tiered participation arrangements	not applicable
21. Efficiency and effectiveness	Yes
22. Communication procedures and standards	Yes
23. Disclosure of rules, key procedures, and market data	Yes

3.1. Principle 1: Legal basis

An FMI should have a well-founded, clear, transparent and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.

Legal acts at statutory level are of crucial importance for the operation of the SORBNET2 system, in particular:

- Act of 29 August 1997 on Narodowy Bank Polski, hereinafter referred to as the NBP Act,
- Act of 29 August 1997 - Banking Law,

- Act of 24 August 2001 on Settlement Finality in Payment and Securities Settlement Systems and the Rules of Oversight of these Systems, hereinafter referred to as the Act on Settlement Finality.

In addition, the legal framework of the SORBNET2 system is defined, in particular by:

- NBP legal acts, i.e.:
 - Regulation No. 30/2017 of 26 October 2017 of the Governor of Narodowy Bank Polski on the manner of performing interbank clearing and interbank settlements,
 - Resolution No. 9/2013 of NBP Management Board of 24 May 2013 on the terms and conditions of opening and maintaining banks' accounts by Narodowy Bank Polski,
 - Resolution No. 29/2014 of NBP Management Board of 5 June 2014 on bank commissions and fees applied by Narodowy Bank Polski,
- agreement concluded between NBP and system participants.

In the case of the SORBNET2 system, significant material aspects of this system operation, requiring a high level of legal certainty include: the issue of settlement finality, procedure in the case of participant's bankruptcy and issues related to securing loans granted in connection with providing participants' liquidity in this system.

From the point of view of each of the material aspects of the SORBNET2 system operation as well as participants of this system, only one jurisdiction is applicable - this system operates based on the provisions of the laws of Poland.

SORBNET2 is a system where the settlement is performed on a gross basis in central bank money. In accordance with Article 15(1) of the Act on Settlement Finality, the provisions on settlement finality are applicable to the SORBNET2 system as the system operated by NBP. Accordingly, this system was notified to the ESMA as so-called *designated system*, to which the provisions on settlement finality apply, pursuant to Directive 98/26/EC of the European Parliament and of the Council of 19 May 1998 on settlement finality in payment and securities settlement systems. The aforementioned legal framework ensures a high level of certainty with respect to transaction finality, including a transaction initiated by an insolvent participant.

The moment of entering an order to the SORBNET2 system and its irrevocable nature is governed by Regulation of the Governor of Narodowy Bank Polski on the manner of performing interbank settlements and the provisions of SORBNET2 agreements concluded between NBP and system participants. The aforementioned legal framework ensures a high level of certainty with respect to transaction finality.

Moreover, results of clearing performed in the Elixir retail payment system operated by KIR, in the kdpw_stream system operated by KDPW and in the SKARBNET4 system operated by NBP are also settled in the SORBNET2 system. In accordance with Article 15(1) of the Act on Settlement Finality, the provisions on settlement finality are applicable to all securities settlement systems, including the system operated by KDPW. Pursuant to the same Act, in accordance with Regulation of the Minister of Finance concerning determining of systems where the systemic risk exists, issued on the basis of the aforementioned Act, the principles related to the settlement finality are also applicable to the Elixir system.

NBP exercises due diligence to ensure that the rules, procedures and agreements related to the SORBNET2 system are compliant with the relevant law and regulations. Legal acts regulating the operation of the SORBNET2 system were prepared, consulted both internally and externally and adopted in accordance with

internal regulations applicable in NBP. External consultations with the banking environment at the stage of creating the aforementioned legal acts were carried out through the ZBP. KIR and KDPW, as potential participants of the SORBNET2 system also took part in the consultation process. Should any amendments to the currently effective Resolution or Regulation become necessary, they shall be also consulted with the banking community. In the case of SORBNET2 agreements, changes in the SORBNET2 system are agreed at the stage of notification of changes by the banking community and NBP, and subsequently included in the contractual provisions, if necessary.

Strict application of the procedures described above in the process of preparation, consultation and approval of the SORBNET2 system legal documentation ensures a high level of certainty that the rules, procedures and agreements will not be cancelled, waived or suspended. Until the moment of drawing up this document, no court has ruled that any activities or findings regarding SORBNET2 under its rules and procedures shall be unenforceable.

Legal acts at a statutory level and NBP legal acts are published, whereas internal NBP regulations are not disclosed to public. The reasons of the specific activity and its legal basis are usually explained in letters sent to SORBNET2 system participants in advance, in relation to the action undertaken. In this scope, KGU SORBNET2 and RSP serve as information fora.

Besides the aforementioned legal acts and agreements with participants, detailed rules specifying many aspects related to the current operation of the system are defined in the functional documentation of the system (including the Functional Specification of the SORBNET2 system for participants).

In accordance with the provisions of the SORBNET2 agreement, any disputes arising from the agreement shall be resolved using the explanatory procedure defined in the agreement, before they are submitted for arbitration by the KIR Interbank Arbitrage, if a participant of the SORBNET2 system is a participant of KIR, or by the Court of Conciliation.

3.2. Principle 2: Management

An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders.

Due to the fact that NBP is the owner of the SORBNET2 system, the provisions of the NBP Act and NBP internal organisational regulations are applicable to issues related to the rules of management.

NBP Payment Systems Department which, as an organisational unit of NBP, reports directly to the Member of NBP Management Board, deals with the management of the SORBNET2 system. This department provides operational service of the system, deals with legal issues of SORBNET2 and its development. Key decisions for the SORBNET2 system are made in agreement with the NBP Management Board, which has a statutory mandate, as the NBP governing body, to perform periodical assessments of currency circulation and settlements as well as foreign currency related transactions. At the same time, the Management of the NBP Payment Systems Department remains the decision-making body for the majority of issues related to the current operation of the SORBNET2 system.

For the SORBNET2 system, both qualitative and quantitative objectives have been determined. The qualitative objectives include:

- mitigation of systemic risk in the payment system,
- streamlining of payment transactions and increasing their security.

The aforementioned qualitative objectives fulfil NBP tasks related to organising payments, in particular in terms of strengthening the functionality and effectiveness of the Polish payment system and its adjustment to the requirements binding in the EU. These objectives are accomplished in the SORBNET2 system, among others, through:

- performing interbank settlements in zloty on banks' current accounts,
- performing interbank settlements in zloty on bank accounts operated for external systems,
- maintaining banks' accounts,
- maintaining accounts of other entities.

The quantitative objectives refer mainly to system availability and efficiency. They define quantitative requirements concerning the availability of the system, the number and the time of processing of orders and determine other technical parameters of the system. On a quarterly basis, the oversight report comparing values assumed with real values is created and presented for information to the NBP Management Board. Those issues are described in the section on *Efficiency and effectiveness*.

The NBP Act defines areas of activity of the Governor of NBP and the NBP Management Board as well as issues related to the potential conflict of interests of Management Board members, however, it does not contain a direct reference to tasks of the NBP Management Board associated with the operation of the SORBNET2 system. NBP performs regular assessments (in semi-annual cycles) of the functioning of the payment system, including the SORBNET2 system, which are submitted for opinion to the PSC and for approval to the NBP Management Board and subsequently published on the NBP website.

Risk management at NBP is performed within the framework of the Integrated Risk Management System in NBP. This issue is described in the section on *Framework for the comprehensive management of risks*.

Problems related to the direction of changes and significant issues associated with the operation of the SORBNET2 system are subject to the analysis and consultation within the PSC. Members of the Council are informed of the current operation of the system, issue opinions concerning proposals of changes and development directions presented by NBP and may submit their own applications and proposals.

In order to streamline the process of making decisions related to the development of the SORBNET2 system and ensure its compliance with participants' expectations, NBP introduced the procedure of change management in the system. This procedure assumes cyclical implementation of consecutive versions of the

SORBNET2 system (once per year in the period May-June), where participants of the system, both external (i.e. banks, KSKOK, KIR, KDPW, KDPW_CCP), and internal at NBP (i.e. NBP departments) are assigned a key role in the process of defining the scope of implemented changes.

3.3. Principle 3: Framework for the comprehensive management of risks.

An FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.

The SORBNET2 system is subject to the risk management framework applicable at NBP. It comprises, in particular, risk identification, measurement, monitoring and management in the SORBNET2 system within business processes constituting system operation.

Among financial risk types defined by NBP, the financial credit risk and financial liquidity risk are theoretically associated with SORBNET2 as a system of payments. However, this system is the RTGS system where debiting and crediting of adequate accounts takes place practically simultaneously and the settlement of payments is performed only if the debited party holds adequate funds on its account. Therefore, the financial credit risk practically does not occur in the SORBNET2 system. Moreover, the SORBNET2 system has been recognised as systemically important, therefore its participants are additionally protected against effects of materialising of this risk type, in accordance with the provisions of the Act on Settlement Finality. Credit risk for NBP could exist in connection with the intraday credit extended to banks by NBP. However, this credit is fully secured by securities (including so-called *haircut*), subject to the fiduciary transfer of title to NBP (repo operation).

In general, in the SORBNET2 system, the strategic and financial risk, including the financial liquidity risk, are derived from operational risk. Liquidity risk in the SORBNET2 system is discussed in detail in the section on *Liquidity risk*, whereas the operational risk is discussed in the section on *Operational risk*.

The measures of effectiveness of the risk management policy, procedures and systems in relation to the SORBNET2 system include risk measurements, observation of system performance and participants' behaviour, whereas in negative terms - observation of incidents and their handling.

Participants are bound to manage risk pursuant to the SORBNET2 agreement. It is imposed both by the principle of system operation, pursuant to which an order is executed only if the bank has sufficient funds on its account, as well as systemic tools indicated in the aforementioned agreement. They enable the bank to:

- monitor the status of payment order execution,
- monitor the balance of their account,
- monitor instructions related to introducing blocking for the settlement of the Elixir system, the settlement of the kdpw_stream system and the settlement of the system operated by KDPW_CCP,
- manage order queue.

The issues of security and procedure in emergency situations are also regulated in the SORBNET2 agreement. Participants of the system are fully responsible for their relations with clients.

Risk in the SORBNET2 system is identified based on the analysis of system performance rules, observations of system operation and its environment as well as registration and analysis of incidents. Moreover, NBP monitors the progress of works in this field worldwide. In particular, available information concerning risk in other RTGS systems is analysed.

So far, operational risk has been recognised as the most important risk in the SORBNET2 system, including in particular the ICT-related technological risk. The ICT-related technological risk is monitored on an ongoing basis, mainly through observation of the current performance of the system, incidents and a detailed analysis of circumstances and conditions under which incidents occurred, compliant with the appropriate procedure. Adequately to results of those analyses, the relevant remedial measures are undertaken.

In addition, relevant clauses are contained in agreements with SWIFT and with the participants. They comprise both the requirements related to information security and the procedure in emergency situations. NBP has developed emergency plans which are verified twice a year, with respect to both technology and logistics issues.

The measure of effectiveness of risk management tools is the number of cases of risk materialisation. Up to date, the aforementioned tools have been found effective and sufficient. In addition, results of the analysis of information security risk performed by NBP in relation to the SORBNET2 system at least once per 24 months, serve as a measure of effectiveness of tools used for ensuring information security.

Facing dynamic changes in geopolitical landscape as well as more and more sophisticated cyber security threats, NBP constantly monitors its operational risk, especially technological and cybersecurity risk within the SORBNET2 system.

3.4. Principle 4: Credit risk

An FMI should effectively measure, monitor, and manage its credit exposures to participants and those arising from its payment, clearing, and settlement processes. An FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions. All other CCPs should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions.

SORBNET2 is the RTGS type system, therefore, the system does not generate credit risk for participants. In accordance with the provisions of the Regulation of the Governor of Narodowy Bank Polski on the manner of performing interbank clearing and interbank settlements, only entities subject to the relevant oversight may be participants of the SORBNET2 system. Moreover, a prerequisite for participation of an entity in the SORBNET2 system is recognising of such entity's financial standing as appropriate by NBP. In addition, while assessing the financial standing of an entity applying for participation, NBP may request the competent supervision authority to provide information, including data, opinions and analyses concerning the financial standing of those entities.

NBP's exposure to credit risk from participants could arise from the fact that NBP extends intraday credit and Lombard credit. However, both those credits are secured by eligible securities. In the case of intraday credit, a legal form of security is repo, whereas for a Lombard credit, a pledge is applicable. Securities used as a collateral are priced with a haircut. As a result of the aforementioned considerations credit risk from

participants was eliminated. Section on *Principle 5: Collateral* deals with more detailed issues in this scope.

In the SORBNET2 system, intraday balances of participants' accounts are monitored. Participants are obliged to monitor own balance pursuant to the SORBNET2 agreement. The aim is to mitigate liquidity risk rather than credit risk which, in fact, does not occur. The timeliness of credit repayment by participants is also monitored. Those tools indirectly allow for the assessment of a participant's standing in terms of its intraday liquidity and, in a longer term, they could be useful for the assessment of its financial standing. In the case of a SORBNET2 system participant's failure to repay an intraday credit, it is transformed into an overnight credit bearing the rate of interest of a Lombard credit, secured by appropriate securities. By the fiduciary transfer of title to the securities and their disposal, NBP recovers funds lent including interest foreseen by NBP for the Lombard credit (cf. the section on *Collateral*).

3.5. Principle 5: Collateral

An FMI that requires collateral to manage its or its participants' credit exposure should accept collateral with low credit, liquidity, and market risks. An FMI should also set and enforce appropriately conservative haircuts and concentration limits.

The criteria for securities which may constitute the collateral for the Lombard and intraday credit were defined by the NBP Management Board and published on the website: www.nbp.pl³.

The intraday credit is secured through the transfer of titles arising from securities denominated in zloty, deposited in the SKARBNET4 system or in KDPW SA, to NBP, according to their market value in the case of treasury bills and treasury bonds listed on the fixing, and according to the nominal value in the case of other securities admitted as collateral to the credit. The Lombard credit is extended against a pledge of securities denominated in zloty deposited in the SKARBNET4 system or in KDPW SA and against a pledge of securities denominated in foreign currency according to their nominal value. Monitoring of the adequacy of the collateral level is carried out daily based on market prices of securities constituting the collateral. Moreover, quarterly risk analyses are performed in operations aiming at liquidity provision to the domestic banking sector and a comprehensive analysis of management methods of this risk is carried out periodically.

In accordance with NBP regulations, the basis for determining the level of the intraday credit is the market value in the case of fixing treasury bills and treasury bonds, reduced by the haircut or the nominal value of securities reduced by the haircut. Treasury bonds for which market prices are regularly available constitute the predominant type of accepted collaterals. On the other hand, the basis for determining the level of collateral in the Lombard credit is the nominal value of securities denominated in zloty, reduced by the haircut, or the nominal value of securities denominated in foreign currency, reduced by the haircut and converted according to the currency exchange rate of the preceding day announced by NBP. In accordance with the provisions of the Resolution of the NBP Management Board concerning the introduction of the "Regulations on banks' refinancing by NBP by means of Lombard credit and intraday credit", the amount of the Lombard and intraday credit is determined according to specified model, depending on the type of accepted collateral.

The current NBP regulations do not permit a possibility to use collaterals for any purpose other than satisfying NBP claims due to the lack of timely credit repayment. Those issues are regulated in the Resolution of the NBP Management Board concerning the introduction of the "Regulations on banks' refinancing by

³ <http://www.nbp.pl/home.aspx?f=/dzienne/zabezpieczenia.htm>

NBP by means of Lombard credit and intraday credit” and in the Resolution of the NBP Management Board concerning the introduction of the “Regulations on operating accounts and deposit accounts for Treasury bills and NBP bills by Narodowy Bank Polski in the SKARBNET4 system and performing securities transactions in this system”.

Information derived from the ongoing monitoring enables adequate response and introducing appropriate changes. The management and the monitoring are performed in the SKARBNET4 IT system through implementation of appropriate functionalities, including the operation of algorithms related to adequacy of the collateral in relation to liquidity provided in real time. Moreover, employees on duty, responsible for monitoring of collaterals, simultaneously monitor the proper operation of the system and take appropriate steps in case of detecting any irregularities using emergency procedures. The rules of the aforementioned management and monitoring are regulated by: The Specification of the SKARBNET4 Owner’s Requirements, internal procedure, covenants and agreements concluded with KDPW.

3.6. Principle 7: Liquidity risk

An FMI should effectively measure, monitor, and manage its liquidity risk. An FMI should maintain sufficient liquid resources in all relevant currencies to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the FMI in extreme but plausible market conditions.

SORBNET2 is the RTGS system executing orders up to the level of funds available on the participant’s account, which mitigates liquidity risk. Therefore, the liquidity risk in this system stems only from the occurrence of this type of risk on the system participant’s side.

Issues associated with liquidity risk management by participants are regulated in the SORBNET2 Agreement which imposes specific obligations on participants, related to the provision of an adequate level of liquidity allowing for order execution. In particular, the participant is obliged to ensure sufficient funds in its account to cover its liabilities.

NBP role in the scope of liquidity risk management concentrates on supporting the participants in the liquidity management process and liquidity monitoring on an ongoing and ex post basis.

The system offers the following tools supporting the liquidity management process to participants:

- The mechanism of the queue of orders waiting for execution, aiming at mitigating the risk of order execution failure and reducing participants’ demand for liquidity.
- Orders entered into the system, for which funds are insufficient, are transmitted to the queue of orders waiting for execution. Orders may remain in the queue for a given operating day until the end of that day at the latest. In case of failure of the participant to ensure the adequate level of funds by the end of the operating day, the order which has not been executed shall be automatically rejected by the system in the procedure of day closure (it shall receive a “rejected” status).
- A possibility to block funds on the current account dedicated for the settlement of the session of external systems (Elixir and kdpw_stream).
- A possibility to block and unblock by participant funds dedicated for any purpose using bank blocking functionality,

- Multilateral netting mechanism for payments between participants, which is activated automatically six times a day. It consists in the execution of all orders waiting in the queue at a given moment, provided that sufficient funds are available as a result of the possibility of mutual multilateral offsetting of funds (net settlement of payments). This means that in the case where a participant does not hold sufficient funds on its current account in the SORBNET2 system and a potential clearing of mutual orders between participants does not result in a negative balance on any current account, all pending orders in the queue at the moment of triggering the mechanism will be cleared. In this process, the FIFO principle is not applied.
- The Monitoring Module of SORBNET2 (MMS2) constituting a tool allowing participants to monitor their own accounts and the settlements performed thereon and to manage the queue of their own orders. The functionality of the module is made available to participants optionally, with a possibility to use two variants:
 - the U2A mode (User-to-Application), as a basic variant, where the MMS2 module makes relevant screens available (access with the use of a web browser),
 - the A2A mode (Application-to-Application), as an advanced variant which requires connecting the participant's internal application directly with the MMS2 module with the use of the SWIFT network and relevant SWIFTNet services (performing adapting works to handle specific MX information messages).

Within the MMS2 module, the following functionalities are offered:

- possibility to view current liquidity position (balances on participant's own accounts as well as crediting and debiting orders),
- management of order queue, i.e. a possibility to remove an order from the queue, move the order to the end or beginning of the queue, change the order priority, change its indicated execution time,
- possibility to block funds for the settlement of sessions of external systems (Elixir and kdpw_stream) and management of such blocking (decrease, increase, waiver of blocking).
- The system offers a possibility to define details related to order execution, i.e.:
 - possibility to assign the specific priority to the order; it is possible to indicate one of the following three priorities:
 - H - highly urgent,
 - U - urgent,
 - N - normal,
 - possibility to indicate the date and/or time of order execution in the system, i.e. defining the following parameters for the order:
 - date of its execution (maximum up to 5 operating days in advance),
 - the earliest time of its execution in the system.
- A participant has a possibility to use liquidity supporting tools offered by NBP (the intraday credit and, as a consequence of non-repayment - the overnight credit, the Lombard credit).

As part of NBP's monitoring of liquidity flows performed in the SORBNET2 system and activity of participants, particular roles dedicated to various user categories, have been defined in the central module of the system (MCS2), which relate to the functions fulfilled by a given user in the system.

The analysis of liquidity ratios is performed in the system on an on-going basis (in the MCS2 module) and ex post (using the PAR-SORBNET2 system), including the current balance on banks' accounts, turnover on accounts, execution times of the Elixir session, use of the intraday credit, the analysis of the order queue and

order execution times, scale of rejected orders.

The sources of liquidity for participants in the SORBNET2 system include: account balance, proceeds from crediting the participant's account by other participants, settlement result (credit balance) in external systems, possibility to use liquidity supporting tools offered by NBP (the intraday credit⁴ and the Lombard credit).

The risk of liquidity loss in the system arises only from the occurrence of liquidity problems of at least one of system participants, in particular, in the group of participants significant in terms of the number and value of transactions cleared in the system.

All participants of the SORBNET2 system have a status of direct participants. It is the only permissible form of participation. Settlements in the SORBNET2 system are performed only on the clearing accounts of direct participants obliged to ensure an adequate level of liquidity both for the execution of their own orders (including orders of own clients) and orders of entities for which a given participant acts as an intermediary in the execution of orders in the SORBNET2 system as a bank-correspondent. The risk of liquidity loss by an affiliate (branch, subsidiary, loro client, a bank performing clearing through a given participant based on a correspondent bank relationship) is borne only by the direct participant acting as an intermediary in clearing in the SORBNET2 system (a correspondent bank).

Operating tools of the SORBNET2 system for identification and monitoring of liquidity flows include the aforementioned:

- the MMS2 module enabling system participants to gain the on-line access to data and information from the current operating day and to archived data (maximum up to one year),
- the central SORBNET2 module (MCS2 module) – enabling NBP users to gain access to data and information from the current operating day and to archived data (currently, data since the beginning of system operation are available),
- operational reports from the SORBNET2 system generated at the end of the day for internal needs of NBP,
- the PAR-SORBNET2 system – containing archived data (since the beginning of system operation) and the set of elaborated operational and oversight reports related, among others, to the number and value of orders executed (and rejected) in total in the system and by its individual participants, the levels of credits and debits to the banks' accounts due to clearing of the Elixir session, use of credits (intraday and Lombard credit).

In particular, in the scope of monitoring of system participants' liquidity, NBP:

- monitors, on an on-going basis, the level of participants' liquidity required for the execution of the Elixir session – activities related to the settlement of the Elixir session are performed by system operators who, in the case of lack of required liquidity on the participant's account, contact a given bank by phone and in the event of the participant's failure to ensure funds for the Elixir session, KIR starts launching the settlement guarantee procedure,
- monitors receiving and repayment of the intraday and Lombard credit – the activities take place on an on-going basis; in addition, reports generated from the PAR-SORBNET2 system are analysed based on daily data (for monthly, semi-annual, annual periods, with the breakdown into banks and in total, regarding drawing / repayment of the Lombard and intraday credit as well as the type of pledged securities, the level of interest accrued and charged in the case of the Lombard credit).

⁴ And in the case of its non-repayment - the overnight credit

NBP also uses analytical tools such as analyses performed cyclically and on an ad hoc basis and reports. In addition, simulation tests are carried out with the use of specialist software and stress-tests checking the resilience of the system to various types of negative shocks.

In order to improve the performance of the settlement in the system, NBP, as the lender of last resort, offers the following products to banks:

- the intraday credit supporting the settlement of payments during the trading day, enabling access to short-term liquidity, i.e. its drawing and repayment should take place during a single operating day,
- the Lombard credit (included in the deposit and credit operations), which is the tool used for supporting and regulating current payment liquidity of banks in the form of transitional short-term assistance and which is granted against the pledge of securities.

The above mentioned credits are granted only to banks holding a current account in the SORBNET2 system which concluded the relevant agreement with NBP. The rules concerning securing credits granted by NBP are defined in the NBP Resolution.⁵ They are described in the section on *Collateral*.

3.7. Principle 8: Settlement finality

An FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time.

The SORBNET2 system was notified to the ESMA as so-called *designated system*, to which the provisions on settlement finality apply, pursuant to Directive 98/26/EC of the European Parliament and of the Council. In accordance with the requirement set forth in Article 6(1) of the Act on Settlement Finality in Payment and Securities Settlement Systems and the Rules of Oversight of these Systems, in the SORBNET2 system the moment of entering a payment order into the system was defined (i.e. payment orders shall be deemed entered into the SORBNET2 system upon their registering in the SORBNET2 system) and the moment from which a settlement order must not be revoked (a payment order may be revoked by the issuer of such order until the moment of its execution in the SORBNET2 system; i.e. from the moment of debiting the relevant account and simultaneous crediting of the other party of the order).

SORBNET2 is the RTGS type system, i.e. a system of real time gross settlement, which means in practice that the system, performs the final settlement (i.e. irrevocable and unconditional execution of the order submitted) in relation to single payment orders (i.e. transaction by transaction) in continuous manner (on an on-going basis) during the trading day (instead of designated moments of a day). It means in practice that the execution of orders takes place in time counted even in seconds from the moment of entering a payment order into the system, i.e. in accordance with the principles of this system, from the moment of the payment order registration in the SORBNET2 system.

The payment order accepted for settlement is subject to immediate execution provided that a participant has sufficient funds on its current account.⁶ In the case of lack of funds, such order shall be placed in the queue of orders waiting for execution. A payment order included in the queue of orders waiting for execution will be rejected if it cannot be cleared before the latest cut-off time for a given type of order defined in the schedule

⁵ Resolution of the NBP Management Board concerning the introduction of the "Regulations on banks' refinancing by NBP by means of Lombard credit and intraday credit"

⁶ With the exception of orders of participant with a status "suspended". All orders of a participant with the "suspended" status, both incoming and outgoing, are subject to authorisation by an authorised NBP employee.

of the trading day, which constitutes an appendix to the agreement for participation in the SORBNET2 system.

In accordance with the agreement for participation in the SORBNET2 system, a payment order must not be revoked after its execution in the SORBNET2 system. A sender of an order may remove the order from the queue of orders waiting for execution (current or with the future execution date/hour) only until the settlement moment, i.e. debiting the payer's account.

The order accepted for clearing in the system and included in the queue of orders waiting for execution may be revoked (removed from the queue) only by its issuer and it shall be performed via the MMS2 monitoring module.⁷

Orders included in the queue for a given operating day and not cleared until the end of that day shall be automatically removed by the system under the operating day closure procedure and appropriate information shall be sent to the issuer of such order.

3.8. Principle 9: Money settlements

An FMI should conduct its money settlements in central bank money where practical and available. If central bank money is not used, an FMI should minimise and strictly control the credit and liquidity risk arising from the use of commercial bank money.

In the SORBNET2 system, a real time settlement of orders is performed in zloty, in the central bank money.

3.9. Principle 13: Participant-default rules and procedures

An FMI should have effective and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designed to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations.

In relation to the SORBNET2 system, the generally applicable regulations apply, i.e. the Act of 24 August 2001 on Settlement Finality in Payment and Securities Settlement Systems and the Rules of Oversight of these Systems, the Act of 10 June 2016 on the Bank Guarantee Fund, Deposit Guarantee Scheme and Resolution, the Act of 28 February 2003 on Bankruptcy Law and the Act of 15 May 2015 on Restructuring Law. In accordance with Article 7 of the Act on Settlement Finality, issuance of the court ruling or decision on liquidation, suspension or limiting of the activity pursued by the participant, or information on undertaking other remedies against the participant, resulting in the suspension or limiting the execution of settlement orders in the system related to that participant, shall be deemed the moment of the participant's bankruptcy.

In terms of participants' obligations arising from granting them an intraday credit or the Lombard credit by NBP, the potential satisfying of related NBP claims shall take place, respectively, based on the fiduciary transfer of securities or the pledge of securities submitted as a collateral of the aforementioned credits (see: the section on *Liquidity risk*).

In the SORBNET2 Agreement, cases of participant's default for operational reasons, caused by the failure attributable to the participant, NBP or the SWIFT network were also defined. In particular, they are defined in Appendix no. 3 to the SORBNET2 Agreement - Emergency procedures. It indicates types of emergency situations, the method of notifying such events and describes in detail the procedure in the event of a failure,

⁷ This functionality is unavailable for KIR on the auxiliary and fiduciary account.

including, among others the way of submitting orders by the participant in emergency mode.

In the case of inability of the participant to fulfil the obligation for technical reasons, it shall take steps enabling, e.g. the submission of orders in emergency mode by such participant.

In addition, in the event of no possibility to complete the settlement session of KIR due to the lack of funds to cover liabilities by one or more banks participating in the settlement of the Elixir system, NBP shall undertake measures strictly defined in the SORBNET2 system agreement, which enable launching of the settlement guarantee by KIR.

Payment orders may be removed from the queue of orders waiting for execution (current or with the future execution date/hour) only until the settlement moment, i.e. debiting the payer's account (see the section on *Settlement finality*).

Pursuant to Article 13(1)-(2) of the Act on Settlement Finality, the court or other competent authority shall notify NBP of declaring the bankruptcy, opening of the restructuring procedure, liquidation, suspension or limitation of the system participant's activity, resulting in the suspension or limitation of execution of its orders in the system. In accordance with Article 22(1) of the Act on Settlement Finality, the list of participants of so-called indicated systems is available on the NBP website, which is significant for the aforementioned courts or other competent authorities. Pursuant to Article 13(3) of the aforementioned NBP Act, immediately after receiving of the ruling or decision issued by the court or other competent authority (in this case, the PFSA) concerning liquidation, suspension or limitation of the activity pursued by the participant, or information on undertaking other remedies against the participant, resulting in the suspension or limiting the execution of settlement orders in the system related to that participant, NBP informs the competent authorities of other Member States, notified by those states to the European Commission.

The suspension of a participant by assigning the "suspended" status in the system for a period indicated by the NBP means temporary suspension by the NBP of the exercise of the participant's rights and obligations. While applying the suspension in the system, NBP is obliged to indicate the reason for the suspension to the suspended participant.

The reasons for the suspension defined in the SORBNET2 participation agreement and depending on the specific nature of a given participant, may include:

- declaration of the participant's bankruptcy (applies to selected participants),
- filing a petition for declaring the participant's bankruptcy (applies to selected participants),
- undertaking restructuring activities towards the participant (applies to selected participants),
- the participant's failure to continue meeting the technical requirements specified in the SORBNET2 participation agreement,
- failure of the participant to perform any of its material obligations towards NBP,
- exclusion of the participant from the Closed User Group SORBNET2 (CUG SORBNET2) or termination of its membership in CUG SORBNET2 for other reasons,
- gross infringement of the provisions of the SORBNET2 participation agreement,
- Inon-acceptance of amendments to the participation agreement in the SORBNET2 system by the participant,
- occurrence of any other event which, in the opinion of NBP, may pose a threat to the stability, proper operation and security of SORBNET2, or which would jeopardise the performance by NBP of the tasks provided for in the NBP Act,
- occurrence of other situations that may result in the suspension or limitation of the participant's activity.

All orders related to the suspended participant, both issued by the suspended participant itself and addressed to it (debit and credit orders), are subject to authorisation by the NBP DSP employee.

Suspension of the entities managing the external systems, i.e. KIR, KDPW and KDPW_CCP will be implemented in accordance with bilateral agreements between NBP and those entities.

3.10. Principle 15: General business risk

An FMI should identify, monitor, and manage its general business risk and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialise. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.

The SORBNET2 system is the principal tool to perform interbank settlements. The services in this system are provided not only to banks but also to so-called external systems. The services are provided under the implementation of the NBP statutory task, i.e. organising payments. In this context, it is difficult to refer to such risk assessment as would be relevant for organisations pursuing activity on a *for profit* basis. However, NBP develops its pricing policy for services provided within payment systems operated so that related NBP losses on current activity are prevented.

The general risk related to operating the SORBNET2 system is the reputation risk and the financial risk associated with the requirement to pay compensation (defined in agreements concluded with participants of the system in the SORBNET2 agreements) in the case of NBP's non-performance or improper performance of the obligations arising from the Agreement with the participant.

Due to the key role of the SORBNET2 system in the Polish payment system as well as the functions and legal status of NBP, liquidation of this system is not possible, therefore no resolution plans are prepared. In the case of replacing the SORBNET2 system by other or new system, internal provisions regulating security in NBP IT systems shall apply.

3.11. Principle 16: Custody and investment risks

An FMI should safeguard its own and its participants' assets and minimise the risk of loss on and delay in access to these assets. An FMI's investments should be in instruments with minimal credit, market, and liquidity risks.

The rules of performing liquidity-providing operations, including those related to their securing by eligible assets, are regulated by resolutions of the NBP Management Board.⁸ In order to mitigate both the risk of the loss of assets and the settlement and operational risk, NBP regulations provide that the securities used as a collateral of the aforementioned operations should be transferred to and stored exclusively in the following institutions and systems:

- SKARBNET4 in the case of Treasury bills and money bills,

⁸ Resolution No. 7/2015 of the NBP Management Board of 12 March 2015 concerning the introduction of the "Regulations on operating accounts and deposit accounts for Treasury bills and NBP bills by Narodowy Bank Polski in the SKARBNET4 system and performing securities transactions in this system", Resolution No. 9/2015 of the NBP Management Board of 12 March 2015 concerning the introduction of the "Regulations on banks' refinancing by NBP by means of Lombard credit and intraday credit".

- KDPW in the case of Treasury bonds, municipal bonds, debentures, corporate bonds,
- Euroclear in the case of Treasury bonds denominated in euro.

Neither own assets nor counterparties' assets are invested.

3.12. Principle 17: Operational risk

An FMI should identify the plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures, and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfilment of the FMI's obligations, including in the event of a wide-scale or major disruption.

In the PFMI, operational risk is defined as *the risk that deficiencies in information systems, internal processes, and personnel or disruptions from external events will result in the reduction, deterioration, or breakdown of services provided by an FMI.*⁹

The operational risk is subject to the risk management framework applicable at NBP. The operational risk management comprises activities in the area of:

- identifying, preparing the description, performing the analysis and measurement of risk level,
- applying risk mitigation mechanisms and monitoring their effectiveness,
- providing information concerning risk management,
- acceptance of the existing risk level and in case it is not acceptable - undertaking additional measures mitigating the risk.

In the case of the SORBNET2 system, NBP acts as the system operator. The NBP Management Board is regularly (on a monthly basis) informed of the current level of operational risk at NBP and takes major decisions regarding the acceptance or lack of acceptance of the specific risk level at NBP. Moreover, the NBP Management Board is responsible for changes in the applicable risk management framework if such a need is identified.

Due to the role of the SORBNET2 system, the measurement and monitoring of the operational security risk in this system deserves special attention.

While applying the risk management framework effective at NBP to the SORBNET2 system and taking into account standards applicable in this area in the EU Member States, NBP as the system operator strives to achieve the highest possible compliance of risk management in the SORBNET2 system with risk management methods in the TARGET2 system¹⁰, considering a considerable universality and common nature of this framework.

Highly qualified personnel is employed for the service of the SORBNET2 system. The issue of preventing fraud in general terms was taken into account in the recruitment process of NBP employees as well as through applying the system of access control to NBP facilities and resources and the rules of document and

⁹ Principles for financial market infrastructures, BIS, April 2012, Annex H - Glossary

¹⁰ Taking into account the difference that the owner and operator of the SORBNET2 system is the central bank, whereas in the case of the TARGET2 system the owner is Eurosystem while the operator comprises three central banks (so-called 3CB) which built this system and currently introduce changes therein postulated by Eurosystem and fulfil the role of the operator. It means that in the case of the TARGET2 system, Eurosystem uses outsourcing, which is not the case of the SORBNET2 system.

information circulation effective at NBP. The following measures additionally serve for counteracting fraud in the SORBNET2 system: a strictly defined distribution of roles with the relevant authorisations related thereto, including the access to adequate resources and performing the specific activities, in accordance with the four-eyes principle.

In the SORBNET2 documentation, qualitative and quantitative objectives are defined in relation to operational reliability of the system, taking into account the adequate “security margin”. Such approach ensures effective operational risk prevention. More on this subject in the section on *Efficiency and effectiveness*.

Internal procedures aiming at ensuring business continuity stipulate the occurrence of a large-scale disturbance or a significant disturbance. The solutions adopted fully enable completion of the settlement by the end of the day. Additionally, in extraordinary situations, particularly in case of contingency situation, a possibility exists to postpone the hour of system closure in order to enable such settlement.

The SORBNET2 system operates in parallel in the backup and basic centre on a *load balancing* basis, therefore, in principle no data loss occurs in the basic centre under emergency circumstances. Nevertheless, in the event of its occurrence, a possibility to match discrepancies by means of a telephone or e-mail contact between authorised NBP employees and authorised representatives of individual system participants has been envisaged, with the use of the MMS2 monitoring module of the SORBNET2 system.

In the crisis management procedures, a possibility to communicate with major external and internal stakeholders of the system has been foreseen. In the case of crisis threat of a scale larger than limited only to the SORBNET2 system, all rules, including communication rules defined for NBP under the regional (national) crisis management system shall apply.

Under the specific system setting (simultaneous processing in both centres) and well-defined and efficiently operating plan ensuring business continuity, such solution was deemed redundant. Nevertheless, in exceptional cases, manual entering of orders into the system by authorised NBP employees is possible whereas communication means relevant for the crisis situation and adequate printouts sent to participants may be used.

3.13. Principle 18: Access and participation requirements

An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.

Entities applying for participation in the SORBNET2 system must comply with all legal and technical requirements related to the participation in the SORBNET2 system defined in legal acts listed in the section on *Legal basis*. No specific financial requirements are included in the SORBNET2 system, however, in accordance with the requirements set forth in the aforementioned legal acts, the financial situation of the entity for which an account shall be opened in the SORBNET2 system must be recognised as appropriate by NBP.

In accordance with the provisions of the Regulation of the Governor of NBP on the manner of performing interbank clearing and interbank settlements, the SORBNET2 system participant shall be understood as an entity which holds a bank account in this system pursuant to the participation agreement concluded with NBP. In the SORBNET2 system, only direct participation is possible. In legal terms, no indirect participation possibility is admitted in the system.

A closed catalogue of entities which may apply for participation in the SORBNET2 system comprises:

- NBP,
- a bank other than NBP (see footnote 1),
- an entity managing an external system,
- the central bank of another country,
- National Credit Union (KSKOK) within the meaning of the Act of 5 November 2009 on credit unions.
- Bank Guarantee Fund.

In accordance with the Resolution on the terms and conditions of opening and operating accounts of banks by NBP, a written application by a bank is required to open the bank's account in the SORBNET2 system. The bank is obliged to attach indicated documents to the application.

The basic condition for participation of central banks of other states and entities managing external systems in the SORBNET2 system is to obtain the consent of the NBP Governor to maintain an account with NBP, in accordance with the Act on Narodowy Bank Polski. In the case of entities managing external systems, a significant condition is the requirement that they are subject to the oversight of the competent authority.

A prerequisite for participation of the National Credit Union in the SORBNET2 system is that the financial standing of such entity's is recognised as appropriate by NBP.

All the aforementioned entities, as well as banks, are obliged to submit all required documents, and their financial standing must be recognised as appropriate by NBP. At the same time, as in the case of banks, opening of an account in the SORBNET2 system shall take place by concluding the agreement on participation in this system.

In order to be able to participate in the SORBNET2 system, all entities are obliged to fulfil strictly defined requirements and technical conditions.

Moreover, an entity applying for participation is bound to perform and pass tests according to test scenarios developed by NBP.¹¹

The access criteria and the requirements related to participation in the SORBNET2 system have been determined in the aforementioned legal regulations. For entities authorised to participate in the SORBNET2 system, the access criteria, both legal and technical, are clearly defined and equal for everyone. The fulfilment of strictly defined legal requirements, including in particular the submission of all required documents and their detailed verification as well as the obligation of on-going updating of those documents, are the measures mitigating legal risk materialisation in this area. The obligation to fulfil the technical requirements by all participants and the verification of this obligation in mandatory tests is aimed at mitigating operational risk materialisation.

Entities other than participants of the SORBNET2 system may gain access thereto by signing an adequate agreement with the bank - participant of the system. However, from legal point of view, such entities shall not have a status of an indirect participant, since the SORBNET2 system is a one-tier system.

Should a participant violate or cease to meet the requirements related to participation, NBP may terminate the participation agreement in the SORBNET2 system with the participant, by giving notice, in particular if, according to the NBP assessment, such participant does not meet the conditions regarding the appropriate financial standing, NBP recognises that the participant poses threat to settlement security in connection with untimely execution of its obligations for reasons attributable to it, when the participant did not accept

¹¹ The test environment (for the SORBNET2 system and the MMS2 module) is made available to system participants (both existing and prospect), where participants may perform optional own tests. The environment is made available on a daily basis, on operating days of the SORBNET2 system, within specific hours (9.00 a.m. – 4.00 p.m.).

amendments to the agreement or when the participant grossly violated the terms and conditions of the agreement.

In the aforementioned cases, NBP may also assign the “suspended” status to the participant, with a consequence that all orders related to the suspended participant, both issued by the suspended participant itself and addressed to it (debit and credit orders), are subject to authorisation by an employee of NBP DSP. More on this subject in the section on *Participant-default rules and procedures*.

Moreover NBP shall, in principle, terminate without notice the agreement for participation in the SORBNET2 system with the participant in the case if:

- a decision has been taken on suspending the activity of or on liquidation of the participant under the procedure defined in separate provisions,
- a decision on establishing a participant has been withdrawn,
- the participant has been taken over by or merged with another entity.

NBP may also withhold the extension of an intraday credit to a bank for a period of thirty calendar days, if the credit is not repaid twice in a given month on the set deadline, for reasons attributable to the bank.¹²

3.14. Principle 21: Efficiency and effectiveness

An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.

The decision on building the SORBNET2 system was taken in response to the expectations reported by participants, in particular in the scope of efficiency of the SORBNET system and for the purpose of implementation of newer technologies and application of international standards. In the course of the work related to the construction of the SORBNET2 system, current cooperation between NBP and the banking community played an important role.

The effectiveness of the SORBNET2 system operation should be understood as ensuring the required level of service provided to its participants. These requirements were defined in the SPUT document regulating issues related to the system operation, its availability and failure-free performance.

In accordance with the requirements set forth in the Resolution of the NBP Management Board on the management of information security in IT systems of Narodowy Bank Polski, documentation related to security defining the characteristics of information processed in the system and estimation of potential losses was developed for the system. On its basis, the SORBNET2 system was classified as a critical system which is subject, in particular, to restrictive requirements in the scope of its availability.

The qualitative and quantitative objectives related to operational reliability of the system are described in the SPUT. The SPUT comprises, among others, the SORBNET2 service card, pursuant to which NBP undertakes to ensure the adequate level of operating parameters of the system. In principle, the SPUT is updated on an annual basis. In particular, the required values of the SORBNET2 system operating parameters may be subject to change if such a need arises from the analysis of the relevant real data for the previous period.

The operating reliability of the SORBNET2 system is guaranteed, on the one hand, by the adequate selection of parameters in the SPUT, i.e. with the relevant “security margin” and, on the other hand, by the tests and

¹² In accordance with Resolution of the NBP Management Board concerning the introduction of the “Regulations on banks’ refinancing by NBP by means of Lombard credit and intraday credit”

exercises performed. The targets in the scope of operating reliability are achieved through the annual updating of the SPUT, indicating the adequate level of service in the SPUT and application of procedures related to ensuring business continuity.

The mechanisms of measurement and assessment of implementation of the required system performance parameters have been defined in the SORBNET2 service card and include the following activities:

- reports related to the performance of the service (service level reports) made in a monthly and annual cycle and on request, including:
 - service availability report,
 - report on order execution times,
- operational reviews of service provision quality - made every 12 months and comprising the analysis of values arising from service provision reports and containing potential recommendations of changes in the level of service provision quality,
- governance reviews - made on a case by case basis after each operational review performed and aiming at verifying the scope, specification and level of performed service as well as adjustment of the SPUT content to the current needs.

The verification of the system operation is performed under the reports prepared by NBP for the needs of the NBP Management Board, i.e.:

- quarterly oversight assessment of the system – “Oversight report on SORBNET2
- quarterly information concerning disturbances in the system performance – “Information on incidents in the payment system”.

The current monitoring of the system is the additional mechanism of regular verification of system performance efficiency. In technical terms, the monitoring of the system performance consists in monitoring of its individual elements, i.e. the local network and SWIFT, servers, the operating system, the integration platform and the performance of individual modules. In business terms, the monitoring of the system (SORBNET2 application) is performed, in particular, through monitoring of processes performed in the system within the opening and the closure of an operating day, an operating day process in the system, including the settlement of orders and the execution of the Elixir session.

The rules of conduct are defined in detail in the system documentation, i.e. in the maintenance and implementation documentation as well as in the security documentation and security procedures.

3.15. Principle 22: Communication procedures and standards

An FMI should use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, settlement, and recording.

The exchange of information between participants and the SORBNET2 system consisting in the exchange of payment and information messages is standardised and based on an international telecommunications network SWIFTNet Secure IP Network (SIPN) provided by S.W.I.F.T srl. association.

Accordingly, in the SORBNET2 system the following requirements were adopted:

- The exchange of orders and processing of participants' orders takes place with the use of SWIFTNet FIN and FINCopy (Y-copy) services and particular SWIFTNet MT messages. The exception to this rule are orders from the Elixir system routed for settlement in the SORBNET2 system, which are

transmitted through the SWIFTNet network with the use of the SWIFTNet FileAct service and orders from the SKARBNET4 system, which are transferred through the internal network within NBP.

- The functionality related to account monitoring and payment management is implemented by the dedicated tool, i.e. the MMS2 module, with the use of a web browser, InterAct services, FileAct services and specified SWIFTNet MX messages.
- The identification of participants in the system and the exchange of messages is based on BIC codes and all system participants are bound to hold the code.
- In accordance with the SWIFT requirement defined for RTGS systems, a dedicated group of system users has been established at the SWIFT level, so-called CUG SORBNET2, enabling participants to perform automatic routing of payments to the settlement in the SORBNET2 system and safe exchange of orders among all participants of the group without the necessity to carry out bilateral exchange of keys between its individual participants.

In the SORBNET2 system, payment and information messages are used in accordance with the international SWIFTNet MT and MX standard.

The list of SWIFTNet MT messages used in the SORBNET2 system is as follows:

No.	Type of message	Type of message	Status	Description
1.	MT 103	Payment	Obligatory	Client's payment order
2.	MT 103+	Payment	Obligatory	Client's payment order (STP)
3.	MT 202	Payment	Obligatory	Interbank order
4.	MT 202COV	Information	Obligatory	Covering order
5.	MT 012	Information	Optional	Sender's notice of releasing the message to the recipient
6.	MT 019	Information	Obligatory	Notice of order execution interruption
7.	MT 900	Information	Optional	Confirmation of participant's account debiting
8.	MT 910	Information	Optional	Confirmation of participant's account crediting
9.	MT 940*	Information	Obligatory	Detailed statement of operations on an operating day
10.	MT 950*	Information	Obligatory	Statement of operations on an operating day

Messages from 1 to 6 are processed with the use of FIN service in Y-Copy mode, whereas messages from 7 to 10 - with the use of the FIN service. All system participants are obliged to ensure processing of the aforementioned SWIFTNet MT messages recognised as obligatory in the system. Information messages marked by an asterisk (*) related to the statement (MT940 and MT950) are obligatory; while acceding to the system, the participant has to indicate which of the messages regarding the statement it wants to receive.

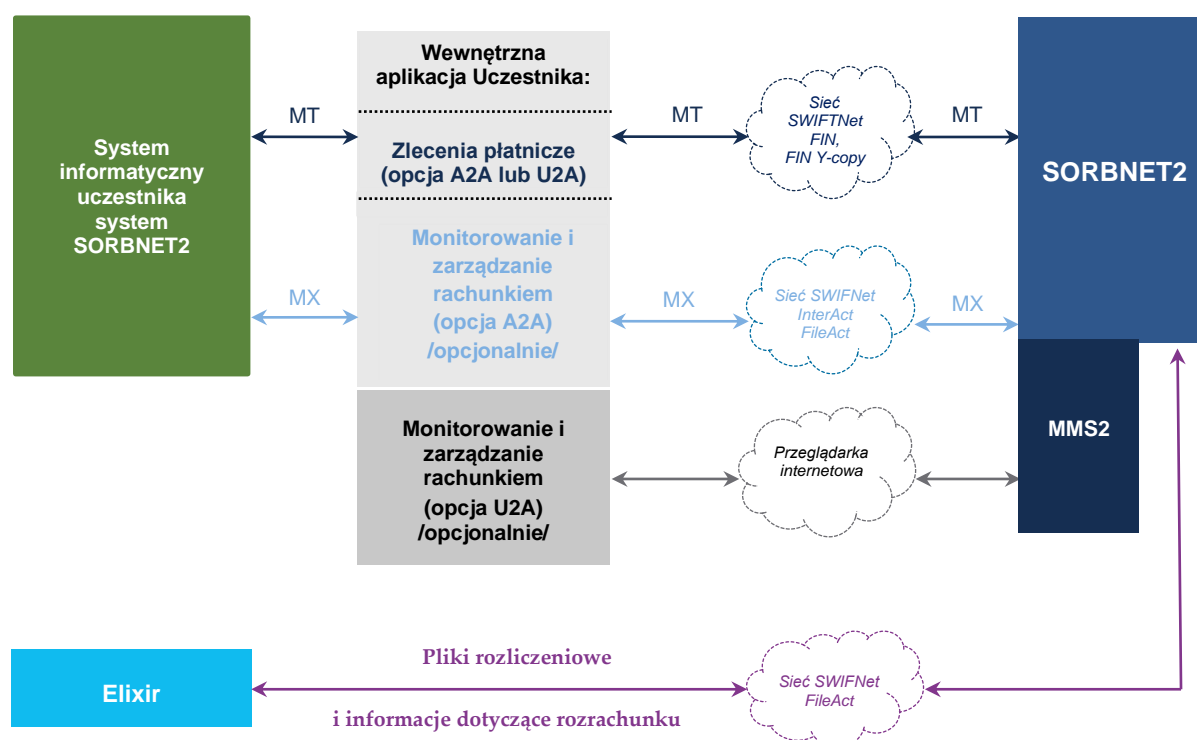
Within account monitoring and management in the SORBNET2 system (implemented by the MMS2 module), InterAct, FileAct services are used as well as specific MX messages (XML for SWIFT) adjusted to the needs of the SORBNET2 system.

The list of SWIFTNet MX messages used in the SORBNET2 system is as follows:

No.	Type of message	Functionality
1.	GetAccount	Inquiry concerning the level of balance on the bank's account. The response is the ReturnAccount message
2.	GetReservation	Request for information concerning the level of blocked accounts for the Elixir or kdpw_stream session. The response is the ReturnReservation message
3.	GetTransaction	Inquiry concerning transactions related to the bank's account; the user may define elements by which the message will be searched. The response is the ReturnTransaction message
4.	CancelTransaction	Removal of payment waiting for execution from the payment queue. Linked with GetTransaction message in order to download payment identifier. The response is the Receipt message.
5.	ModifyTransaction	Serves for payment queue management (enables change of order priority and time of its execution). The response is the Receipt message.
6.	ModifyReservation	Enables defining of the blocked amount for the Elixir or kdpw_stream session on an indicated account. The response is the Receipt message
7.	DeleteReservation	Enables cancelling of the blocked amount for the Elixir or kdpw_stream session on an indicated account. The response is the Receipt message
8.	Receipt	Confirmation of receipt of the message sent by the system and information on its implementation status responding to the following messages: CancelTransaction, ModifyTransaction, ModifyReservation and DeleteReservation
9.	GetData and ReturnData	Own messages of the SORBNET2 system used for the service and/or exceeding the response time to the primary inquiry and exceeding the response size

The figure below presents a diagram of information exchange between participants within the SORBNET2 system, i.e. services used and SWIFTNet messages.

Figure 2. Diagram of information flow within the SORBNET2 system



System informatyczny uczestnika systemu SORBNET2	IT system of SORBNET2 system participant
Wewnętrzna aplikacja Uczestnika	Participant's internal application
Zlecenia płatnicze (opcja A2A lub U2A)	Payment orders (A2A or U2A option)
Monitorowanie i zarządzanie rachunkiem (opcja A2A) /opcjonalnie/	Account monitoring and management (A2A option) /optional/
Monitorowanie i zarządzanie rachunkiem (opcja U2A) /opcjonalnie/	Account monitoring and management (U2A option) /optional/
Pliki rozliczeniowe i informacje dot. rozrachunku	Clearing files and information concerning settlement

3.16. Principle 23: Disclosure of rules, key procedures, and market data

An FMI should have clear and comprehensive rules and procedures and should provide sufficient information to enable participants to have an accurate understanding of the risks, fees, and other material costs they incur by participating in the FMI. All relevant rules and key procedures should be publicly disclosed.

The rules of SORBNET2 system operation are regulated in the legal, technical and operational documentation which is known to system participants.

The **legal** documentation is discussed in the section on *Legal basis*.

The **technical and operational** documentation of the system consists of functional and technical specifications of the system as well as detailed instructions and procedures dedicated to system participants, i.e.:

- Functional specification of the SORBNET2 system for participants,
- Monitoring of account in SORBNET2, MMS2 module,
- Technical conditions of U2A integration,
- Instruction of MMS2 user,
- SORBNET2_SWIFT_Subscription_Guide,
- Instruction of registration of SORBNET2 system participant,
- testing documentation of the system (plan of tests, scenarios and test schedules),
- Procedure of cooperation between external users of SORBNET2 system and NBP in the management process of changes introduced in the SORBNET2 system.

The above documentation is listed in Annex no. 2 to the "Functional specification of the SORBNET2 system for participants" and it is available on the NBP website under the password protected tab dedicated to the SORBNET2 system.¹³

The **technical and operating** documentation of the system also comprises internal specifications of the system, detailed instructions and NBP internal procedures.

NBP strives to ensure that the rules and procedures are transparent, which is implemented through:

- on-going contact with participants – any questions and doubts of participants in relation to SORBNET2 (concerning its operation and system requirements defined in the legal, functional and technical documentation) may be submitted by participants to the e-mail box sorbnnet2@nbp.pl or by telephone contact,
- enabling participants to submit comments and proposals of changes on the "Functional specification of the SORBNET2 system for participants",

¹³ The current participants of the system have an access to the tab.

- participation (on invitation) of NBP representatives in KGU SORBNET2 meetings at which, among others, issues related to current operation of the system as well as planned changes and directions of the system development are discussed. The coordinator of works within the group is ZBP, results of KGU SORBNET2 work are submitted to NBP as a common position of the banking sector.

The operation of the system is the subject discussed regularly at PSC meetings in the framework of discussions concerning a cyclical (semi-annual) report on the "Assessment of the Polish payment system operation". Issues related to the proposals of system development or introducing new legal regulations are also presented to the PSC. The structure of the PSC, in which representatives of banks and other domestic institutions associated to the payment system participate, enables taking interests of the banking system into consideration.

Results of the discussion carried out at the PSC meeting are made available to public opinion in the form of communication of the Council meeting published on the website www.nbp.pl under the tab regarding the payment system and the PSC.

The rules of conduct in case of events deviating from the standard, correct performance of the system are defined in the SORBNET2 Agreement and in the "Functional specification of the SORBNET2 system for participants". Information on the occurrence of problems in the system is provided to all participants through the e-mail box sorbnet2@nbp.pl immediately after their identification by NBP employees.

Changes in the rules and procedures of system operation can be twofold, i.e. they can refer to legal issues, namely, the amendments to the provisions of the SORBNET2 Agreement or technical issues which, in turn, may take place as a result of planned activities (implementation of changes) or as a result of sudden and unexpected (*ad hoc*) changes which may occur during the operating day.

The amendments to the SORBNET2 Agreement take place as a result of changes in the terms and conditions of participation in the system defined in the SORBNET2 Agreement and are implemented by way of annexes to the agreement submitted to participants in due advance (2 calendar weeks prior to the entry into force of new terms and conditions).

Participants do not issue opinions on annexes prepared by NBP, the undersigned annexes are submitted to NBP, at the latest, a day prior to the entry into force of the new terms and conditions of the agreement.

Implementation of the planned changes in the SORBNET2 system has been regulated under the relevant procedures. Two following procedures are applicable:

- "Procedure regarding the cooperation between external users of the SORBNET2 system and Narodowy Bank Polski in the change management process introduced in the SORBNET2 system" – developed by NBP with participation of external users of the SORBNET2 system taking part in KGU SORBNET2,
- "Notification of the proposal of changes in the SORBNET2 system and the schedule of introducing changes" (version 1.1 of 1 January 2014) – developed by NBP with participation of NBP internal users.

In spring each year NBP introduces a new version of the SORBNET2 system. In the case of introducing changes in the framework of SWIFT Release, i.e. introducing changes initiated and developed by SWIFT, it is also possible to introduce changes in November of a given year. In June 2025, it is planned to launch the successor to the SORBNET2 system, i.e. the SORBNET3 system. The migration of participants to the new system will take place on a Big-Bang basis, i.e. without a transitional period during which the SORBNET2 system and the SORBNET3 system would operate in parallel.

The aforementioned rules of change management in the system were communicated to participants for information and application. In accordance with the adopted cooperation procedure, information concerning planned changes to be introduced in the system is submitted to participants in due advance (at least half a year) in writing and via the e-mail box sorbnet2@nbp.pl and published on the NBP website under the password protected tab dedicated to the SORBNET2 system.

The *ad hoc* changes in the system can take place during an operating day and may result from internal needs of the system operator, e.g. system failure, or in connection with a request submitted by participants, e.g. change of *cut off time* (COT) for execution of orders. In both cases, participants are informed of the change in the rules and procedures of system operation via the contact e-mail box sorbnet2@nbp.pl. Information is submitted exclusively to contact persons notified by participants in the SORBNET2 registration form. The rules of conduct in the case of system failure on the NBP side and on the participants' side are regulated in the SORBNET2 Agreement.

Information published covers SORBNET2 system operation (including the changes introduced therein) and statistical data included in reports posted on the NBP website in the material on the "Assessment of the Polish payment system operation" and in the "Information on settlements and interbank settlements". Moreover, information concerning operation of the SORBNET2 system is provided on an on-going basis to entities interested in such information.

The test environment (for the SORBNET2 system and the MMS2 module) is made available to system participants (both existing and future), where participants may perform optional own tests. The environment is made available on a daily basis, on operating days of the SORBNET2 system, within specific hours (9.00 a.m. – 4.00 p.m.).

Signing of the SORBNET2 Agreement by a participant means reading and accepting the rules of system operation by the participant. The SORBNET2 Agreement defines the procedure applied by NBP in case of a participant's failure to comply with its provisions.

The type and level of fees charged by NBP in the SORBNET2 system is regulated by the Resolution concerning commissions and banking fees applied by NBP¹⁴ and in Appendix no. 5 to the SORBNET2 Agreement: Tariff of fees and commissions developed thereunder. The Tariff is posted on the NBP website under the tab: Payment system/System infrastructure/Large-Value Payment Systems/SORBNET2. In addition, it is made available to the public in NBP regional branches and provided to participants of the SORBNET2 system and NBP clients. The template of the agreement is available for specified users and posted on the website under the password protected tab dedicated to the SORBNET2 system.

Each change regarding the scope of services or fees introduced in the SORBNET2 system is implemented by way of an annex to the SORBNET2 Agreement, provided to the participants in due advance, i.e. two calendar weeks prior to the entry into force of new terms and conditions. The annex signed by a participant is submitted to NBP, at the latest, a day prior to the entry into force of the new terms and conditions of the agreement. The information on commissions and fees charged by NBP in connection with the participation in the SORBNET2 system, posted on the NBP website, is also updated.

Data concerning the performance of the SORBNET2 system (and SORBNET) are published on the website www.nbp.pl under the tab related to the payment system, in the part on "Statistical data" → "Payment

¹⁴ Resolution No. 29/2014 of NBP Management Board of 5 June 2014 on bank commissions and fees applied by Narodowy Bank Polski (as amended).

systems". The website www.nbp.pl is comprehensively maintained in Polish; its abbreviated version is also maintained in English (it presents, in particular, legal regulations and basic statistical data related to the payment system).

4. List of generally available resources

The documentation related to the SORBNET2 system used while drafting this document in the scope of acts of law and NBP legal acts is available in the public domain. The aforementioned legal acts comprise, without limitation:

- Act of 29 August 1997 on Narodowy Bank Polski,
- Act of 29 August 1997 - Banking Law,
- Act of 24 August 2001 on Settlement Finality in Payment and Securities Settlement Systems and the Rules of Oversight of these Systems.
- Resolution No. 9/2013 of NBP Management Board of 24 May 2013 on terms and conditions of opening and maintaining banks' accounts by Narodowy Bank Polski,
- Regulation No. 30/2017 of the Governor of Narodowy Bank Polski on the manner of performing interbank clearing and interbank settlements,
- Resolution of the NBP Management Board on the introduction of the "Regulations on banks' refinancing by NBP by means of Lombard credit and intraday credit",
- Resolution No. 2/2024 of NBP Management Board of 30 January 2024 concerning bank commissions and fees applied by Narodowy Bank Polski.

The participation in the system is regulated by agreements concluded by NBP with those entities.

www.nbp.pl