



The Bank of Russia Standard

STO BR NPS-1.1-2020

FINANCIAL MESSAGES IN THE NPS

GENERAL TERMS

Introduction date: 2017-03-20

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Preamble

1. ACCEPTED AND ENACTED by The Bank of Russia's order of 3 March 2017, No. 568, "On the enactment of the Bank of Russia Standard STO BR NPS-1.0-2017 "Financial messages in NPS. General terms".

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Introduction

This Standard contains the main implementation objectives, principles and recommendations for usage of universal rules on financial messages composing for funds transfer in the National Payment System (hereinafter – the NPS).

The Bank of Russia Standard

FINANCIAL MESSAGES IN THENPS

GENERAL TERMS

Introduction date 2017-03-20

1. Scope

This Standard is recommended for organizations usage when sending financial messages related to funds transfer in the Russian Federation.

This standard is intended for:

funds transfer participants (banks and their customers);
 developers of information and program software, information systems.

Provisions of this Standard are applied on a voluntary basis, unless regulatory acts of the Bank of Russia or the terms of contracts make some provisions obligatory.

2. Terms and definitions

ISO 20022 Standard	– International Standard ISO 20022 "Financial Services. Universal financial industry message scheme", Technical Regulation and Metrology Federal Agency accepted the National Standard of the Russian Federation GOST R ISO 20022-1-2013 "Financial Services. Universal financial industry message scheme. Part 1. Metamodel"
ISO 20022 NPS Standards	– a set of the Bank of Russia Standards, including this Standard, which reflect market practice of NPS participants and are fully compliant with ISO 20022 standard, taking into account the legislative, regulatory framework of NPS
XML-schema	– language describing XML-document structure
XSD-file	– file with a *.xsd extension containing the XML-schema
OCL	– object constraint language, establishing formation, structural and logical controls rules
XSLT	– language for converting XML-documents from one XML-schema to another.

3. Unified financial messages formation objectives

In the financial industry various solutions for financial (payment) messages are used for client-to-bank level, bank-to-bank level, and furthermore they are not fully in line with potential opportunities of modern technologies for straight through processing. Examples:

organizations with bank accounts in several banks are forced to support multitude messaging decisions which reflect specifics of particular banks;

banks in a competitive environment for attracting customers should also provide for excessive solutions designed for existing differences in practice of large customers;

for transnational organizations - funds transfer participants, the lack of a unified financial (payment) messages at the national level, consistent with international standard, is deterrent to their activity development in the country. The implementation of the universal rules on financial (payment) messages composing based on ISO 20022 standard gives the possibility to cut costs of multiple solutions support for banks and their customers as well as to provide readiness of NPS customers to participate in new infrastructure projects.

At the same time, usage of universal rules on financial (payment) messages composing assures the use of unified document attributes, messages in transaction chain related to funds transfer and reporting.

4. Methodology for financial messages standardization

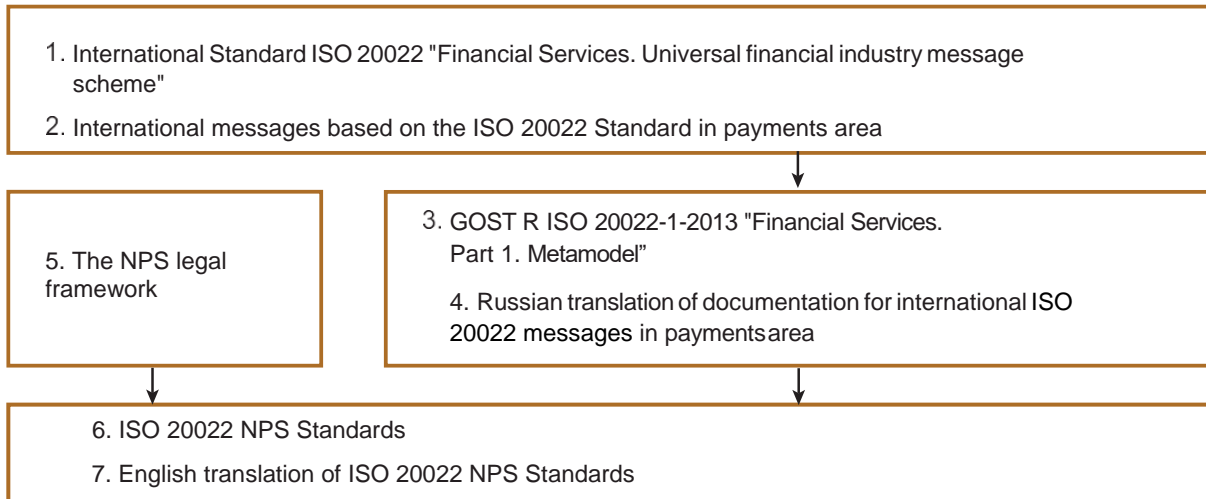
Modern development of funds transfer processes standardization is based on usage of the ISO 20022

6	CBR PS messages	organization messages	organization messages	organization messages	organization messages	organization messages	organization messages	organization messages	organization messages	organization messages	organization messages	organization messages	organization messages	organization messages	organization messages	organization messages	organization messages	organization messages	organization messages
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5. Usage recommendations for universal rules of financial (payment) messages composing

It is recommended to use universal rules for financial messages composing in the NPS developed according to ISO 20022 methodology and available on the official website of the ISO 20022 standard. The implementation of these messages in the NPS includes publication of a set of the Bank of Russia Standards both in Russian and English.

Figure 1. Standards and the NPS legal framework



ISO 20022 NPS Standards, developed on the basis of the international standard ISO 20022 for payments, taking into account the NPS legal framework, define the list (classifier) of the applicable message elements, funds transfer models on the initiative of Debtor, Creditor as well as other interaction models between funds transfer participants in the NPS.

6. Core principles for implementation of universal rules of financial messages composing in the NPS

6.1. NPS messages elements classifier

Financial messages terms and elements definitions formed on the basis of the ISO 20022 Standard used in the national practice are mandatory for their inclusion to NPS messages elements Classifier.

This Classifier is a basis for the development of an interagency classifier of uniform message elements used in various areas of financial and economic activity.

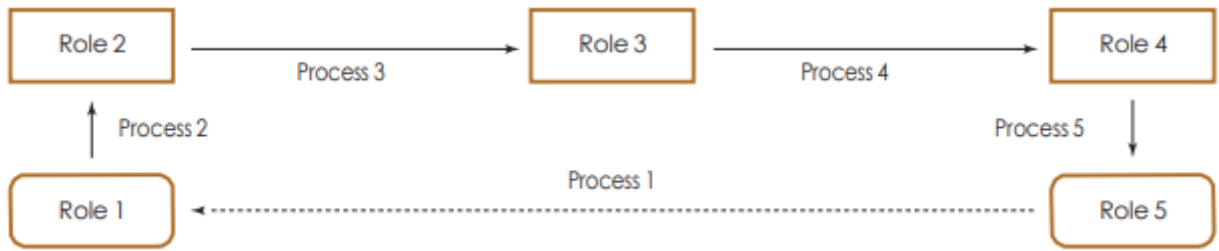
Table 3. Form of NPS messages elements Classifier

Term (elements)		Definition (description)	Element tag	Data type
Russian name	English name (Term Code)			
Elements				

6.2. ISO 20022 NPS Standards review level

At the review level, interaction models in the NPS is presented, which includes description of processes and roles used within this model.

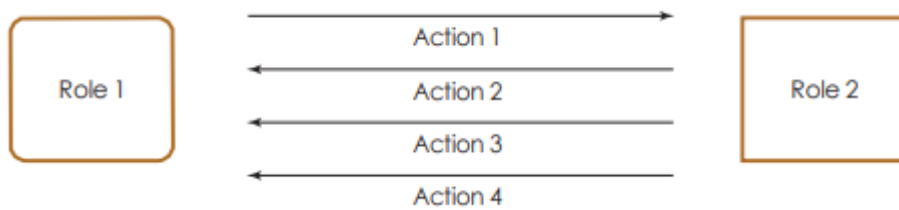
Figure 2. Interaction models Example



6.3. ISO 20022 NPS Standards conceptual level

At the conceptual level, detailing of interaction models in the NPS is carried out by disclosing the content of the actions in the process that arises between the two roles. Arrangement of different pairs of roles allows to make possible scenarios for implementing of interaction models, regardless of the complexity of the scenario.

Figure 3. Example of detailing interaction models for a pair of roles in process 2



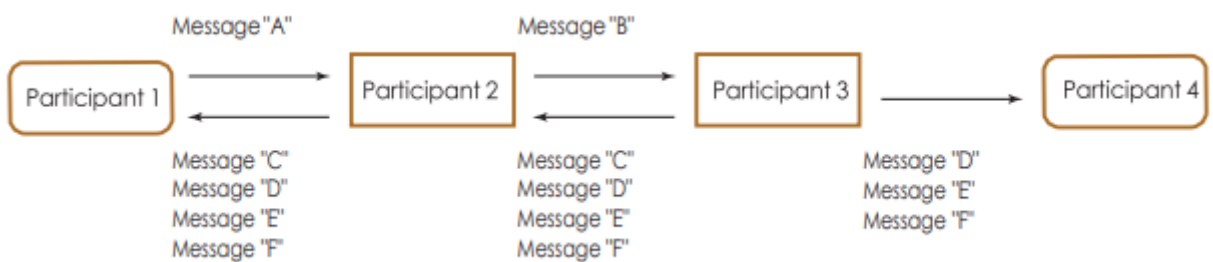
Analysis of the parameters of financial (payment) messages, developed on the basis of ISO 20022 Standard, is carried out in order to determine whether they can be used to perform actions between two roles. Selected messages are recognized as accepted for NPS use and are included in ISO 20022 NPS Standards.

Table 4. Form of publication of messages list included in ISO 20022 NPS Standards

Message name	Action carried out by using the message

At the conceptual level, basic scenarios are presented for interaction models in which roles are delegated to specific participants, and actions between them are described using messages from the list.

Figure 4. Link Model scenario Example



Functional correspondence is established between funds transfer instruction defined by NPS legal framework (hereinafter - Instruction) and messages from the list.

Table 5. Functional correspondence form between instructions and messages from the list

Funds transfer instruction title	List of regulatory documents establishing these instructions		Messages included in ISO 20022 NPS Standards		
	general requirements	format definition	in the process of instruction initiation	in the process of instruction settlement	in the process of confirming the execution of instruction

6.4. ISO 20022 NPS Standards logical level

At the logical level, for messages included in ISO 20022 NPS Standards, their structural and elements structures are given which are fully in line with the structural and elements structures of international financial (payment) messages.

For instructions and messages between which correspondence is established at the conceptual level, rules for elements placement of these instructions in the structure of related messages are indicated.

If there are instruction attributes elements used at national level for which correspondence with international financial (payment) messages elements has not been established, the element block "Supplementary Data"¹ ("Additional data") is used.

The form for submitting structural is set by the relevant "Financial messages in the NPS. Direct debit. Messages definitions" and "Financial messages in the NPS. Credit transfer. Messages definitions" Standards.

To perform structural control of messages included in ISO 20022 NPS Standards:

- international requirements for message schemes;
- national requirements for message schemes.

To perform logical control of messages included in ISO 20022 NPS Standards, are indicated:

- international requirements for elements filling rules;
- national requirements for elements filling rules are indicated.

6.5. ISO 20022 NPS Standards physical level

ISO 20022 NPS Standards users apply benchmark XML-schemas (XSD-files), as well as rules in OCL-format (XSLT-files) to implement the conditions for structural and logical control of messages according to international and national rules.

The international requirements for complete structure of messages are established both in ISO 20022 Standard documents and in ISO 20022 NPS Standards. For automated systems, these requirements are presented in the form of identical XSD-files in the electronic repository of ISO 20022 Standard and the Database of ISO 20022 NPS Standards.

Requirements are presented in ISO 20022 NPS Standards in OCL-language and for automated systems in the form of XSLT-files as part of ISO 20022 NPS Standards Database.

Table 6. Sources of information for design and implementation of structural and logical messages controls

Types of control	Level of control	Source of information when designing control	Source of information for control implementation
Structure control	ISO	In text form, XML-schemes on the ISO 20022 website	Identical XSD files on www.iso20022.org website and the Bank of Russia portal
Structural restrictions	ISO	In text form on the ISO 20022 website; in OCL form on the Bank of Russia portal	XSLT-files on the Bank of Russia portal
	EAEU NPS	In form of text and OCL-language on the Bank of Russia portal	
	Organization	In form of text and OCL-language on organization's website	XSLT-files on organization's website
Logical control Restrictions	ISO	In text form on the ISO 20022 website; in OCL form on the Bank of Russia portal	XSLT-files on the Bank of Russia portal
	EAEU NPS	In form of text and OCL-language on the Bank of Russia portal	
	Organization	In form of text and OCL-language on organization's website	XSLT-files on organization's website

There are:

- International requirements for messages structural restrictions, stated in documents of the ISO 20022 Standard and ISO 20022 NPS Standards;
- Requirements at EAEU level to messages structural restrictions, stated in ISO 20022 NPS Standards;
- National requirements for messages structural restrictions, stated in ISO 20022 NPS Standards;
- International requirements for messages logical control, stated in documents of the ISO 20022 Standard and ISO 20022 NPS Standards;
- Requirements of EAEU level to messages logical control, stated in ISO 20022 NPS Standards;
- National requirements for messages logical control, stated in ISO 20022 NPS Standards.

¹ Creation of attributes block "Supplementary Data" is agreed with the ISO 20022 Registration Authority (RA).

If the organization establishes additional requirements for structural and logical messages control included in ISO 20022 NPS Standards, these requirements should not contradict the high-level control requirements listed above.

At the physical level of ISO 20022 NPS Standards the principles for separating the layers of electronic data interchange (applied, technological, transport), data exchange rules, and rules for creating and processing of electronic messages at each layer are established.

7. ISO 20022 NPS Standards publication

Publication of ISO 20022 NPS Standards mean their placing with open access on the Bank of Russia portal in the Internet both in Russian and English, including:

- ISO 20022 NPS Standards²;
- messages included in ISO 20022 NPS Standards³;
- mapping tables between messages elements included in ISO 20022 NPS³;
- reference XML-schemas (XSD-files), OCL-format rules (XSLT-files) ³;
- catalog of financial (payment) messages examples⁴;
- English-language documentation on international financial (payment) messages placed of the ISO 20022 standard official website⁴;
- translated into Russian documentation on international financial (payment) messages⁴.

8. ISO 20022 NPS Standards maintenance

The ISO 20022 NPS Standards are formed on the basis of the latest version ISO 20022 Standard, which meets the needs of the payment services participants in long-term. Schemes and descriptions of international financial messages developed on the ISO 20022 basis Standard a updated annually, while previous versions continue to be relevant, the requirement for portability of new version in relation to the previous one ("downwards") is not established.

The NPS Unified Messages and Standards which the Bank of Russia recommends for use in the NPS are based on the latest version of international financial messages published on the ISO 20022 standard website.

Each of the ISO 20022 NPS Standards is implemented once by issuing a corresponding order by the Bank of Russia.

Management of reference copies of the ISO 20022 NPS Standards is carried out by the Bank of Russia.

The ISO 20022 NPS Standards can be modified by developing and publishing new versions of the ISO 20022 NPS Standards.

The reasons for making changes to the ISO 20022 NPS Standards are:

- changes in the legislation of the Russian Federation and / or regulatory legal acts;
- publishing a new version of the e-repository on the ISO 20022 website;
- initiatives of participants in the payment services;
- making changes to the schemes and descriptions of financial messages used in the Bank of Russia services (The Payment System of the Bank of Russia and the Financial Messaging System of the Bank of Russia).

Change Requests to the ISO 20022 NPS Standards can be initiated by the Bank of Russia and payment services participants and considered at the site of the Subcommittee No. 3 "Technologies of basic financial (banking) operations" of the Technical Committee No. 122 "Standards of financial operations" (hereinafter – Sc No. 3 TC No. 122).

Changes to the ISO 20022 NPS Standards are made on an annual basis within the development periods:

- from April 1 to September 30;
- from October 1 to March 31.

Change Requests from the Bank of Russia and payment services participants to make changes to the ISO 20022 NPS Standards are considered in the next maintenance period.

The Bank of Russia together with Sc № 3 TC № 122 analyzes and evaluates received proposals. The decision to develop new versions of the ISO 20022 NPS Standards is made by the Protocol PC № 3 TC № 122 no later than 45 working days from the start of the development Period.

When making a positive decision, the Bank of Russia develops new versions of the ISO 20022 NPS Standards and sends them to Sc № 3 TC № 122 for approval no later than 30 working days from the date of making the decision.

The new versions of the ISO 20022 NPS Standards are reviewed, approved by the Sc № 3 TC № 122 and issued by the Protocol no later than 30 working days from the date of receipt of the new versions.

The new versions of the ISO 20022 NPS Standards are released no later than the end of the corresponding development period.

² approved in hard copy, published electronically

³ approved and published electronically

⁴ published electronically

The new versions of the ISO 20022 NPS Standards are published on the Bank of Russia's website. The previous versions of the ISO 20022 NPS Standards are not discontinued, and their publication remains.

The Bank of Russia recommends to use the last version of the ISO 20022 standard NPC.

The payment service participants independently switch to new versions of the ISO 20022 NPS Standards, guided by their own needs to use the corresponding updates.

9. ISO 20022 NPS Standards training

In order to prepare for the migration to ISO 20022 NPS Standards, the Bank of Russia has developed a specialized training program.

The program is designed for operating services managers and specialists, treasuries and IT-structures of banks, commercial organizations, and authorities.

The program includes an introduction course, specialized courses on ISO 20022 NPS Standards, as well as practical training.

Complete program information is published on the Bank of Russia website in subsection "ISO 20022 Standard" of the "National Payment System" section.