Bank National Clearing Centre (Joint-stock company)

Moscow Exchange

Disclosure under the Principles for FMIs defined by CPSS-IOSCO[1]

Responding institution: Bank National Clearing Centre (Joint-stock company)

Jurisdiction in which the FMI operates: Russian Federation

Regulator: the Central bank of the Russian Federation

The date of this disclosure:

This disclosure can also be found at http://www.nkcbank.com/viewCatalog.do?menuKey=384

For futher information, please contact: maxim.noskov@moex.com

[1] Committee on Payment and Settlement Systems Technical Committee of the International Organization of Securities Commissions Principles for financial market infrastructures

Key abbreviations and terms

Abbreviation	Full name
NCC	Bank National Clearing Centre (joint-stock company)
CCP	Central counterparty
EMIR	European Markets Infrastructure Regulation
OTC	Over-the-counter
PFMI	Principles for Financial Market Infrastructures
Clearing Rules	Clearing Rules of the Bank National Clearing Centre (Joint-stock company) Part I. General part, Part II. Tariffs, Part III. Part III. Clearing Rules for Securities Market, Part IV. Clearing Rules for FX and Precious Market, Part V. Clearing Rules for Derivatives Market, Clearing Rules for Standardised OTC Derivatives Market.
CBR	The Central bank of the Russian Federation
NSD	Non-banking credit organization CJSC National Settlement Depository, Central Securities Depository of the Russian Federation, a part of Moscow Exchange
CM	Clearing member/Clearing participant
Risk Department	Risk analysis and control department
Moscow Exchange	Public Joint-Stock Company «Moscow Exchange MICEX-RTS» / Moscow Exchange Group
Guarantee fund	A default fund aimed to cover losses caused by a CM's default if the defaulting CM collateral and NCC's dedicated capital (Skin-in-the-game) are insufficient. There are 4 default funds at Moscow Exchange's markets: FX and Precious Metals, Securities, Derivatives, Standardised OTC Derivatives.

I. Executive summary

NCC has carried out CPSS-IOSCO self-assessment and presents its results via this disclosure for a wide range of stakeholders.

The self-assessment revealed that NCC complies with the majority of international principles and is a up-to-date clearing house that provides world-class services to clearing members and their clients.

However, NCC broadly observes the following principles:

Principle 2 (Governance) due to the lack of independent directors at the Supervisory Board and the fact that the composition of the Risk Committee is not disclosed.

Principle 13 (Participant-default rules and procedures) as the frequency of default-management procedures' testing is not formalized.

II. Summary of major changes since the last update of the disclosure.

NCC performed the self-assessment of its rules, principles and procedures in March 2015. The following changes occurred during March-November 2015:

1) The safeguard structures were updated in line with the latest CPMI-IOSCO recommendations[2] and CBR's new regulation:

a) Definition of minimum requirements for dedicated CCP capital (Skin-in-the-game);
b) Definition of loss capping and loss spreading mechanisms aiming at improving CCP stability and resiliency (the amendments are described in A.4.7.1);
c) Stress collateral was introduced, i.e. a variable contribution for the situation of default proportionate to NCC's exposure to a clearing member, which is designed to cover losses in case of market stress and a clearing member's default, before fixed contributions of non-defaulting clearing members to the guarantee fund are used. The calculation methodology is based on stress testing principles.

2) The reserve for possible losses caused by business risk event was established (the amendments are described in Principle 15. General business risk).

3) The procedure for mitigating conflict of interest is adopted (the amendments are described in A.2.7.1, A.2.7.2).

III. General background on the FMI

NCC is a subsidiary of Moscow Exchange. NCC functions as the clearing house and CCP at financial markets.

[2] «Recovery of financial markets infrastructures», CPMI-IOSCO, October 2014.

As a CCP NCC assumes risks of the trades executed by the clearing members during trading session and NCC acts as a counterparty between the parties: becomes the seller for every buyer and becomes the buyer for every seller, who replace their contractual obligations between each other with contractual obligations with CCP.

The principal and major goal of NCC is to guarantee financial stability for the financial markets' segments served by NCC. This goal is achieved by up-to-date risk-management system that meets global standards. Further NCC's goal is to provide clearing services that enable clearing members to use the funds addressed to the market effectively.

NCC as a clearing house and a CCP simultaneously brings the following benefits for its clearing members:

- NCC guarantees every non-defaulting clearing member the execution of all trades' with CCP obligations even if the other clearing member fails to execute its obligations;
- There is no need for clearing members to assess other clearing members' risks and to set limits other than the limit on NCC as a CCP;
- NCC provides clearing services with margin trading and executes netting of claims and liabilities, thus clearing members can increase the effectiveness of the use of their financial assets and decrease their transactional costs.

NCC's strategic goal is to provide clearing members of different financial market's segments the integrated clearing service that presumes clearing members' unified collateral and unified positions (limits) across all markets served by NCC.

CBR regulates and supervises Russian financial system and markets. NCC's activities are based on federal laws, viz. Federal Law No. 86-FZ "On the Central Bank of the Russian Federation", Federal Law No. 395-1 "On Banks and

Banking Activity", Federal Law No. 39-FZ "On the Securities Market", Federal Law No. 7-FZ "On Clearing and Clearing Activities", Federal Law No. 325-FZ "On Organized Trading" and other regulatory legal acts.

Key quantitative figures:

NCC provides services to 706 clearing members. The average volume of cleared transaction is 3 935 bn. RUB.

NCC holds substantial capital tantamount to 57.5 bn. RUB as of November 1st, 2015.

NCC earned 10.9 bn. RUB of net income in 2014. NCC's net income for the 9 months of 2015 is 14.9 bn. RUB.

IV. Principle-by-principle narrative disclosure

Final score of the self-assessment of Bank National Clearing Centre (Joint-stock company), October 2015	
Assessment category	Principles
Observed	1,3,4,5,6,7,8,9,10,12,14,15,16,17,18,20,21,22,23
Broadly observed	2,13
Partly observed	-
Not observed	-
Not applicable	11,19,24

<table>
<tr><th colspan="3">Comprehensive assessment</th></tr>
<tr><td colspan="3">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.</td></tr>
<tr><td></td><td>Q</td><td>A</td></tr>
<tr><td>Key consideration 1: The legal basis should provide a high</td><td>Key consideration 1: The legal basis should provide a high degree of certainty for each material aspect of an FMI's</td><td>A.1.1.1 The material aspects of NCC's activities that require a high degree of legal certainty are as follows:
procedure for performance (termination) of obligations admitted to</td></tr>
</table>

degree of certainty for each material aspect of an FMI's activities in all relevant jurisdictions.	**activities in all relevant jurisdictions.** *Material aspects and relevant jurisdictions* Q.1.1.1: What are the material aspects of the FMI's activities that require a high degree of legal certainty (for example, rights and interests in financial instruments; settlement finality; netting; interoperability; immobilisation and dematerialisation of securities; arrangements for DvP, PvP or DvD; collateral arrangements (including margin arrangements); and default procedures)? Q.1.1.2: What are the relevant jurisdictions for each material aspect of the FMI's activities?	clearing; procedure for posting, maintaining and refunding the clearing collateral; default management procedures; collateral collection procedures; close-out netting; procedure for interaction with the stock exchange, settlement institution and settlement depository; requirements for clearing members, and the procedure for granting, suspension and termination of admission. A.1.1.2: The relevant jurisdiction within NCC's activities is the Law of the Russian Federation. All NCC's actions and procedures shall comply with the imperative requirements of the Russian legislation. If NCC opens accounts at foreign banks (settlement organizations) beyond Russian jurisdiction, laws of the foreign state apply to these accounts if the agreement between NCC and the foreign bank does not indicate otherwise (US, EU and other relevant jurisdictions).
	Legal basis for each material aspect Q.1.1.3: How does the FMI ensure that its legal basis (that is, the legal framework and the FMI's rules, procedures and contracts) provides a high degree of legal certainty for each material aspect of the FMI's activities in all relevant jurisdictions? a) For an FMI that is a CSD, how does the CSD ensure that its legal basis supports the immobilisation or dematerialisation of securities and the transfer of securities by book entry? b) For an FMI that is a CCP, how does the CCP ensure that its legal basis enables it to act as a CCP, including the legal basis for	A.1.1.3: The major legislative instrument providing a high degree of legal certainty is the Federal Law dated February 7th, 2011 No. 7-FZ "On Clearing and Clearing Activities". Internal documents and procedures of NCC have been developed in accordance with the legislation of the Russian Federation and CBR's regulations and have been approved by the authorized bodies of NCC and registered by the regulator (Central Bank of Russia - CBR). NCC interacts with CBR and other regulatory authorities to ensure a high degree of legal certainty in the regulations regarding every material aspect of NCC's activities. a) Not applicable. b) The legal basis of CCP functioning, its status are stated in the

	novation, open offer or other similar legal device? Does the CCP state whether novation, open offer or other similar legal device can be revoked or modified? If yes, in which circumstances? c) For an FMI that is a TR, how does the TR ensure that its legal basis protects the records it maintains? How does the legal basis define the rights of relevant stakeholders with respect to access, confidentiality and disclosure of data? d) For an FMI that has a netting arrangement, how does the FMI ensure that its legal basis supports the enforceability of that arrangement? e) Where settlement finality occurs in an FMI, how does the FMI ensure that its legal basis supports the finality of transactions, including those of an insolvent participant? Does the legal basis for the external settlement mechanisms the FMI uses, such as funds transfer or securities transfer systems, also support this finality?	Federal Law No. 325-FZ «On organized trading», Federal Law No. 7-FZ «On clearing and clearing activities». Clearing rules indicate the terms of NCC's clearing and CCP activities based on the legislation. NCC checks the possibility of filing CMs orders after which the trades are executed (CM-CCP-CM). Novation is not applied. The legal model is similar to open offer. c) Not applicable. d) The terms and conditions of the netting are stipulated in Clearing Rules, whereto CMs accede by signing the relevant agreements during the admission process. The legal basis for netting is the Clearing Law 7-FZ. e) The settlement finality is conducted in settlement organizations and the settlement depository (NSD). Despite the fact that NCC does not make settlements on its own, settlement finality happens as soon as NCC receives confirmation of transfer from settlement organizations and NSD.
Key consideration 2: An FMI should have rules, procedures, and contracts that are clear, understandable, and consistent with relevant laws and regulations.	Q.1.2.1: How has the FMI demonstrated that its rules, procedures and contracts are clear and understandable? Q.1.2.2: How does the FMI ensure that its rules, procedures and contracts are consistent with relevant laws and regulations (for example, through legal opinions or analyses)? Have any inconsistencies been identified and remedied? Are the FMI's rules, procedures	A.1.2.1. Although there is no specific process in this regard, it should be mentioned that Clearing Rules are subject to approval by the major divisions of NCC, including the Clearing Department, Risk Department, and Legal Department. This approval is aimed at achieving high level of transparency and certainty of the procedures described in Clearing Rules. Furthermore, Clearing Rules are subject to registration in CBR pursuant to legislation. CBR carries out control and supervision functions in the financial markets, analyzes financial markets major trends, and CMs' needs. Moreover, NCC cooperates with CMs directly via meetings/presentations and by phone/e-mail in order to ensure clarity of procedures and rules.

	and contracts reviewed or assessed by external authorities or entities? Q.1.2.3: Do the FMI's rules, procedures and contracts have to be approved before coming into effect? If so, by whom and how?	A.1.2.2. Clearing rules whenever amended are subject to mandatory approval procedure with NCC's divisions, viz. Legal department that carries out its legal check in order to ensure compliance with current legislation and NCC's internal documents. If any inconsistency is detected, the changes are made and Clearing Rules are sent to another round of approval procedure. Furthermore, in some cases NCC users' committees (e.g. Risk committee) that include CMs' representatives approve Clearing Rules. After taking into consideration committees' proposals and comments, Supervisory Board approves Clearing Rules. Then, Clearing Rules are registered by CBR that check Clearing Rules' compliance with legislation. If CBR has any proposals for strengthening NCC's procedures, the possible changes are discussed with CBR and NCC's divisions and these proposals are taken into consideration in further versions of Clearing Rules. Moreover, NCC monitors the changes in the Russian legislation and financial market regulations. The requirements as to timely accounting and recording of such changes in the internal documents are set forth in the Legal Risk Management Regulation of NCC. A.1.2.3: Clearing Rules and other documents of NCC are subject to mandatory approval by the authorized body of NCC. As it was mentioned before, in some cases indicated in the internal documents, Clearing Rules may be sent to NCC users' committees (e.g. Risk committee) for approval prior to Supervisory Board's approval. Then, Clearing Rules are approved by the Supervisory Board and as it was said before are sent to CBR's registration. Clearing Rules come into force after CBR's registration on the date stated by the Supervisory Board. NCC discloses Clearing rules at its website at least 5 days prior to the date when Clearing rules comes into force. The law indicate the cases when Clearing Rules' provisions come into force a bit later (e.g. clauses of CCP's responsibility amount).
Key consideration 3: An FMI should be able to articulate the legal basis for its activities to relevant authorities,	Q.1.3.1: How does the FMI articulate the legal basis for its activities to relevant authorities, participants and, where relevant, participants' customers?	A.1.3.1: NCC operates in accordance with the laws of the Russian Federation, NCC's Articles of Association (http://nkcbank.ru/viewCatalog.do?menuKey=91 in Russian only), and other internal documents, that indicate the legal basis for NCC's

participants, and, where relevant, participants' customers, in a clear and understandable way.		authorized bodies' activities (e.g. Supervisory Board regulation and Management Board regulation). Terms and conditions of the clearing agreements with CMs are set forth in Clearing Rules.
Key consideration 4: An FMI should have rules, procedures, and contracts that are enforceable in all relevant jurisdictions. There should be a high degree of certainty that actions taken by the FMI under such rules and procedures will not be voided, reversed, or subject to stays.	*Enforceability of rules, procedures and contracts* Q.1.4.1: How does the FMI achieve a high level of confidence that the rules, procedures and contracts related to its operations are enforceable in all relevant jurisdictions identified in key consideration 1 (for example, through legal opinions and analyses)?	A.1.4.1. Clearing Rules and other internal documents of NCC are subject to approval by the Legal Department of NCC, which checks the documents for compliance with Russian legislation and NCC's internal documents. Moreover, Clearing Rules are registered in CBR.
	Degree of certainty for rules and procedures Q.1.4.2: How does the FMI achieve a high degree of certainty that its rules, procedures and contracts will not be voided, reversed or subject to stays? Are there any circumstances in which an FMI's actions under its rules, procedures or contracts could be voided, reversed or subject to stays? If so, what are those circumstances? Q.1.4.3: Has a court in any relevant jurisdiction ever held any of the FMI's relevant	A.1.4.2: A high degree of certainty that NCC's internal documents, including Clearing Rules, will not be voided, reversed or subject to stays is ensured through legal examination of internal documents and by checking them for compliance with the legal stipulations and NCC's internal documents. A high degree of certainty that the contracts concluded by NCC operating as a CCP will not be voided is ensured through legal examination of the documents setting forth the terms and conditions of clearing services, by checking CMs as regards their legal capacity to enter transactions on the basis of Clearing Rules. To mitigate the risk of contracts being voided, reversed or subject to stays, NCC's Legal Department and external counsels checks the compliance of Clearing Rules and conditions of the trades cleared as consequences with legislation (including Clearing Law) and regulatory legal acts. Furthermore, Clearing Rules are subject to CBR's registration. A.1.4.3: Currently, there are no court decisions holding any of NCC's activities or arrangements under its rules and procedures to be unenforceable.

	activities or arrangements under its rules and procedures to be unenforceable?	
Key consideration 5: An FMI conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflict of laws across jurisdictions.	Q.1.5.1: If the FMI is conducting business in multiple jurisdictions, how does the FMI identify and analyse any potential conflict-of-laws issues? When uncertainty exists regarding the enforceability of an FMI's choice of law in relevant jurisdictions, has the FMI obtained an independent legal analysis of potential conflict-of-laws issues? What potential conflict-of-laws issues has the FMI identified and analyzed? How has the FMI addressed any potential conflict-of-laws issues?	A.1.5.1: Not applicable. Currently NCC operates within the jurisdiction of the Russian Federation only. Every NCC's action and procedure shall comply with imperative requirements of the Russian legislation. If NCC opens accounts at foreign banks (settlement organizations) beyond Russian jurisdiction, laws of the foreign state apply to these accounts if the agreement between NCC and the foreign bank does not indicate otherwise (US, EU and other relevant jurisdictions).
Final conclusion on the Principle 1	NCC performs its activities in accordance with its legal basis, which provides a high degree of certainty for all material aspects of NCC's activities. NCC has rules and procedures that are clearly formulated, easy to understand and conform to the effective laws and regulations. NCC clearly and understandably determines the legal basis of its activities for the competent authorities and CMs. NCC uses the rules and procedures valid and effective in the jurisdiction where NCC conducts its activities. NCC ensures a high degree of certainty that the actions performed by NCC in accordance with such rules and procedures will not be voided, reversed or stayed.	
Assessment of the Principle 1	Observed	
Recommendations and comments	-	

Principle 2: Governance 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.		
Key consideration 1: An FMI should have objectives that place a high priority on the safety and efficiency of the FMI and explicitly support financial stability and other relevant public interest	Q.2.1.1: What are the FMI's objectives, and are they clearly identified? How does the FMI assess its performance in meeting its objectives?	A.2.1.1. NCC is a 100% subsidiary of Public Joint-Stock Company «Moscow Exchange MICEX-RTS» and its strategy is an integral part of the Strategy of Moscow Exchange. The Strategy identifies 3 major objectives for NCC: 1) Ensuring financial stability of the markets; 2) Offering efficient clearing and collateral management services to CMs;

considerations.	Q.2.1.2: How do the FMI's objectives place a high priority on safety and efficiency? How do the FMI's objectives explicitly support financial stability and other relevant public interest considerations?	3) Resilience and business continuity. The assessment is carried out on the level of MOEX Group and Supervisory Board of NCC on a regular basis. A. 2.1.2. Main statements of the Strategy are associated with improving efficiency and safety, supporting financial stability and focus on convenience for CMs, including improvement and integration of the risk management system across all markets, creating single clearing and settlement pool for all markets, simplifying access to clearing for foreign investors, optimization/harmonization of the business processes based on the IT platform improvements.
Key consideration 2: An FMI should have documented governance arrangements that provide clear and direct lines of responsibility and accountability. These arrangements should be disclosed to owners, relevant authorities, participants, and, at a more general level, the public.	*Governance arrangements* Q.2.2.1: What are the governance arrangements under which the FMI's board of directors (or equivalent) and management operate? What are the lines of responsibility and accountability within the FMI? How and where are these arrangements documented?	A.2.2.1. NCC's Supervisory Board, Management Board and CEO operate by virtue of the Articles of Association of NCC. NCC Supervisory Board's, Management Board's and CEO's roles, functions and responsibilities are separated in accordance with the Russian legislation on JCS and are indicated in NCC's Articles of Association. Furthermore, the Supervisory Board functions are based on the Regulation on the Supervisory Board of NCC, approved by resolution of the sole shareholder dated June 30th, 2014 (Resolution No.19), which stipulates the rights, obligations and responsibility of the members of the Supervisory Board in course of performing their

		functions. Furthermore, the Management Board of NCC acts by virtue of the Regulation on the Management Board of NCC, approved by resolution of the sole shareholder dated July 30th, 2015 (Resolution No. 27). The regulation includes the procedure for Management Board's decision-making and states the rights and responsibilities of CEO and Management Board's members. The terms of reference the Supervisory Board and the Management Board are separated in accordance with Russian legislation on joint stock companies as reflected in NCC Articles of Association.
	Q.2.2.2: For central bank-operated systems, how do governance arrangements address any possible or perceived conflicts of interest? To what extent do governance arrangements allow for a separation of the operator and oversight functions?	A.2.2.2. Not applicable.
	Q.2.2.3: How does the FMI provide accountability to owners, participants and other relevant stakeholders?	A.2.2.3. NCC's shareholders are guaranteed to have access to information in accordance with the effective legislation of the Russian Federation. In accordance with clauses 89 and 91 of the Federal Law "On Joint-Stock Companies", NCC guarantees shareholders to have access to the following documents: the agreement on setting up the company; the Articles of Association of the company and their amendments and supplements registered in accordance with the established procedure, the resolution on setting up the company, the document confirming the state registration of the company; the documents confirming the company's right to the property on its balance sheet; internal documents of the company; the regulation on the branch or representative office of the company; annual statements; accounting documents; accounting reports; minutes of the general meetings of shareholders (resolutions issued by the shareholder holding all voting shares in the company), meetings of the Supervisory Board, the Audit Committee and the Management Board; voting ballots and proxies (copies thereof) for participation in the general meeting of shareholders; reports of independent appraisers; lists of affiliates of the company; lists of persons entitled

		to participate in the general meeting of shareholders and persons entitled to dividends, and other lists created by the company to ensure that the shareholders can exercise their rights; report of the Audit Committee, opinion of the company's auditor, government and municipal bodies of financial control; securities prospectuses, quarterly issuer reports and other documents containing information which must be published or otherwise disclosed in accordance with federal laws; notices of conclusion of shareholder agreements submitted to the company, as well as the lists of persons who has concluded such agreements; court resolutions on the disputes associated with formation of the company, management of the company or participation in the company; other documents contemplated in the Articles of Association of the company, internal documents of the company, resolutions of the Annual general meeting, Supervisory Board of the company, management bodies of the company, as well as the documents contemplated in the regulations of the Russian Federation. Furthermore, pursuant to the effective legislation, NCC discloses its financial statements and other information about its activities crucial for CMs and other stakeholders at its official website http://nkcbank.ru. Moreover, NCC sends CMs clearing results' reports, holds meetings with CMs and communicates via user committees.
	Disclosure of governance arrangements Q.2.2.4: How are the governance arrangements disclosed to owners, relevant authorities, participants and, at a more general level, the public?	A.2.2.4. NCC's Articles of Association, which stipulate the separation of terms of reference of the management bodies have been uploaded onto the official NCC's website for public use. In accordance with the legislation on joint-stock companies, NCC shareholders are guaranteed access to the information specified above in A.2.2.3. NCC discloses its financial statements in accordance with the Russian and international standards. NCC also discloses additional information about the operations material for the shareholder, investors and other stakeholders, while maintaining a reasonable balance between NCC transparency and commercial interests' protection. NCC discloses information using most convenient instruments and

		methods for the recipients. Comprehensive information is published at the corporate website www.nkcbank.ru MOEX's website www.moex.com . NCC also discloses information via mass media. Every significant event or action of NCC is accompanied by press release in the mass media.
Key consideration 3: The roles and responsibilities of an FMI's board of directors (or equivalent) should be clearly specified, and there should be documented procedures for its functioning, including procedures to identify, address, and manage member conflicts of interest. The board should review both its overall performance and the performance of its individual board members regularly.	*Roles and responsibilities of the board* Q.2.3.1: What are the roles and responsibilities of the FMI's board of directors (or equivalent), and are they clearly specified?	A.2.3.1. The rights and obligations of the Supervisory Board are clearly defined in paragraphs 2.14 and 2.15 of the Regulation on the Supervisory Board of NCC, approved by resolution of the sole shareholder dated June 30th, 2014 (Resolution No. 19) and the Articles of Association of NCC. The paragraph 11.1 of the Articles of Association of NCC stipulates that the terms of reference of the Supervisory Board include the issues of general management of NCC's operation, except the issues which the Federal Law "On Joint Stock Companies" includes in the terms of reference of the General Meeting of Shareholders. The terms of reference of the Supervisory Board are clearly defined in the Articles of Association of NCC. In particular, the terms of reference of the Supervisory Board include: • determination of the Bank's priorities, approval of NCC's development strategy; • placement of bonds and other issue-grade securities by NCC; • approval of the resolution on issuance (additional issuance) of securities; • formation of the Management Board of NCC, determination of the quantity of its members, election of members of the Management Board, setting the duration of powers for each member of the Management Board; • approval of NCC budget; • recommendations as to the size of share dividends and procedure for payment thereof; • approval of NCC's internal documents determining basic principles of its activities, including asset and liability management principles, risk management principles and measures aimed at decreasing risks in clearing operations; • documents on the organization of the internal control framework

		of NCC. According to the Articles of Association of NCC, any issues included in the terms of reference of the Supervisory Board cannot be referred for resolution to the Management Board or Chairman of the Management Board.
	Q.2.3.2: What are the board's procedures for its functioning, including procedures to identify, address and manage member conflicts of interest? How are these procedures documented, and to whom are they disclosed? How frequently are they reviewed?	A.2.3.2. The activity of the Supervisory Board is regulated by the Articles of Association of NCC and the Regulation on the Supervisory Board of NCC. In order to prevent conflicts of interest, the Supervisory Board includes independent director who has sufficient autonomy to form his own position and who is able to make objective judgments independently from any influence of NCC's executive bodies, its shareholder, or other stakeholders. NCC aims to increase the share of such members in the Supervisory Board, and to this end, the Regulation on the Supervisory Board of NCC recommends that independent directors shall account for at least one-third of all elected members of the Supervisory Board. In addition, in order to prevent conflicts of interest, the Supervisory Board presently includes only one representative of the executive bodies of NCC, i.e. the Management Board – NCC's CEO. The procedures are internal documents, however they are sent to participants and regulator as they ask NCC to do so. The measures taken by NCC to identify, examine and resolve any conflicts of interest between the members of the Supervisory Board are revised as often as necessary, at least – once a year.
	Q.2.3.3: Describe the board committees that have been established to facilitate the functioning of the board. What are the roles, responsibilities and composition of such committees?	A.2.3.3. There are 2 committees of the Supervisory Board of NCC: the Nominations and Remunerations Committee and the Risks Committee. The Nominations and Remunerations Committee was established to ensure sound and timely decision-making in the field of personnel management and remuneration. In particular, it develops and submits to the Supervisory Board the recommendations on the priorities of NCC's activities in the field of personnel management and

		remuneration of the management bodies and the Audit Commission, on the issues of NCC's policy and standards in selection of candidates for membership in the management bodies of NCC. The objectives and functions of the Nominations and Remunerations Committee is formulated in the Regulation on the Committee, approved by the Supervisory Board on 5 June 2015 (Minutes No.1). The Committee is elected by the Supervisory Board from the members of the Supervisory Board and shall consist of at least 3 persons. The Risks Committee was set up in order to meet the requirements of the Federal Law "On Clearing and Clearing Activities" as regards tightening control over the risk management framework. The main objective of the Committee is participation in improving the risk management framework of NCC as a clearing institution and CCP in order to increase its financial stability and ensure continuity of its clearing activities. Committee is formulated in the Regulation on the Committee, approved by the Supervisory Board on 5 June 2015 (Minutes No.1). Members of the Committee are elected from among the members of the Supervisory Board of NCC in the quantity determined by the Supervisory Board of NCC, but in any case it shall range from 5 to 15 members. The Committee may include: representatives of CMs (not more than one member from one CM); members of the Supervisory Board of NCC; representatives of CBR, representatives of self-regulatory organizations. Representatives of CMs shall account for at least half of the Committee's members. NCC's Supervisory board does not have its own audit committee, however Moscow Exchange's Supervisory Board does have audit commission (http://moex.com/a2356). Such corporate structure is designed due to high level of NCC's integration in Moscow Exchange.

	Review of performance Q.2.3.4: What are the procedures established to review the performance of the board as a whole and the performance of the individual board members?	A.2.3.4. The quality check of corporate governance of NCC, also touching upon the procedure of activities of the Supervisory Board of NCC, is performed as follows: - as part of CBR assessment of the management quality of the credit institution operating as a CCP, in accordance with the Directive No. 2919-U “On Assessment of the Management Quality of a Credit Organization Performing the CCP Functions” dated December 3rd, 2012; - as part of NCC self-assessment of the state of its corporate governance in accordance with the methodology formulated in the Appendix No. 1 to the Letter of the Bank of Russia dated February 7th, 2007 No. 11-T "On the list of issues for assessment by the credit institutions of their state of corporate governance". The Supervisory Board and the Nominations and Remunerations Committee review the performance of every member of the Supervisory Board and the Supervisory Board itself on a regular basis.
Key consideration 4: The board should contain suitable members with the appropriate skills and incentives to fulfil its multiple roles. This typically requires the inclusion of non-executive board member(s).	Q.2.4.1: To what extent does the FMI’s board have the appropriate skills and incentives to fulfil its multiple roles? How does the FMI ensure that this is the case? Q.2.4.2: What incentives does the FMI provide to board members so that it can attract and retain members of the board with appropriate skills? How do these incentives reflect the long-term achievement of the FMI’s objectives? Q.2.4.3: Does the board include non-executive or independent board members? If so, how many? Q.2.4.4: If the board includes independent board members, how does the FMI define an independent board member? Does the FMI disclose which board member(s) it regards as independent?	A.2.4.1. The sole shareholder ensures the appropriate skills and incentives of the Supervisory Board by electing members with significant expertise in banking, financial and research fields, high level of personal competence, professional and personal reputation. A.2.4.2. Supervisory board members’ motivation framework ensures the compensation commensurate to the market level (finance and banking fields). Furthermore, the motivation system encourages Supervisory Board members to take part in Supervisory Board’s meetings and committees. The size of annual remuneration for the members of the Supervisory Board of NCC is determined depending on their roles and degree of participation in the meetings of the Supervisory Board of NCC, its committees. A thorough remuneration policy motivates Supervisory Board members and ensures accomplishment of long-term goals indicated in A.2.1.1. A.2.4.3., A.2.4.4. The procedure for the election and determination of independence of the members of NCC Supervisory Board is stipulated in the Regulation on the Supervisory Board of NCC, based on the provisions of the Code of Corporate Governance

		recommended for use by CBR: An extract from Supervisory Board Regulation regarding Independence criteria: A member of NCC Supervisory Board shall not be deemed an independent director, if: 1) he and/or his related party is or has been a member of executive bodies or an employee of NCC and/or an organization under its control within three (3) latest years; 2) he and/or his related party is a member of the Supervisory Board of a legal entity that controls NCC or an organization under its control or a managing organization of such a legal entity; 3) within any one of three (3) latest years, he and/or his related party has received remuneration and/or other financial benefit from NCC and/or organizations under its control that exceeds a half of the annual base remuneration of a member of NCC Supervisory Board. Whereas payments and/or reimbursements received by the members of NCC Supervisory Board as remuneration and/or reimbursement of expenses for performing the duties of a member of the Supervisory Board and/or an organization under its control, including those related to D&O insurance, and revenue and other payments received from securities of NCC and/or an organization under its control shall not be taken into account; 4) he and/or his related party is a holder or a beneficiary of NCC shares that are equal to more than one (1%) of the authorized capital or the total number of voting shares of NCC or the market value of which exceeds twenty (20) annual base remunerations of a member of NCC Supervisory Board;

		5) he and/or his related party is an employee and/or a member of executive bodies of a legal entity, if his remuneration is determined by the Remuneration Committee (Board of Directors) of that legal entity and any employee and/or a member of NCC executive bodies is a member of that Remuneration Committee (Board of Directors); 6) he and/or his related party provides consulting services to NCC or legal entities that control NCC or are under its control, or is a member of management bodies of organizations providing those services to NCC or such legal entities, or an employee of such organizations directly involved in providing the services; 7) within three (3) latest years, he and/or his related party has provided valuation, tax consulting, auditor's or accounting services to NCC or legal entities under its control, or has been a member of management bodies of organizations rendering such services to those legal entities, or a rating agency of NCC, or has been an employee of such organizations or a rating agency directly involved in providing the respective services; 8) he and/or his related party has been holding office of a member of NCC Supervisory Board for more than 7 years; 9) he and/or his related person is an employee and/or a member of executive bodies of a substantial shareholder of NCC (a legal entity from a group of organizations that comprises a substantial shareholder of NCC). 10) within any one of three (3) latest years, he and/or his related party has received remuneration and/or other financial benefit from a substantial shareholder of NCC (a legal entity from a group of organizations that comprises a substantial shareholder of NCC) that exceeds a half of the annual base remuneration of a member of NCC

		Supervisory Board. Whereas payments and/or reimbursements received by the members of NCC Supervisory Board as remuneration and/or reimbursement of expenses for performing the duties of a substantial shareholder of NCC (a legal entity from a group of organizations that comprises a substantial shareholder of NCC), including those related to D&O insurance, and revenue and other payments received from securities of a substantial shareholder of NCC (a legal entity from a group of organizations that comprises a substantial shareholder of NCC) shall not be taken into account; 11) he and/or his related party is a member of the Board of Directors in more than two (2) legal entities that are under control of a substantial shareholder of NCC or a person that controls a substantial shareholder of NCC; 12) he and/or his related party is an employee and/or a member of management bodies of a substantial counterparty or a competitor of NCC, and legal entities that control a substantial counterparty or a competitor of NCC or organizations under its control; 13) he and/or his related party is a holder or a beneficiary of shares of a substantial counterparty or a competitor of NCC that are equal to more than five (5%) of the authorized capital or the total number of voting shares; 14)he and/or his related party is or has been, within one year preceding election to NCC Supervisory Board, a state or municipal employee, a person holding state office, an employee of the Bank of Russia. The assessment of independence is carried out by the Corporate Governance Department after the analysis of the members of the Supervisory Board conformity with the independence criteria stipulated in the abovementioned Regulation on the basis of the

		directors' personal questionnaire data, regular surveys among them, and collection of additional information on legal entities, whose management bodies include the members of the Supervisory Board of NCC. For the corporate years 2015-2016, 9 members were elected to the Supervisory Board of NCC, 1 of them is recognized as independent, and 8 (except NCC's CEO) as non-executive members.
Key consideration 5: The roles and responsibilities of management should be clearly specified. An FMI's management should have the appropriate experience, a mix of skills, and the integrity necessary to discharge their responsibilities for the operation and risk management of the FMI.	*Roles and responsibilities of management* Q.2.5.1: What are the roles and responsibilities of management, and are they clearly specified? Q.2.5.2: How are the roles and objectives of management set and evaluated?	A.2.5.1. The Management Board is a collegial executive body, which conducts daily management of NCC's operations. The terms of reference of the executive bodies include all issues of NCC's current activities, except the issues included in the terms of reference of the General Meeting of Shareholders or the Supervisory Board. The executive bodies of NCC arrange implementation of resolutions of the General Meeting of Shareholders and the Supervisory Board. The terms of reference of the Management Board are clearly defined in the Articles of Association of NCC. The rights and obligations of the members of the Management Board are determined by the Russian legislation, the Articles of Association of NCC, and the contract concluded between each member of the Management Board and NCC. There is Assets management committee of the Management Board. The Committee is engaged in determining the list of eligible assets and their quantitative and qualitative features, setting limits for operations with banks and determining interest rates for raising and placement liquidity. The procedures of the Committee is defined by the Regulation on the Committee, approved by the Supervisory Board on 25 December 2006. A.2.5.2. The Management Board of NCC is an executive body reporting to the General Meeting of Shareholders and the Supervisory Board of NCC. The main objective of the Management Board is to implement the strategy and the main priorities of NCC set by the General Meeting of Shareholders and the Supervisory Board, as well as implementation of other resolutions of the General Meeting of

		Shareholders and the Supervisory Board. Supervisory Board sets, reviews and monitors Management Board's KPIs.
	Experience, skills and integrity Q.2.5.3: To what extent does the FMI's management have the appropriate experience, mix of skills and the integrity necessary for the operation and risk management of the FMI? How does the FMI ensure that this is the case? Q.2.5.4: What is the process to remove management if necessary?	A.2.5.3. The present members of the Management Board of NCC possess sufficient expertise and skills (biographies are disclosed at NCC's website http://www.nkcbank.com/viewCatalog.do?menuKey=39) required to govern NCC and manage its risks, and meet the qualification and business reputation requirements stipulated by the effective banking legislation. Fulfillment of these requirements is ensured in the course of formation of NCC Management Board. All members of the Supervisory Board of NCC possess sufficient experience and professional integrity to manage NCC's operations and risk management. The fulfillment of these requirements is ensured through the provisions of NCC Articles of Association stipulating that all members of the Supervisory Board must meet the qualification and business reputation requirements set by the federal laws and regulations of CBR. To ensure compliance with the provisions of these regulations, NCC has notified CBR in writing about the conformity of all members of NCC management bodies (the Management Board and the Supervisory Board) to the qualification and/or business reputation requirements established by the Federal Law "On Banks and Banking Activity". Information concerning the experience (biography) of each member of the Supervisory Board is publicly available at NCC's website. A.2.5.4. In accordance with the current version of NCC Articles of Association, early termination of powers of the Chairman of the Management Board is included in the competence of the General

		Meeting of Shareholders (sole shareholder). In October 2015, this competence was transferred to the Supervisory Board. Amendments will come into force in the near future as CBR registers the Articles of Association. Early termination of powers of the members of NCC Management Board is included in the competence of the Supervisory Board.
Key consideration 6: The board should establish a clear, documented risk-management framework that includes the FMI's risk-tolerance policy, assigns responsibilities and accountability for risk decisions, and addresses decision making in crises and emergencies. Governance arrangements should ensure that the risk-management and internal control functions have sufficient authority, independence, resources, and access to the board.	*Risk management framework* Q.2.6.1: What is the risk management framework that has been established by the board? How is it documented? Q.2.6.2: How does this framework address the FMI's risk tolerance policy, assign	A.2.6.1: The risk management framework of NCC comprises: • Internal documents approved by the relevant management bodies of NCC; • System of risk management functions distribution between the management bodies and officers; • Internal procedures and IT systems ensuring an continuous identification, assessment and control of risks taken, as well as provision of information to stakeholders about NCC risks. The Supervisory Board of NCC has approved the Risk Management Policy of NCC. The main body in charge of risk management is Risk Department, which is responsible for the following: • the development of the risk management policy and strategy of NCC; • the development or participation in the development of strategic, methodological and organizational documents associated with risk management in NCC and Moscow Exchange; • the identification, evaluation and monitoring of economic risks; • the organization or participation in organization of the process of identification, evaluation and monitoring of other risks; • the formulation of proposals and recommendations on risk mitigation. Risk Department reports to the Chairman of the Management Board of NCC and Supervisory Board oversees Risk Department's activities. Besides, NCC has specifically appointed officers responsible for managing individual risks: namely legal risk, operational risk, and reputation risk (on the basis of Regulations on legal, operational and reputational risks). These persons also report to the Chairman of the Management Board. A.2.6.2. The authorities of management bodies in making risk

	responsibilities and accountability for risk decisions (such as limits on risk exposures), and address decision-making in crises and emergencies?	management decisions are set forth in the Articles of Association of NCC: • The Supervisory Board is in charge for setting general risk management principles, and it controls their implementation, it also approves Clearing Rules and the criteria for temporarily excess cash allocation. • The Management Board is in charge for approving the internal documents created to further promotion of the general risk management principles, it approves static risk parameters and limits for the allocation of temporarily excess cash; • The Chairman of the Management Board makes operational risk management decisions. In the internal documents, risk tolerance is examined when determining the principles for investment portfolio formation, including the selection of counterparties and instruments in course of allocation of temporarily excess cash of NCC, and when formulating approaches to evaluation of reliability of the counterparties and CMs (for example, by means of the internal rating system). In addition, NCC as a qualified CCP strictly complies with CBR's requirements on credit institutions-CCPs' operations as regards limiting the risks assumed in course of clearing activities and banking operations.
	Q.2.6.3: What is the process for determining, endorsing and reviewing the risk management framework?	A.2.6.3: The Supervisory Board not only approves the documents determining the major risk management principles, but also oversees the arrangement of the risk management framework of NCC, including evaluation of efficiency of the risk management framework. To this end, the Supervisory Board, and, with a greater level of detail, the Risk Committee of the Supervisory Board, receives and assesses periodical reports containing relevant risk analysis.
	Authority and independence of risk management and audit functions Q.2.6.4: What are the roles, responsibilities, authority, reporting lines and resources of the risk management and audit functions?	A.2.6.4. The Internal Audit Service is an independent division within NCC's organizational structure and is a part of internal control framework. The independence of the Internal Audit Service is achieved by complying with the following requirements:

		- Supervisory Board oversees the Internal Audit Service directly; - The Internal Audit Service's activities are not subject to check unless it is stipulated in legal acts and NCC's charter; - The Internal Audit Service may report to the Supervisory Board about the issues that arise within its activities and make proposals for their resolution. Furthermore, the Internal Audit Service discloses this information to NCC's CEO and the Management Board; - The Internal Audit Service is subject to independent audit check; - The Internal Audit Service is not entitled to carry out banking operations and other transactions. The Internal Audit Service's head and employees are not entitled to sign payment and bookkeeping documents as well as other documents related to NCC's risk-taking; - The Supervisory Board assigns and dismisses the Internal Audit Service's head who reports to the Supervisory Board. The Internal Audit Service is engaged in: - carrying out internal control in compliance with Russian legislation, regulatory legal acts and NCC's internal documents; - conducting checks of the full range of NCC's activities, i.e. every division and NCC's employee; - exercising control of the effectiveness of measures taken by the divisions and divisions' heads in order to mitigate the risks identified by the Internal Audit Service. The Internal Audit Service's reports on the progress of the Audit Plans are submitted to the Supervisory Board of NCC at least twice a year. The copies of the reports are sent to the Chairman of the Management Board and the Management Board of NCC. Furthermore, at least once every six months, the Internal Audit Service informs the Supervisory Board on the measures taken to fulfil the recommendations and eliminate the uncovered violations. The

		copies of these reports are sent to the Chairman of the Management Board and the Management Board of NCC. The Internal Control Service is included in the internal control framework of NCC. The main functions of the Internal Control Service are: identification of regulatory risk (compliance risk), control of NCC's observance of the effective legislation on clearing and clearing activities (Federal Law "On Clearing and Clearing Activities"), laws on illegal use of insider information and market manipulation. The Internal Control Service is included in the internal control framework of NCC. The head of the Internal Control Service is appointed and dismissed by the resolution of NCC's CEO. The Head of Internal Control Service is accountable to NCC's CEO. The Head of Internal Control Service is accountable to the Supervisory Board of NCC within several issues regarding legislative requirements for measures against insider information and market manipulation. Internal Control Service is operationally independent from other subdivisions of NCC. The annual report of Internal Control Service's activities is presented to NCC's CEO and the annual report of Internal Control Service's activities regarding legislative requirements for measures against insider information and market manipulation is presented to the Supervisory Board of NCC. NCC's Internal Control Service rules set the pattern of reports' regarding compliance of NCC's clearing activities with Clearing Law, regulatory legal acts, Clearing Rules, NCC's Charter and other internal documents. Risk Department is responsible for the following: • the development of the risk management policy and strategy of NCC; • the development or participation in the development of strategic, methodological and organizational documents associated with risk management in NCC and Moscow Exchange; • the identification, evaluation and monitoring of economic risks;

	Q.2.6.5: How does the board ensure that there is adequate governance surrounding the adoption and use of risk management models? How are these models and the related methodologies validated?	• the organization or participation in organization of the process of identification, evaluation and monitoring of other risks; • the formulation of proposals and recommendations on risk mitigation. The terms of reference of the Responsible Employees include setting up the framework for managing individual risks. Risk Department and the senior officers report directly to the Chairman of the Management Board of NCC, and thus perform their duties independently from the units operating in the risk-taking environment. Risk Department reports are also communicated to the Supervisory Board at least quarterly. A.2.6.5: The models and related risk management methodology are examined by the Risk Committee at the Supervisory Board of NCC and approved by the Management Board or the Supervisory Board of NCC.
Key consideration 7: The board should ensure that the FMI's design, rules, overall strategy, and major decisions reflect appropriately the legitimate interests of its direct and indirect participants and other relevant stakeholders. Major decisions should be clearly disclosed to relevant stakeholders and, where there is a broad market impact, the public.	*Identification and consideration of stakeholder interests* Q.2.7.1: How does the FMI identify and take account of the interests of the FMI's participants and other relevant stakeholders in its decision-making in relation to its design, rules, overall strategy and major decisions? Q.2.7.2: How does the board consider the views of direct and indirect participants and other relevant stakeholders on these decisions; for example, are participants included on the risk management committee, on user committees such as a default management group or through a public consultation? How are conflicts of interest between stakeholders and the FMI identified, and how are they addressed?	A.2.7.1., A.2.7.2. Identification and consideration of stakeholder interests is carried out by the following measures: 1. The main method is the interaction through the User Committees of the companies-members of Moscow Exchange, whereto NCC belongs. The main objective of the Committees is to represent the interests of market participants of Moscow Exchange for the purpose of the full and comprehensive consideration of the market participants needs in numerous matters related, inter alia, to clearing, settlement and registration of operations in the markets of Moscow Exchange, as well as to operation of CCP. The Committees develop and provide expertise in respect of technological improvements, users' proposals and recommendations; they also perform expert evaluation of new projects and interact with the market participants of Moscow Exchange. 2. Direct interaction via the members of the Supervisory Board and members of the Risk Committee of the Supervisory Board, being the members of the management bodies of the companies

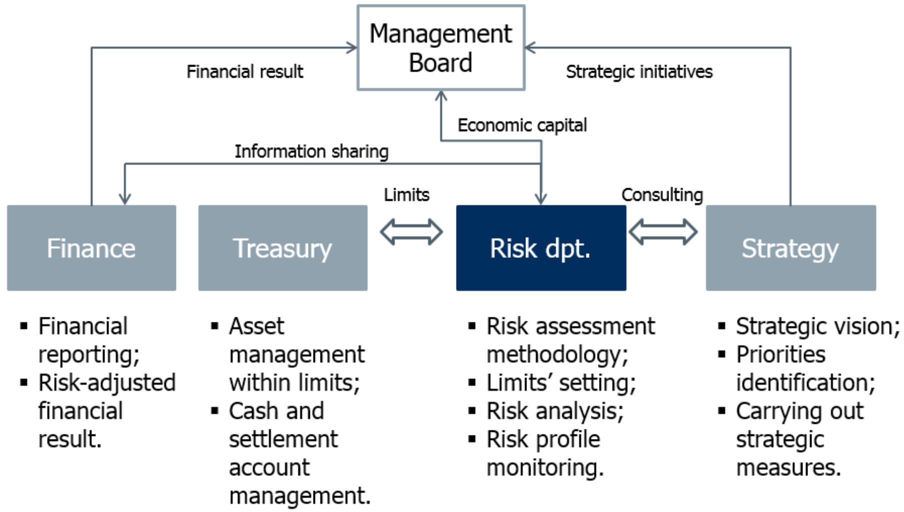
		operating as participant of the financial market and CMs; in this respect, pursuant to the Regulation on the Risk Committee of the Supervisory Board, 2015, representatives of CMs shall account for at least half of all members of the Committee, thus ensuring proper involvement of stakeholders in the decision-making process and formulation of recommendations for the Supervisory Board. 3. Public events (forums, seminars, consultations). Conflicts of interest are identified and addressed effectively in accordance with the Procedure of mitigating conflict of interest in NCC, approved by the Supervisory Board on 26 June 2015 (Minutes No.2). Conflict of interest may arise whenever: an employee has access to the confidential information, however he/she does not use it in his/her everyday work; if an employee combines the execution and control of a task; an employee may receive valuable gifts, an employee may use inside information in trading, etc. NCC mitigates these risks by separation of functions, limited information access, information security procedures, high requirements for employees and executive staff.
	Disclosure Q.2.7.3: To what extent does the FMI disclose major decisions made by the board to relevant stakeholders and, where appropriate, the public?	A.2.7.3: Information is disclosed in the cases stipulated by the effective legislation and, additionally, to the extent contemplated by the Regulation on Information Policy of NCC. The disclosure/submission requirements apply to the documents approved by the Supervisory Board of NCC and the documents regulating NCC's relations with its clients and CMs (for example, Clearing Rules), as well as other most important decisions of the Supervisory Board. In addition, the parent company of NCC – Moscow Exchange - being the trading organizer and a public company, is required by the effective legislation to disclose information about material facts and

		the Supervisory Board's decisions important for CMs and shareholders, and complies with the above by publishing statements of material facts: – in the news feeds of the authorized information agencies; – at the Interfax website; – at the official website of Moscow Exchange.
Final conclusion on the Principle 2	NCC ensures clarity and transparency of the corporate governance system. The goals and objectives of Moscow Exchange include the objective of strengthening reliability of NCC and improving the risk management framework of NCC in order to ensure stability in the financial market segments it services. NCC has appointed independent subdivisions and officers responsible for risk management and internal control. Furthermore, the Supervisory Board is directly involved in building the risk management and internal control frameworks. To take account of the interests of CMs in course of decision-making, NCC has set up the Risk Committee at the Supervisory Board, which consists of representatives of CMs; Moscow Exchange formed user committees.	
Assessment of the Principle 2	Broadly observed	
Recommendations and comments	– NCC does not disclose personal composition of the Risk Committee. – The number of independent members of the Supervisory Board is subject to further improvement.	

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.		
Key consideration 1: An FMI should have risk-management policies, procedures, and systems that enable it to identify, measure, monitor, and manage the range of risks that arise in or are borne by the FMI. Risk-management frameworks should be subject to periodic review.	*Risks that arise in or are borne by the FMI* Q.3.1.1: What types of risk arise in or are borne by the FMI?	A.3.1.1. In its operation, NCC bears the following major risks: • credit risk; • market risk; • liquidity risk; • operational risk; • regulatory risk (compliance risk); • legal risk; • reputation risk. • general business risk; • custodian risk. NCC manages these risks, whether those arise in course of its

		clearing activities, or in allocation of temporarily excess cash (own funds investment and the collateral posted by CMs).
	Risk management policies, procedures and systems Q.3.1.2: What are the FMI's policies, procedures and controls to help identify, measure, monitor and manage the risks that arise in or are borne by the FMI?	A.3.1.2: The risk management framework of NCC includes a set of procedures, internal documents and measures aimed at risk identification, evaluation and modification of risks, as well as monitoring their status in order to mitigate or optimize NCC's financial exposure due to an adverse development of risk factors. The major document that governs the risk management activities of NCC is the Risk Management Policy of NCC. This policy describes the general principles of operation of NCC risk management system and determines the measures taken to manage CCP risks, common for the markets serviced by NCC as a CCP. The specifics and differences in operation of the risk management system in certain markets are described in Clearing Rules of the respective markets. In addition, NCC has developed and applies the policies and procedures for managing the risks associated with the allocation of own funds and collateral of CMs. Besides the Risk management policy the main policies and procedures relating to the specified risk are the following: • Major guidelines of the Methodological Recommendations for individual assessment of credit exposures to counterparties / securities issuers at NCC; • Methodology for determining risk parameters of the FX market and precious metals market of Moscow Exchange; • Methodology for determining risk parameters of the securities market of MICEX Stock Exchange; • Methodology for determination of internal ratings of counterparties (major guidelines); • Methodology for selecting and evaluating foreign currencies and securities accepted as collateral; • Interest-rate policy, • Asset and liabilities management regulation; • Procedure for market risk valuation

	Q.3.1.3: What risk management frameworks are used by the FMI to help identify, measure, monitor and manage its range of risks? Q.3.1.4: How do these systems provide the capacity to aggregate exposures across the FMI and, where appropriate, other relevant parties, such as the FMI's participants and their customers?	• Liquidity risk management policy; • Operational risk management policy; • Methodical recommendation for credit risk valuation; • Methodical recommendation for foreign exchange risk valuation; • Methodical recommendation for interest rate risk valuation; • Methodology for risk calculation at Standardised OTC Derivatives market. A.3.1.3: The risk management function is performed using the data from the trading and clearing system, the data from the systems recording treasury operations and general administrative transactions, and the data from external sources about CMs, counterparties, and market indicators. Furthermore, to identify, evaluate and control risks, specialized software products were developed, providing calculation and control of risk parameters, setting limits for operations of CMs and limits for counterparties, and monitoring of the financial condition of CMs and counterparties of Moscow Exchange. Moreover, persons in charge were appointed to manage each risk. The risk-management role is described by the graph:

		 A.3.1.4: The systems used by NCC enable risk aggregation by CM (including CM risks and counterparty risk in other operations) and for products (markets). NCC systems enable the aggregation of data among all of CMs and their clients as well as client accounts segregation (omnibus and individual).
	Review of risk management policies, procedures and systems Q.3.1.5: What is the process for developing, approving and maintaining risk management policies, procedures and systems? Q.3.1.6: How does the FMI assess the effectiveness of risk management policies, procedures and systems? Q.3.1.7: How frequently are the risk	A.3.1.5: Policies, procedures and risk management systems are designed by Risk Department, coordinated with the relevant interested subdivisions (for instance, Legal department) and approved by the relevant management bodies. Furthermore, Clearing rules and Risk-management policy are approved by NCC's Supervisory Board and registered by CBR, thus strengthening risk-management procedures. A.3.1.6: The Supervisory Board controls the efficiency of the risk management framework; to this end, it receives reports (incl. backtesting reports) from Risk Department, as well as reports of the Internal Audit Service and Internal Control Service on the results of the performed checks of the risk management activities.

	management policies, procedures and systems reviewed and updated by the FMI? How do these reviews take into account fluctuation in risk intensity, changing environments and market practices?	A.3.1.7: NCC regularly (at least once a year) analyzes and, when necessary, revises the existing policies, procedures and risk management systems in order to reflect the changes in financial market legislation taking into account the development of markets, and the results of the risk evaluation models quality analysis it uses.
Key consideration 2: An FMI should provide incentives to participants and, where relevant, their customers to manage and contain the risks they pose to the FMI.	Q.3.2.1: What information does the FMI provide to its participants and, where relevant, their customers to enable them to manage and contain the risks they pose to the FMI? Q.3.2.2: What incentives does the FMI provide for participants and, where relevant, their customers to monitor and manage the risks they pose to the FMI? Q.3.2.3: How does the FMI design its policies and systems so that they are effective in allowing their participants and, where relevant, their customers to manage and contain their risks?	A.3.2.1: The trading and clearing systems disclose information on the requirements/obligations of CM, as well as initial margin requirements and collateral adequacy. In case of a margin call, the CM is notified in accordance with Clearing Rules. Furthermore, NCC discloses all necessary information regarding risks at its website. Thus, CMs are able to manage risks they pose to NCC. A.3.2.2: NCC issues initial margin requirements for CMs, timely informs CMs of the arising margin calls and sets penalty rates for the obligations roll-over in case of they are not fulfilled in due time. Moreover, NCC preliminarily discloses information about any changes in risk parameters affecting CMs' collateral adequacy. In case of CMs' financial condition deterioration or excessive risk concentrations, initial margin requirements for the relevant CMs may be increased. NCC communicates with CMs via user committees, meetings, and mass media. NCC supplies CMs with regular reports and information. A.3.2.3: The systems and policies developed by now enable CMs to limit the risk appetite of their clients by setting individual risk parameters for certain client accounts. NCC discloses the description and the general provisions of its risk management documents at NCC's website.
Key consideration 3: An FMI should regularly review the material risks it bears from and poses to other entities	*Material risks* Q.3.3.1: How does the FMI identify the material risks that it bears from and poses to other entities as a result of	A.3.3.1. Material risks are identified via asset concentration monitoring (daily for regulatory purposes). Major interdependencies are:

(such as other FMIs, settlement banks, liquidity providers, and service providers) as a result of interdependencies and develop appropriate risk-management tools to address these risks.	interdependencies? What material risks has the FMI identified? Q.3.3.2: How are these risks measured and monitored? How frequently does the FMI review these risks?	• NSD; • Correspondent banks. NCC has identified credit risk on these entities as CMs collateral is deposited there. NCC has also identified concentration risk across several groups of interdependent counterparties. Being a CM, NSD carries trade-associated risks on NCC. It is worth mentioning that NCC has not established any relations with other CCPs, so there are no interdependencies with such Financial Market Infrastructures. NCC recognizes credit, market, operational, liquidity, legal, regulatory, custodian and reputation risks as material ones. A.3.3.2: NCC conducts daily monitoring of open sources, searching for information about any changes in international ratings and general negative information about the counterparties. NCC analyzes financial standing of NSD on a monthly basis and correspondent banks at least on a quarterly basis and forms necessary provisions. Overwhelming majority of correspondents are top-tier investment grade-rated banks. NSD is a qualified central depository in Russia. NCC reviews the material risks it bears from other entities at least on a quarterly basis. The processes for market risk measuring and monitoring are primarily provided by the Methodologies for determining risk parameters in FX, precious metals and securities markets, which describe the processes of spot risk, interest rate risk and settlement price calculation, concentration limit settings, thresholds definition for spot risk range valuation and thresholds definition for price range valuation, etc. According to these Methodologies dynamic risk parameters are

		reviewed a daily or intraday basis and static parameters are reviewed as frequently as necessary. Operational risk is inherent in the whole activities of Moscow Exchange, so all entities and employees are responsible for its monitoring. To support its measuring and monitoring the internal and external bases for the storage of the accidents happened and losses incurred were established. The accidents are put into the base when they happened and reported at least once a month.
	Risk management tools Q.3.3.3: What risk management tools are used by the FMI to address the risks arising from interdependencies with other entities?	A.3.3.3: In order to manage the credit risks arising due to the interdependence with other entities, NCC monitors the financial condition of its counterparties, sets the limits on the allocation of funds with counterparties, as well as trade limits. NCC forms reserves for possible losses. In order to mitigate the risks arising due to interdependence with the settlement banks, NCC diversifies its funds held on the correspondent accounts by moving some portion of the cash from its accounts with the settlement banks to the accounts in other banks with low credit risk (including the correspondent account with CBR). Furthermore, for the purpose of controlling the credit risk, NCC sets limits for such counterparties as regards allocation of funds on the correspondent accounts. For market risk NCC uses the following tools: a) for foreign exchange risk VaR instrument allows to measure the exposure for each currency; b) interest rate risk is measured by means of duration methodology; c) for the fair price valuation of the portfolio the VaR, Sharpe ratio and basis point price measures are used within the price and market liquidity risk estimation. Stress-testing procedure allows assessment of the size of the main type of risks under stress scenario conditions. For all kind of risks NCC sets the limits, which are approved by the authorized executive bodies. A.3.3.4: The limits are revised at least once a year, as well as in case of changes in the financial indicators of the counterparties. For the

	Q.3.3.4: How does the FMI assess the effectiveness of these risk management tools? How does the FMI review the risk management tools it uses to address these risks? How frequently is this review conducted?	provision purposes, quality categories are revised at least once a quarter in accordance with the regulatory requirement, viz. Regulation on formation of reserves for possible losses. The effectiveness of VaR instrument is assessed by means of comparing the forecasted estimations acquired through the VaR methodology and actual values (back-testing process). Risk department corrects the model's parameters in case of inconsistencies.
Key consideration 4: An FMI should identify scenarios that may potentially prevent it from being able to provide its critical operations and services as a going concern and assess the effectiveness of a full range of options for recovery or orderly wind-down. An FMI should prepare appropriate plans for its recovery or orderly wind-down based on the results of that assessment. Where applicable, an FMI should also provide relevant authorities with the information needed for purposes of resolution planning.	*Scenarios that may prevent an FMI from providing critical operations and services* Q.3.4.1: How does the FMI identify scenarios that may potentially prevent the FMI from providing its critical operations and services? What scenarios have been identified as a result of these processes? Q.3.4.2: How do these scenarios take into account both independent and related risks to which the FMI is exposed?	A.3.4.1: NCC has identified key scenarios for activation of NCC Financial Recovery Plan. Scenarios that may prevent NCC from providing its critical operations are indicated in Financial Recovery Plan. NCC identifies scenarios based on current macroeconomic situation and regulatory framework in Russia and abroad. NCC takes into account CPSS-IOSCO "Consultative report Recovery of financial market infrastructures" as well as CBR commentary on this issue. NCC assesses and alters the Plan on a yearly basis. NCC determined 3 scenarios: 1) Basic scenario; 2) Scenario that involves preventive measures; 3) Scenario that involves financial recovery measures (e.g. raising additional liquidity). A.3.4.2: These scenarios include incurring losses from mass defaults of CMs and other events. These scenarios are revised at least annually. Aforesaid scenarios take into account all risks of NCC. Firstly, it is credit risk and market risk, i.e. default of 2 largest CMs. Secondly, it is liquidity risk, i.e. dramatic outflow of initial margin. Furthermore, operational and reputation risks.
	Recovery or orderly wind-down plans Q.3.4.3: What plans does the FMI have for its recovery or orderly wind-down?	A.3.4.3: NCC has developed the recovery procedures: the Business Continuity Policy and the Financial Recovery Plan.

	Q.3.4.4: How do the FMI's key recovery or orderly wind-down strategies enable the FMI to continue to provide critical operations and services?	A.3.4.4: The aforementioned strategies enable NCC to continue providing critical services as they include a wide range of possible scenarios and indicate measures to be taken in each scenario. These scenarios cover major risks of NCC. Profound tools, measures and indicators strengthen NCC's stability and ensure business continuity in any situation. Moreover, the overall safeguard structure is being updated in order to enable NCC to provide critical operations. For example, in case of default that exceeds NCC's pre-funded resources, NCC's loss capping mechanisms are introduced to ensure compliance with CBR requirements and regulations. In order to ensure an appropriate speed of response to the potential suspension of normal operating procedures, NCC has developed the Business Continuity Policy and Business Continuity and Recovery Plans. As a result, NCC has implemented a business continuity model which contemplates the measures to be taken to fulfill NCC's obligations in an emergency. In case of launching the Business Continuity Plan, NCC will focus on prompt recovering of the most critically important business processes, in the medium term – recovering of the non-critical processes, in the long term – recovering of all processes. Moreover, in accordance with the Financial Recovery Plan, NCC has developed available tools and methods to restore financial stability and preserve business continuity in case of a considerable deterioration of NCC financial condition. The plan describes several major scenarios, each containing the conditions for its realization, the risks, indicators and measures relevant to such scenario and the conditions for its realization.
	Q.3.4.5: How are the plans for the FMI's recovery and orderly wind-down reviewed and updated? How frequently are the plans reviewed and updated?	A.3.4.5: NCC's Financial Recovery Plan and Business Continuity Plan are revised and updated annually. Business Continuity Policy is updated as often as it is deemed necessary. The revision of the plan is carried out by divisions in charge and based on changes in regulations and macroeconomic environment.

		For instance, factors that made an impact on an updated plan (in 2014) include FATCA implementation and economic sanctions against Russian banks and corporations.
Final conclusion on the Principle 3	NCC risk management framework guarantees managing major risks associated with NCC's activities: legal risk, credit risk, operational risk, liquidity risk, etc. The officers responsible for the organization of the risk management process are appointed. All documents regulating the risk management process are regularly analyzed and, if necessary, revised. NCC has identified certain scenarios that could prevent NCC from providing clearing services on a continuous and uninterrupted basis; it has developed the measures to restore business continuity and financial stability of NCC.	
Assessment of the Principle 3	Observed	
Recommendations and comments	-	

Principle 4: Credit risk An FMI should effectively measure, monitor, and manage its credit exposure 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 largest participants and their affiliates that would potentially cause the largest aggregate credit exposures to the CCP in extreme but plausible market conditions. All other CCPs should maintain, at a minimum, total financial resources sufficient to cover the default of the one participant and its affiliates that would potentially cause the largest aggregate credit exposures to the CCP in extreme but plausible market conditions.		
Key consideration 1: An FMI should establish a robust framework to manage its credit exposures to its participants and the credit risks arising from its payment, clearing, and settlement processes. Credit exposure may arise from current exposures, potential future exposures, or both.	Q.4.1.1: What is the FMI's framework for managing credit exposures, including current and potential future exposures, to its participants and arising from its payment, clearing and settlement processes?	A.4.1.1: In accordance with Clearing Rules, NCC takes the following measures to mitigate credit exposures associated with clearing: • issues financial requirements for CMs; • issues margin requirements for CMs; • conducts preliminary control of CMs' collateral when an order is submitted (pre-order validation); • performs at least daily mark-to-market of the collateral and positions of CMs and controls CMs' collateral adequacy. NCC issues a margin call in case the collateral is insufficient; • forms Guarantee funds; • performs at least daily mark-to-market of securities and foreign currency recorded as contributions to the Guarantee

	Q.4.1.2: How frequently is the framework reviewed to reflect the changing environment, market practices and new products?	funds: • issues requirements for stress collateral of CMs of category B and O (general CM); • performs at least daily mark-to-market of the collateral for stress; • limits its liability in accordance with clause 16 of Clearing Rules. In addition, NCC regularly conducts: • monitoring of compliance with financial requirements for CMs (at least monthly); • monitoring of risk concentrations by groups of related counterparties (monthly); • assessment of financial conditions of all counterparties (at least quarterly); • limits for allocation of funds with counterparties, as well as trading limits. • daily monitoring of the market and external events and factors which can have a significant impact on the counterparties' ability to meet their obligations to NCC. A.4.1.2: Review of the credit risk management arrangements is conducted at least once a year, as well as upon changes in the risk profile due to: • changing market conditions; • changes in the regulation; • launch of new products and implementation of projects.
Key consideration 2: An FMI should identify sources of credit risk, routinely measure and monitor credit exposures, and use appropriate risk-management tools to control these risks.	Q.4.2.1: How does the FMI identify sources of credit risk? What are the sources of credit risk that the FMI has identified?	A.4.2.1: The sources of credit risk for NCC are identified on the basis of the procedures established by NCC's internal documents. These procedures include: analysis of NCC's activities; analysis of NCC operations; analysis of NCC's counterparties. Major sources of credit risk for NCC are: • exposures to CMs (current and potential negative revaluation of positions and collateral of CMs),

		• claims to counterparties and issuers where temporarily excess funds are invested (investment portfolio) • and settlement organizations (correspondent, clearing and depository accounts).
	Q.4.2.2: How does the FMI measure and monitor credit exposures? How frequently does and how frequently can the FMI recalculate these exposures? How timely is the information?	A.4.2.2: In order to measure and monitor credit exposures to CMs, NCC conducts pre-order validation checks, to ensure collateral sufficiency. Furthermore, risk-monitoring systems are integrated into the trade platform to ensure online data availability. During every clearing session, NCC conducts mark-to-market of CMs' collateral and positions (at least on a daily basis). NCC continuously carries out online monitoring of CMs' positions and their collateral adequacy. Volumes of funds in correspondent, clearing and depository accounts are monitored on a daily basis. Concentration and other credit risk limits are monitored on an online basis.
	Q.4.2.3: What tools does the FMI use to control identified sources of credit risk (for example, offering an RTGS or DvP settlement mechanism, limiting net debits or intraday credit, establishing concentration limits, or marking positions to market on a daily or intraday basis)? How does the FMI measure the effectiveness of these tools?	A.4.2.3: Further to the above (A.4.1.1), NCC uses the following credit risk control methods: - Setting margin requirements for CMs; - Elimination of settlement risk by using the "delivery versus payment" principle or preliminary delivery by CMs; - Preliminary control of the collateral adequacy before carrying out of trades (pre-order Validation); - Setting limits (concentration limits; trade limits; price bands); - Restricting participation in different markets; - Daily mark-to-market of positions and collateral; - Changing collateral adequacy requirements for trades; - Forming provisions for possible losses. The effectiveness of such methods is measured in comparison with the actually incurred losses, as well as via a number of back testing and stress testing exercises.

Key consideration 3: A payment system or SSS should cover its current and, where they exist, potential future exposures to each participant fully with a high degree of confidence using collateral and other equivalent financial resources (see Principle 5 on collateral). In the case of a DNS payment system or DNS SSS in which there is no settlement guarantee but where its participants face credit exposures arising from its payment, clearing, and settlement processes, such an FMI should maintain, at a minimum, sufficient resources to cover the exposures of the two participants and their affiliates that would create the largest aggregate credit exposure in the system.	*Coverage of exposures to each participant* Q.4.3.1: How does the payment system or SSS cover its current and, where they exist, potential future exposures to each participant? What is the composition of the FMI's financial resources used to cover these exposures? How accessible are these financial resources? Q.4.3.2: To what extent do these financial resources cover the payment system's or SSS's current and potential future exposures fully with a high degree of confidence? How frequently does the payment system or SSS evaluate the sufficiency of these financial resources? *For DNS payment systems and DNS SSSs in which there is no settlement guarantee* Q.4.3.3: If the payment system or SSS is a DNS system in which there is no settlement guarantee, do its participants face credit exposures arising from the payment, clearing and settlement processes? If there are credit exposures in the system, how does the system monitor and measure these exposures? Q.4.3.4: If the payment system or SSS is a DNS system in which there is no settlement guarantee and has credit exposures among its participants, to what extent does the payment system's or SSS's financial resources cover, at a minimum, the default of the two participants and their affiliates that would create the largest aggregate credit exposure in the system?	A.4.3.1 - A.4.3.4: Not applicable.
Key consideration 4: A CCP should cover its current and potential future exposures to	*Coverage of current and potential future exposures to each participant* Q.4.4.1: How does the CCP cover its current	A.4.4.1: To cover current and future risks to each CM, NCC has set up a safeguard structure, which comprises: 1. individual clearing collateral (initial margin) of the defaulting

each participant fully with a high degree of confidence using margin and other prefunded financial resources (see Principle 5 on collateral and Principle 6 on margin). 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 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 for 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 for the CCP in extreme but plausible market conditions. In all cases, a CCP should document its supporting	and potential future exposures to each participant fully with a high degree of confidence? What is the composition of the CCP's financial resources used to cover its current and potential future exposures? How accessible are these financial resources? Q.4.4.2: To what extent do these financial resources cover the CCP's current and potential future exposures fully with a high degree of confidence? How frequently does the CCP evaluate the sufficiency of these financial resources?	CM, its composition complies with the Russian legislation and is determined in Clearing Rules; NCC accepts most liquid assets as collateral (currencies (RUB, USD, EUR, etc., shares included in MICEX and RTS indexes, sovereign bonds, corporate bonds included in CBR's Lombard list, i.e. the list of assets that CBR accepts as eligible collateral for REPO trades). Securities are deposited in NSD. Cash and currencies are deposited in top-tier correspondent banks (mostly – systemically important banks), thus the credit risk is mitigated. NCC has prompt access to all the aforementioned collateral types throughout the day. 2. Defaulting CM stress collateral (the rules and procedures are in place, currently in the process of implementation); 3. Defaulting CM's contributions to Guarantee funds; 4. NCC's dedicated capital (Skin-in-the-game), dedicated to cover potential losses in case the defaulting CM's individual clearing collateral and Guarantee funds' contributions are insufficient; 5. Contributions of non-defaulting CMs to Guarantee funds (collective clearing collateral); 6. Additional NCC's dedicated capital (Supervisory Board may make such decision). This procedure is described in the clause 16 of Clearing Rules. Common part. page 35 (http://www.nkcbank.com/UserFiles/File/CK22/NCC%20Pravila%20kliringa.%20Obshaya%20chast%20(1%20%20redakziya%202015).pdf) Furthermore, NCC has implemented cross-default procedure that allows using any residual value of the defaulting CM's collateral across markets to cover losses caused by its default. A.4.4.2: The initial margin covers NCC's potential losses with a confidence level of at least 99%. At least once a day, NCC performs the mark-to-market of claims, liabilities and collateral of CM, and, if

rationale for, and should have appropriate governance arrangements relating to, the amount of total financial resources it maintains.		the funds are insufficient, it issues margin calls to such CM. Other levels of protection are used to cover losses in a stress environment. A simplified stress testing of CMs' positions with standard parameters is conducted daily; furthermore, NCC performs comprehensive stress testing of its financial stability every week and sends the report to NCC's Chief Risk Officer. Comprehensive stress testing (incl. reverse stress testing and assessment of NCC's liquid assets) is carried out on a monthly basis and is sent to the Management Board and the Risk Committee. The Supervisory Board scrutinizes comprehensive stress testing results on a quarterly basis. Furthermore, stress testing reports prepared in accordance with current regulation are sent to CBR every month.
	Risk profile and systemic importance in multiple jurisdictions Q.4.4.3: Do any of the CCP's activities have a more-complex risk profile (such as clearing financial instruments that are characterised by discrete jump-to-default price changes or that are highly correlated with potential participant defaults)? Is the CCP systemically important in multiple jurisdictions?	A.4.4.3: NCC does not clear jump-to-default instruments, such as Credit Default Swaps. NCC is the largest CCP under the Russian jurisdiction and the only CCP considered systemically important by CBR. No other jurisdiction considers NCC as a systemically important CCP.
	Additional financial resources Q.4.4.4: What additional financial resources does the CCP maintain to cover a wide range of potential stress scenarios that include, but are not limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure in extreme but plausible market conditions? Q.4.4.5: If the CCP is involved in activities with a more-complex risk profile or is systemically important in multiple jurisdictions, to what extent do the additional financial resources cover, at a minimum, the default of	A.4.4.4: In order to cover a wide range of stress scenarios, viz. the potential default of 2 major CMs at once, NCC uses the financial resources: 1) Defaulting CM clearing collateral (initial margin); 2) Defaulting CM stress collateral (the rules and procedures are in place, currently in the process of implementation); 3) Defaulting CM clearing collateral in other markets, pursuant to cross-default procedures defined in Clearing Rules; 4) Fixed contribution of the defaulting CM to Guarantee fund;

	the two participants and their affiliates that would create the largest credit exposure in the CCP in extreme but plausible market conditions? Q.4.4.6: How frequently does the CCP evaluate the sufficiency of its additional resources?	5) NCC's dedicated capital (Skin-in-the-game); 6) Fixed contributions of the non-defaulting CMs to the Guarantee fund; 7) NCC's additional dedicated capital (Supervisory Board may make such decision). A.4.4.5: Not applicable. A.4.4.6: NCC evaluates the adequacy of its financial resources in stress scenarios as follows: - on a daily basis – for the positions of CMs; - on a monthly basis - as of the 1st day of each month during the comprehensive stress testing; - moreover, NCC may conduct ad hoc stress testing when necessary; - NCC's dedicated capital (Skin-in-the-game) amount is revised at least annually.
	Supporting rationale and governance arrangements Q.4.4.7: How does the CCP document the supporting rationale regarding its holdings of total financial resources? Q.4.4.8: What governance arrangements are in place relating to the amount of total financial resources at the CCP?	A.4.4.7, A.4.4.8: The Moscow Exchange User Committees, The Risk Committee of the Supervisory Board and the Supervisory Board discussed and approved the effective safeguard structure and dedicated capital of NCC (Skin-in-the-game); as a result of this discussion, these issues are indicated in Clearing Rules.
Key consideration 5: A CCP should determine the amount and regularly test the sufficiency of its total financial resources available in the event of a default or multiple defaults in extreme but plausible market conditions through rigorous stress testing. A CCP should have	*Stress testing* Q.4.5.1: How does the CCP determine and stress-test the sufficiency of its total financial resources available in the event of a default or multiple defaults in extreme but plausible market conditions? How frequently does the CCP stress-test its financial resources?	A.4.5.1: The sufficiency of NCC's financial resources to cover losses from realization of material risks arising from NCC's activities (stress testing of financial resources), includes: • sufficiency of NCC's aggregate financial resources to cover aggregate losses; • sufficiency of regulatory capital to meet the regulatory requirements of CBR; • sufficiency of Guarantee funds. Sufficiency of aggregate financial resources is determined as the

clear procedures to report the results of its stress tests to appropriate decision makers at the CCP and to use these results to evaluate the adequacy of and adjust its total financial resources. Stress tests should be performed daily using standard and predetermined parameters and assumptions. On at least a monthly basis, a CCP should perform a comprehensive and thorough analysis of stress testing scenarios, models, and underlying parameters and assumptions used to ensure they are appropriate for determining the CCP's required level of default protection in light of current and evolving market conditions. A CCP should perform this analysis of stress testing more frequently when the products cleared or markets served display high volatility, become less liquid, or when the size or concentration of positions held by a CCP's participants increases significantly. A full validation of a CCP's risk-management model should be performed at least annually.	Q.4.5.2: How are stress test results communicated to appropriate decision-makers at the CCP? How are these results used to evaluate the adequacy of and adjust the CCP's total financial resources?	value of total loss coverage ratio, which equals to the difference between the amount of NCC's total financial resources and total losses divided by the amount of NCC's total financial resources * 100%. Sufficiency of aggregate financial resources = (Capital + Guarantee Funds - Total Risk) / (Capital + Guarantee funds); where: aggregate losses in case of stress testing scenarios realization in course of NCC's activities include: - losses from Defaulters' positions close-out (CCP credit risk); - losses from non-performance of obligations by NCC's counterparties / bond issuers / (investment credit risk); - losses from revaluation of NCC's assets and liabilities in case of unfavorable changes in market indicators (market risk). Stress testing of NCC's financial stability is performed as follows: - on a monthly basis, as of the first day of each month, unless the higher frequency of stress testing is set; - on a weekly basis for NCC's management; - unscheduled stress testing in accordance with a special procedure, if necessary. A.4.5.2: Stress testing Management Reports are submitted for review to the Asset Management Committee and the Management Board of NCC on the reporting dates. The Supervisory Board of NCC receives the Stress testing Management Reports on a quarterly basis. Based upon the results of the stress testing, NCC's management bodies may, depending on their terms of reference determined by the Articles of Association and other documents of NCC, decide to implement the measures aimed at decreasing the risks assumed by NCC: - change the value of individual clearing collateral / initial margin calculation methodology; - change the size of contributions to the Guarantee funds / revise the approaches of determining the size of contributions to the

		Guarantee funds; - increase NCC's capital; - other measures aimed at mitigating NCC's risks.
	Review and validation Q.4.5.3: How frequently does the CCP assess the effectiveness and appropriateness of stress test assumptions and parameters? How does the CCP's stress test programme take into account various conditions, such as a sudden and significant increase in position and price volatility, position concentration, change in market liquidity, and model risk including shift of parameters? Q.4.5.4: How does the CCP validate its risk management model? How frequently does it perform this validation? Who carries this out?	A.4.5.3: The stress testing scenarios are reassessed on a continuous basis. The Risk management Committee of the Supervisory Board revises the effectiveness and appropriateness of stress test assumptions and parameters at least on a quarterly basis. A.4.5.4: Validation of the risk management models is conducted by Risk Department. The validation is performed by means of back testing at least once a year.
Key consideration 6: In conducting stress testing, a CCP should consider the effect of a wide range of relevant stress scenarios in terms of both defaulters' positions and possible price changes in liquidation periods. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress	Q.4.6.1: In conducting stress testing, what scenarios does the CCP consider? What analysis supports the use of these particular scenarios? Do the scenarios include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions?	A.4.6.1. In order to define the set of plausible forward-looking stress scenarios NCC takes into account extreme historical changes in risk factors, then applies expert assessment to adjust them to current economic conditions (if necessary). As a result, stress scenarios include: • The extreme change in major risk factors (such as FX rates, stock indices, yield curves, price volatilities) which are defined as described above; • Defaults of NCC's CMs / bond issuers / counterparties (including a default of largest two CMs and a default of two largest counterparties/ bond issuers from NCC investment portfolio); • Liquidity squeeze resulting from the outflow of initial margin posted in cash (for liquidity stress tests).

scenarios in a variety of extreme but plausible market conditions.		
Key consideration 7: An FMI should establish explicit rules and procedures that address fully any credit losses it may face as a result of any individual or combined default among its participants with respect to any of their obligations to the FMI. These rules and procedures should address how potentially uncovered credit losses would be allocated, including the repayment of any funds an FMI may borrow from liquidity providers. These rules and procedures should also indicate the FMI's process to replenish any financial resources that the FMI may employ during a stress event, so that the FMI can continue to operate in a safe and sound manner.	*Allocation of credit losses* Q.4.7.1: How do the FMI's rules and procedures explicitly address any credit losses it may face as a result of any individual or combined default among its participants with respect to any of their obligations to the FMI? How do the FMI's rules and procedures address the allocation of uncovered credit losses and in what order, including the repayment of any funds an FMI may borrow from liquidity providers?	A.4.7.1. NCC Clearing Rules define the structure of total financial resources that can be used to cover losses resulting from defaults of any CM (see A.4.4.4.). If these financial resources are not enough to absorb default losses, Clearing Rules enable defaulting CM's loss and position spreading between non-defaulting CMs having positions opposite to the defaulter. In accordance with Clearing Rules in Securities market clause 28.22 and Clearing Rules in FX market and Precious metals market clause 17.23, in order to fulfil its obligations towards non-defaulting CMs, NCC acts in the following order: 1) uses its own available cash / precious metals; 2) In case of insufficiency of its own available cash, executes swap trades with the authorized CMs, except for CBR; 3) concludes, in accordance with the cooperation agreement, swap trades with CBR; 4) In case of security shortage, executes REPO trades with the authorized clearing participants to borrow the needed security. Any funds borrowed from CMs, CBR or other liquidity providers are repaid as the position of the defaulting CM is closed out.
	Replenishment of financial resources Q.4.7.2: What are the FMI's rules and procedures on the replenishment of the financial resources that are exhausted during a stress event?	A.4.7.2. Clearing Rules contemplate the Guarantee fund's replenishment in case any part of the contribution is spent. The funds are replenished within 1 settlement day from the moment the CMs are notified by NCC (3 business days for the Standardised OTC Derivatives Market). The notification is sent by NCC not later than on the day following the day when the contributions to the Guarantee fund are used. The number of the Guarantee funds replenishments is limited to 6 times a calendar year for all markets beside the Standardised OTC Derivatives Market. The number of replenishments at this market is

		limited to 3 times a quarter. Furthermore, the Financial Recovery Plan contemplates NCC's actions in case of its capital reduction down to the level threatening NCC business continuity (approaching the minimum NCC capital adequacy ratios).
Final conclusion on the Principle 4	NCC has established and uses the framework for evaluation, monitoring and management of the credit risks to CMs, settlement organizations and counterparties for the allocation of temporarily excess cash. On an ongoing basis, NCC identifies current and potential risks to CMs; it has sufficient instruments to manage such risks. NCC maintains adequate financial resources to cover credit risks to each CM with certain confidence probability (including individual collateral and Guarantee funds). NCC maintains sufficient aggregate financial resources (including individual collateral, stress collateral, Guarantee funds and NCC's dedicated capital (Skin-in-the-game) to cover the credit risks of at least two largest CMs in extreme but plausible market conditions. CMs' positions are stress tested regularly.	
Assessment of the Principle 4	Observed	
Recommendations and comments		

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.		
Key consideration 1: An FMI should generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity, and market risks.	Q.5.1.1: How does the FMI determine whether a specific asset can be accepted as collateral, including collateral that will be accepted on an exceptional basis? How does the FMI determine what qualifies as an exceptional basis? How frequently does the FMI adjust these determinations? How frequently does the FMI accept collateral on an exceptional basis, and does it place limits on its acceptance of such collateral? Q.5.1.2: How does the FMI monitor the	A.5.1.1: NCC determines whether an asset can be accepted as collateral on the basis of regulatory requirements for liquidity, credit quality and market risk (the objective criteria are, e.g.: inclusion in the stock index, Lombard List of CBR, international ratings of certain level, and financial condition of the issuers). The following types of assets can be accepted as collateral in Moscow Exchange markets: FX market: foreign currencies and precious metals; Securities market: foreign currency, government bonds, corporate bonds and shares; Derivatives market: foreign currencies and shares; Standardised OTC Derivatives market: foreign currencies. The list of eligible collateral is revised at least quarterly. NCC does not accept collateral on exceptional basis.

	collateral that is posted so that the collateral meets the applicable acceptance criteria? Q.5.1.3: How does the FMI identify and mitigate possible specific wrong-way risk – for example, by limiting the collateral it accepts (including collateral concentration limits)?	A.5.1.2: The list of assets accepted as collateral is regularly checked for compliance with the existing requirements. In addition, all newly-admitted collateral is checked, and the standard collateral is permanently monitored. The collateral management system does not allow for collateral other than in the list of eligible collateral. A.5.1.3: In order to mitigate specific wrong way risk, NCC prohibits all CMs to post collateral consisting of securities issued by such CM or by affiliated parties (except for the Derivatives market where CMs can post collateral in shares issued by such CM or by affiliated parties, but conservative limits and haircuts are applied).
Key consideration 2: An FMI should establish prudent valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions.	*Valuation practices* Q.5.2.1: How frequently does the FMI mark its collateral to market, and does it do so at least daily? Q.5.2.2: To what extent is the FMI authorised to exercise discretion in valuing assets when market prices do not represent their true value?	A.5.2.1: Collateral is marked to market on a daily basis. A.5.2.2: NCC sets prices using the current market data on the trades and orders from available sources, and if such data is not current and/or insufficient, NCC applies models to determine current prices (as described in the Methodologies for defining risk parameters).
	Haircutting practices Q.5.2.3: How does the FMI determine haircuts? Q.5.2.4: How does the FMI test the sufficiency of haircuts and validate its haircut procedures, including with respect to the potential decline in the assets' value in stressed market conditions involving the liquidation of collateral? How frequently does the FMI complete this test?	A.5.2.3: NCC determines the haircuts applied to the collateral using the same framework for the definition of IM rates. A.5.2.4: Haircuts are back tested on a daily basis together with initial margin rates (haircuts are set using the same framework for the definition of IM rates). More detailed information on initial margin back-testing is indicated in A.6.6.1.
Key consideration 3: In order to reduce the need for	Q.5.3.1: How does the FMI identify and evaluate the potential procyclicality of its	A.5.3.1: As it was noted above (A.5.2.3), NCC sets haircuts based on the same principles employed for determining initial margin

procyclical adjustments, an FMI should establish stable and conservative haircuts that are calibrated to include periods of stressed market conditions, to the extent practicable and prudent.	haircut calibrations? How does the FMI consider reducing the need for procyclical adjustments – for example, by incorporating periods of stressed market conditions during the calibration of haircuts?	requirements, which also consider the need to minimize pro-cyclical adjustments.
Key consideration 4: An FMI should avoid concentrated holdings of certain assets where this would significantly impair the ability to liquidate such assets quickly without significant adverse price effects.	Q.5.4.1: What are the FMI's policies for identifying and avoiding concentrated holdings of certain assets in order to limit potential adverse price effects at liquidation? What factors (for example, adverse price effects or market conditions) are considered when determining these policies? Q.5.4.2: How does the FMI review and evaluate concentration policies and practices to determine their adequacy? How frequently does the FMI review and evaluate these policies and practices?	A.5.4.1: NCC sets concentration limits based on observed market volumes. Collateral volumes above such levels entail more conservative haircuts. A.5.4.2: NCC revaluates the concentration limits on a monthly basis, and if the currently established limit values significantly deviate from the calculated ones, the parameters are changed.
Key consideration 5: An FMI that accepts cross-border collateral should mitigate the risks associated with its use and ensure that the collateral can be used in a timely manner.	Q.5.5.1: What are the legal, operational, market and other risks that the FMI faces by accepting cross-border collateral? How does the FMI mitigate these risks? Q.5.5.2: How does the FMI ensure that cross-border collateral can be used in a timely manner?	A.5.5.1: NCC keeps collateral in foreign currencies with foreign correspondent banks based on agreements with these banks. NCC mitigates the risks by choosing reliable banks (systemically important and investment-grade rated) as counterparties and ensuring detailed description of rights and obligations in the agreements. A.5.5.2. NCC ensures the possibility of timely use of cross-border collateral by describing rights and obligations of the parties to the enforceable contract in detail.
Key consideration 6: An FMI should use a collateral management system that is well-designed and operationally flexible.	Collateral management system design Q.5.6.1: What are the primary features of the FMI's collateral management system?	A.5.6.1: The primary features of NCC's collateral management system include the following: • The collateral is registered at the same level as the positions are registered for collateral adequacy check; • NCC collateral management system allows for registration of

	Q.5.6.2: How and to what extent does the FMI track the reuse of collateral and its rights to the collateral provided?	house and client collateral accounts (omnibus and individual); • The same accounts at which collateral is posted are used for deliveries, which provides extra operational flexibility for CMs; • NCC's collateral management system design provides possibility for intraday collateral withdrawal, pledging, transfer between different accounts, substitution and liquidation (all executed after collateral adequacy check). A.5.6.2: CM may use the collateral accounts only to ensure the performance of transactions with NCC, and the right to dispose the collateral in case of CM's failure to meet its obligations to NCC is stipulated in Clearing Law and in Clearing Rules. Any reuse of the securities provided by CMs as collateral by NCC is impossible. At the same time, NCC is entitled to use the funds provided by CMs in its interests.
	Operational flexibility Q.5.6.3: How and to what extent does the FMI's collateral management system accommodate changes in the ongoing monitoring and management of collateral? Q.5.6.4: To what extent is the collateral management system staffed to ensure smooth operations even during times of market stress?	A.5.6.3: Collateral management system is operationally flexible and allows adopting changes in market conditions or in CMs' positions immediately. If the estimated value of a certain asset accepted as collateral changes significantly, the collateral management system allows adopting new parameters on intraday basis; the new haircuts can be activated immediately if necessary. Collateral adequacy check is performed by means of current positions and active orders (full pre-order validation is performed at all markets), all positions changes are taken into account immediately. A.5.6.4: The team of experts manages and controls the collateral valuation process and monitors collateral adequacy and concentrations in CMs' portfolios. The responsibilities of all parties involved in the collateral valuation and monitoring processes are described in the internal procedures.
Final conclusion on the Principle 5	NCC accepts the assets as collateral which meet certain requirements to liquidity, market risk and credit risk. Collateral values are recalculated (marked-to-market) at least on a daily basis and conservative haircuts are applied in order to take into account market and liquidity risks. The procedure for calculating haircuts follow the same risk management principles applied in the definition of initial margin values. Collateral management system is flexible enough to cover a wide range of situations.	

Assessment of the Principle 5	Observed
Recommendations and comments	-

Principle 6: Margin A CCP should cover its credit exposures to its participants for all products through an effective margin system that is risk-based and regularly reviewed.		
Key consideration 1: A CCP should have a margin system that establishes margin levels commensurate with the risks and particular attributes of each product, portfolio, and market it serves.	*Description of margin methodology* Q.6.1.1: What is the general framework of the CCP's margin system, particularly with respect to current and potential future exposures? If the CCP does not use a margining system, what risk management measures does it take to mitigate its risks? To what extent do these measures deliver equivalent outcomes?	A.6.1.1: NCC's initial margin calculation uses scenario analysis to determine potential losses of NCC in case a CM undergoes default management procedure. The size of initial margin is determined as the maximum loss among all the adopted scenarios.
	Q.6.1.2: Is the margin methodology documented?	A.6.1.2: Presently, NCC has documented the margin methodology (http://moex.com/s1682, http://moex.com/s1670, http://moex.com/s1694, http://moex.com/s1703). The procedure for scenarios' calculation (other risk parameters' calculation) used to determine the collateral requirements is documented as well.
	Q.6.1.3: To what extent is the detail of the CCP's margin methodology made available to participants for use in their individual risk management efforts?	A.6.1.3: To make margin methodology transparent and replicable for CMs NCC discloses Clearing Rules and main methodological documents, a number of materials and services including detailed descriptions of margining procedures, current and historical risk parameters, algorithm principles, examples and prototypes on its website.. Using disclosed information CMs and their clients can simulate margin requirements. The scope of disclosure allows CMs to understand the principles used in NCC margin methodology and use it in their individual risk models (for spot markets the scope of application allows to fully replicate the margin model).

	Credit exposures Q.6.1.4: What are the determinants of the credit exposures of the CCP, with respect to the attributes of each product, portfolio and market it serves? Q.6.1.5: To what extent are the CCP's margin requirements commensurate with the risks and particular attributes of each product, portfolio and market it serves?	A.6.1.4: The determinants of the credit exposures include delivery of assets and cash in spot (FX and securities) and repo markets, and variation margin delivery in Derivatives and Standardized OTC Derivatives markets. A.6.1.5: The margin requirements take into account the specifics of price volatility, liquidity and the structure of each serviced product and measure potential losses due to the determinants of the credit exposure events.
	Operational components Q.6.1.6: How does the CCP address the risk of a participant payment failure that would cause a shortage of required margin to the participant's position? Q.6.1.7: How does the CCP enforce timelines for margin collections and payments? If the CCP has participants from different time zones, how does the CCP address issues posed by differences in local funding markets and operating hours of relevant payment and settlement systems?	A.6.1.6. All transactions cleared by NCC are subject to pre-order validation, which means that they are all checked against collateral using NCC margin model before they are accepted by trading system, as a result, shortage of required margin to the CM's position cannot occur from new transactions. Margin shortage may only occur from to mark-to-market and changes in risk parameters. If the CM has the margin shortage, NCC: • Prohibits the CM to increase positions (only transactions reducing margin requirement are allowed until the margin shortage is closed); • Issues a margin call to the CM at the clearing session. A.6.1.7. All the actions performed by NCC and CMs, as well as NCC's interaction with the settlement organizations and settlement depositories, are taken in accordance with the timeline set by Clearing Rules. The settlement time is determined taking into account the possibility for performance of payments by the settlement bank, given its location. NCC enforces timelines for margin collection and payments by declaring a CM's default if they fail to fulfill their margin call and closing out the positions of such CM.
Key consideration 2: A CCP should have a reliable source of timely price data for its margin system. A CCP should	*Sources of price data* Q.6.2.1: What are the sources of price data for the CCP's margin model? What data does the CCP use to determine initial margin?	A.6.2.1: The major source of price data is the current information about the orders and trades of CMs in relevant instruments in the markets of Moscow Exchange. Moreover, as an alternative and for quality control purposes, NCC uses current information delivered by

also have procedures and sound valuation models for addressing circumstances in which pricing data are not readily available or reliable.	Q.6.2.2: How does the CCP determine that the price data it uses for its margin system is timely and reliable, including prices provided by a third party where relevant?	other market information providers. A.6.2.2: The pricing data for NCC's margining model is taken from NCC's proprietary data base and reflects the trading activity recorded on Moscow Exchange. Furthermore, OTC quotes are used from market information providers. Only relevant up-to-date pricing data is used. This is achieved by applying restricted time window for the price data. Reliability of data is achieved by expert opinion. The methodology disclosed at NCC's website describes the criteria used to decide whether the data is reliable and current, as well as their hierarchy in determining NCC's settlement prices.
	Estimation of prices Q.6.2.3: When prices are not readily available or reliable, how does the CCP estimate prices to calculate margin requirements? Q.6.2.4: How does the CCP validate models used to estimate prices or margin requirements when price data are not readily available or reliable? How does the FMI ensure the independence of the validation process?	A.6.2.3: In these cases, NCC uses theoretical prices determined by means of internal models. A.6.2.4: The standard method of evaluation for such models is the out-of-sample test, when the quality is assessed on the basis of reliable information on liquid instruments, which is also excluded from the model's input data. Model validation is performed by risk management. The independent assessment of pricing models is also performed via discussing the pricing methodology with CMs.
Key consideration 3: A CCP should adopt initial margin models and parameters that are risk-based and generate margin requirements sufficient to cover its potential future exposure to participants in the interval between the last margin collection and the close out of positions following a participant default. Initial margin should meet an established single-tailed confidence level of at least 99 percent with respect to the	*Initial margin model* Q.6.3.1: What is the design of the CCP's initial margin model? Describe the model in detail, including the method used to determine potential future exposure. What is the level of coverage of the initial margin model? Q.6.3.2: What are the assumptions of the	A.6.3.1: The major approach this model uses is the search for the worst scenario. The initial margin model takes into account the specifics of instruments and, therefore, it is used with small variations aiming to adapt to the specifics of each instrument. In the FX, securities and money markets, due to linearity of instruments relative to the risk factors, a simplified approach is used, which features two scenarios for each underlying risk factor (up and down), also taking into account the size of the position, by means of concentration limits. The approach used in the Derivatives market is chosen subject to possible inclusion of non-linear instruments in the position, and, therefore, the set of spot risk scenarios expands to 23, and the scenarios of possible alteration of implied volatility are considered. A.6.3.2: The margin model assumptions are the following:

estimated distribution of future exposure. For a CCP that calculates margin at the portfolio level, this requirement applies to each portfolio's distribution of future exposure. For a CCP that calculates margin at more-granular levels, such as at the subportfolio level or by product, the requirement must be met for the corresponding distributions of future exposure. The model should (a) use a conservative estimate of the time horizons for the effective hedging or close out of the particular types of products cleared by the CCP (including in stressed market conditions), (b) have an appropriate method for measuring credit exposure that accounts for relevant product risk factors and portfolio effects across products, and (c) to the extent practicable and prudent, limit the need for destabilising, procyclical changes.	margin model? Q.6.3.3: How does the CCP estimate the key parameters and inputs of the margin model (such as the liquidation horizon and confidence interval)?	• The potential future exposures arise from possible price fluctuations resulting in revaluation of CMs positions. • Losses resulting from price fluctuations during the liquidation period in case of a CM's default should be covered by initial margin as the first level of protection in normal market conditions. • The margin requirement is calculated at portfolio level, nevertheless, NCC includes only those portfolio effects in the margin model that are fundamentally justified and validated (see A.6.5.1-6.5.2 for further information). A.6.3.3: The standard liquidation horizon used in the model equals 2 days (vs. 3 days for the Standardized OTC Derivatives market). Besides, the model was supplemented with liquidity allowance, which takes into account the possibility of price effects in case of liquidation, when the position size exceeds the market average. The standard required confidence probability is at least 99%.
	Closeout and sample periods Q.6.3.4: How does the CCP determine an appropriate closeout period for each product? In particular, how does the CCP account for potentially increased liquidation times during stressed market conditions? What factors are considered in this analysis (for example, market liquidity, impact of a participant's default on prevailing market conditions, adverse effects of position concentration, and the CCP's hedging capability)? Q.6.3.5: How does the CCP determine an appropriate sample period for historical data used in the margin model? What factors are considered (for example, reflection of new, current or past volatilities, or use of simulated data for new products without much history)?	A.6.3.4: When determining closeout period for each CCP product, NCC takes into account the product's current liquidity status (trading volumes, etc.), the possible liquidity outflow from a specific product, and also considers the entire range of possible hedging instruments in general. On spot markets, where liquidity is deemed more vulnerable to liquidation of large positions, NCC also uses initial margin add-ons for positions in each product exceeding the concentration limits. The limits and add-ons are determined based on the assumption of gradual close-out carried out during extended period to avoid drastic change in the asset's price limit.

	Q.6.3.6: How does the CCP consider the trade-off between prompt liquidation and adverse price effects?	A.6.3.5: When determining the risk parameters, NCC uses the data including stress periods (for the last 10 years), taking into account the qualitative features such as relevance of the data used in terms of the changed macroeconomic structure and relevance of the instrument-specific risk factors effective during the available time period. Besides historical data, NCC also uses forward-looking scenarios relevant for current economic conditions for initial margin rates calculation. A.6.3.6: Depending on the liquidity structure of portfolio instruments and the hedging effect inside the defaulter's portfolio, NCC chooses an optimal position liquidation strategy in terms of loss minimization.
	Procyclicality and specific wrong-way risk Q.6.3.7: How does the CCP address procyclicality in the margin methodology? In particular, does the CCP adopt margin requirements that, to the extent practical and prudent, limit the need for destabilising procyclical changes? Q.6.3.8: How does the CCP identify and mitigate specific wrong-way risk?	A.6.3.7: In order to address possible procyclicality in the margin model, when setting initial margin rates NCC: • Includes periods of high volatility in historical observations used for initial margin rates calculation; • Considers not only volatility measures calculated based on historical data, but also ad-hoc scenarios relevant to current economic situation to get forward-looking initial margin rates. A.6.3.8: NCC identifies specific wrong-way risk only from accepting securities issued by a CM or its affiliated parties as collateral. NCC does not accept securities issued by the CM or its related parties as collateral and does not clear jump-to-default products (CDS etc.). NCC also poses collateral concentration limits.
Key consideration 4: A CCP should mark participant positions to market and collect variation margin at least daily to limit the build-up of current exposures. A CCP should have the authority and operational capacity to make intraday margin calls and payments, both scheduled and unscheduled, to participants.	Q.6.4.1: What is the design of the CCP's variation margin model? Describe the model in detail, including the method used to measure current exposure, frequency of mark-to-market and schedule of margin collection, and intraday margin call capabilities.	A.6.4.1: NCC carries out pre-order validation of all transactions, thus no margin shortfalls may arise due to trading activity of CMs. The variation margin model and relevant calculations are described in the relevant Clearing Rules. In the FX and Securities markets, as well as in the Standardised OTC Derivatives market, margin calls are issued once a day during the clearing session. In the FX and Securities markets, the clearing session is held in the morning before opening, and margin calls shall be paid not later than at 17:30 on the day when the margin call was issued. In the Standardised OTC Derivatives market, the clearing session is held at 17:00, and margin calls shall be paid within one

<table>
<tr>
<td></td>
<td>Q.6.4.2: Does the CCP have the authority and operational capacity to make and complete intraday margin calls for initial and variation margin?</td>
<td>business day.
In the Derivatives market, variation margin calls are issued twice a day during the intraday or evening clearing session, and must be paid not later than 45 minutes prior to the start of the next clearing session.
<table>
<tr><td>Market</td><td>Frequency</td><td>Clearing session, during which the margin call is issued, Moscow time</td><td>Margin call payment deadline</td></tr>
<tr><td>FX</td><td>once a day</td><td>9:30a.m. – 10:00 a.m.</td><td>05:30 p.m.</td></tr>
<tr><td>Securities</td><td>once a day</td><td>9:45 a.m. – 10:00 a.m.</td><td>05:30 p.m.</td></tr>
<tr><td>Derivatives</td><td>twice a day</td><td>02:00 p.m.-02:03 p.m.
06:45 p.m.-07:00 p.m.</td><td>45 min. prior to the start of the next session</td></tr>
<tr><td>Standardised OTC Derivatives</td><td>once a day</td><td>05:00 p.m.</td><td>Within one business day</td></tr>
</table>
Clearing Rules do not stipulate sending intraday variation margin calls, however the pre-order validation procedure can be considered as a substitute for intraday variation margin calls: in case of a sharp market move, NCC can increase initial margin rates intraday, and CMs with margin shortage are banned from increasing their positions until their collateral is sufficient to meet the margin requirements.

A.6.4.2: Full pre-order validation procedures together with the ability to change initial margin requirements intraday essentially reduces the necessity of intraday variation margin calls.</td>
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<tr>
<td>Key consideration 5: In calculating margin requirements, a CCP may</td>
<td>Portfolio margining
Q.6.5.1: Does the CCP allow offsets or reductions in required margin across products</td>
<td>A.6.5.1: NCC does allow margin offsets in case of opposite positions in the instruments with identical underlying assets if there is a gap between the settlement dates. NCC controls reliability of the portfolio</td>
</tr>
</table>

allow offsets or reductions in required margin across products that it clears or between products that it and another CCP clear, if the risk of one product is significantly and reliably correlated with the risk of the other product. Where two or more CCPs are authorised to offer cross-margining, they must have appropriate safeguards and harmonised overall risk-management systems.	that it clears or between products that it or another CCP clear? If so, is the risk of one product significantly and reliably correlated with the risk of the other product? How does the CCP offset or reduce required margin? Q.6.5.2: How does the CCP identify and measure its potential future exposure at the product and portfolio level? How does the CCP's portfolio margining methodology account for offsets or reductions in required margin across products that it clears?	effect by adhering to conservative approach of providing offsets only for portfolios with opposite positions in instruments with identical underlying assets, i.e. no offsets are allowed between products without fundamentally related underlying assets, even if they show strong correlation according to historical data. The amount of the margin offset provided by NCC to the CM could vary from 50% (for calendar spreads on Derivatives market) to full offset with an add-on depending on the maturity gap (for spot markets because of shorter maturity gaps). A.6.5.2: To measure its potential future exposure on the product and portfolio level NCC uses a worst case scenario algorithm that is applied online to every CMs portfolio. First all CMs positions are grouped in sub-portfolios based on underlying assets/risk-factors. After that for each instrument in each sub-portfolio possible P&Ls are calculated applying pre-defined joint margin scenarios. At last the margining algorithm calculates worst case scenarios for each sub-portfolio regarding possible future joint market movements in the prices of instruments from different sub-portfolios.
	Cross-margining Q.6.5.3: In the case of cross-margining between two or more CCPs, how have the CCPs harmonised their approaches to risk management? What legal and operational arrangements govern the cross-margining arrangements?	Not applicable
	Robustness of methodologies Q.6.5.4: How does the CCP confirm the robustness of its portfolio and cross-margining methodologies? How does the CCP's methodology account for the degree of price dependency, and its stability in stressed	A.6.5.4: In respect of the real and simulated portfolios, NCC applies the procedures similar to the methodology reliability check for instrument margin.

	market conditions?	
Key consideration 6: A CCP should analyse and monitor its model performance and overall margin coverage by conducting rigorous daily backtesting – and at least monthly, and more-frequent where appropriate, sensitivity analysis. A CCP should regularly conduct an assessment of the theoretical and empirical properties of its margin model for all products it clears. In conducting sensitivity analysis of the model's coverage, a CCP should take into account a wide range of parameters and assumptions that reflect possible market conditions, including the most-volatile periods that have been experienced by the markets it serves and extreme changes in the correlations between prices.	*Backtesting and sensitivity analysis* Q.6.6.1: Describe in detail the backtesting methodologies and model performance, including both target confidence level and the result of overall margin coverage. How does such testing address portfolio effects within and across asset classes within the CCP and cross-margining programmes with other CCPs? How frequently is the backtesting conducted? Q.6.6.2: Describe in detail the sensitivity analysis of model performance and overall coverage of the CCP's initial margin methodology. Does the analysis cover a wide range of parameters, assumptions, historical and hypothetical market conditions, and participant positions, including stressed conditions? How frequently is the analysis conducted?	A.6.6.1. Initial margin rates are back tested on a daily basis when determining the risk parameters based on the frequency of initial margin shortfalls. For the purpose of regulatory back testing the frequency and size of initial margin rates shortfalls are also tested. Regulatory back testing includes the most stressed time period within the last 10 years and is performed on the instrument-level basis at least monthly. Back testing results are considered satisfying if for all the instruments the historical frequency of initial margin rate breaches is less than 1%, and the size of breach is not more than 60% (related to initial margin rate). Considering portfolio effects are taken into account for IM calculation only for instruments with the same underlying assets, back testing of individual components gives a high level of assurance for portfolio effects. A.6.6.2 Sensitivity analysis are included in reverse stress testing framework. Reverse stress testing is done once a month. NCC calculates the indicators of the CCP's capital sensitivity (risk protection level) to parameters' changes, and checks compliance with the confidence probability limits (at least 99%).
	Margin model performance Q.6.6.3: What are the identified potential shortcomings of the margin model based on backtesting and sensitivity analysis? Q.6.6.4: What actions would the CCP take if	A.6.6.3: Due to the simplicity of the margin model in regards with portfolio margining, its potential shortcomings are overestimation of the risks of decorrelation of instruments for one underlying asset (for Derivatives market) and the impossibility of "covered sales" registration (for Derivatives market). A.6.6.4: Despite the fact that NCC has never faced the situation, the procedure includes identifying whether it is a technological or methodological problem. In case of technological problem the

	the model did not perform as expected? Q.6.6.5: How does the CCP disclose the results of its backtesting and sensitivity analysis?	deficiencies will be promptly tackled. In case of methodological problem the methodology will be reviewed and subject to approval by the Risk Management Committee of the Supervisory Board. A.6.6.5: NCC informs its Management Board, Supervisory Board and CBR about stress tests and back tests results at least on a quarterly basis.
Key consideration 7: A CCP should regularly review and validate its margin system.	Q.6.7.1: How does the CCP regularly review and validate its margin system including its theoretical and empirical properties? How frequently is this done? Q.6.7.2: How does the CCP incorporate material revisions and adjustments of the margin methodology, including parameters, into its governance arrangements? Q.6.7.3: How and to whom does the CCP disclose both the method and the results of this review and validation?	A.6.7.1: NCC's Risk Department performs back testing and validation of the model parameters on a monthly basis. A.6.7.2: NCC's Risk Department submits for review the results of the model quality assessment and any change suggestions to NCC's internal management bodies (including the Risk Committee and the Management Board), the results are also submitted to the User's Committees for discussion purposes. A.6.7.3: NCC discloses the information to its Management Board, Supervisory Board and CBR in accordance with the regulations established by CBR's regulatory acts.
Final conclusion on the Principle 6	NCC covers its exposures to CMs with sufficient degree of probability by means of the margin system (individual clearing collateral and other collateral contemplated by the relevant Clearing Rules). NCC provides its coverage of potential exposures to CMs' positions with the confidence probability of at least 99%. The collateral is marked-to-market once a day, and if the collateral is insufficient, the CMs receive margin calls. Although there are no intraday variation margin calls, NCC can increase initial margin requirement intraday, which together with full pre-order validation gives the instrument for keeping under control CMs' risks. In order to check the quality of margin models, these models are subject to validation, including back testing, and the results of such back testing are submitted to CBR. Model validation is an independent process.	
Assessment of the Principle 6	**Observed**	
Recommendations and comments	-	
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.		
Key consideration 1: An FMI should have a robust framework to manage its liquidity risks from its participants, settlement banks, nostro agents, custodian banks, liquidity providers, and other entities.	Q.7.1.1: What is the FMI's framework for managing its liquidity risks, in all relevant currencies, from its participants, settlement banks, nostro agents, custodian banks, liquidity providers and other entities? Q.7.1.2: What are the nature and size of the FMI's liquidity needs, and the associated sources of liquidity risks, that arise in the FMI in all relevant currencies? Q.7.1.3: How does the FMI take into account the potential aggregate liquidity risk presented	A.7.1.1: NCC's liquidity management framework comprises the following elements: • distribution of roles and responsibilities concerning liquidity management; • procedures for managing and supervising NCC's liquidity status; • information system for collection and analysis of NCC's liquidity data; • a set of methodologies, statutory ratios and action plans aimed at ensuring efficient management and control of liquidity status; • internal management accounting to support the decision-making on efficient management and control of liquidity status. NCC's liquidity management procedures cover various forms (emergence factors) of the liquidity risk: • operating liquidity risk arising cause of NCC's inability to timely meet its current obligations due to the existing structure of current cash credits and debits – operating analysis and control of liquidity; • risk of mismatch between the amounts and dates of repayment of claims and obligations – analysis and assessment of prospective liquidity (GAP analysis); • risk of unforeseen claims on liquidity, i.e. the consequences of the risk that unforeseen future events may claim more resources than allocated for this purpose, - stress testing. A.7.1.2: The nature of NCC's liquidity needs is settlement and collateral withdraws by CMs. The size accounts for funds required to settle transactions and potential collateral withdraws. The most relevant currencies subject to liquidity needs are RUB, USD, and EUR. A.7.1.3. Liquidity risk posed by an individual entity or group of related entities playing multiple roles with respect to NCC is mostly limited to

	by an individual entity and its affiliates that may play multiples roles with respect to the FMI?	their individual roles as CMs or liquidity providers, basically because NCC doesn't consider CMs as reliable liquidity providers in case of CM's default.
Key consideration 2: An FMI should have effective operational and analytical tools to identify, measure, and monitor its settlement and funding flows on an ongoing and timely basis, including its use of intraday liquidity.	Q.7.2.1: What operational and analytical tools does the FMI have to identify, measure and monitor settlement and funding flows? Q.7.2.2: How does the FMI use those tools to identify, measure and monitor its settlement and funding flows on an ongoing and timely basis, including its use of intraday liquidity?	A.7.2.1, A.7.2.2: The settlement and financial cash flows are monitored using the on-line data from clearing systems, settlement and treasury liquidity management systems. The analytical tools for measuring and monitoring liquidity are GAP analysis and the statistical analysis of settlement and funding flows using the methodology similar to value-at-risk.
Key consideration 3: A payment system or SSS, including one employing a DNS mechanism, should maintain sufficient liquid resources in all relevant currencies to effect same-day settlement, and where appropriate intraday or 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 payment obligation in extreme but plausible market conditions.	Q.7.3.1: How does the payment system or SSS determine the amount of liquid resources in all relevant currencies to effect same day settlement and, where appropriate, intraday or multiday settlement of payment obligations? What potential stress scenarios (including, but not limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation in extreme but plausible market conditions) does the payment system or SSS use to make this determination? Q.7.3.2: What is the estimated size of the liquidity shortfall in each currency that the payment system or SSS would need to cover?	A.7.3.1 – A.7.3.2: Not applicable
Key consideration 4: A CCP should maintain sufficient liquid resources in all relevant	*Sufficient liquid resources* Q.7.4.1: How does the CCP determine the amount of liquid resources in all relevant	A.7.4.1: The liquid funds are the assets formed of the clearing collateral and NCC's own funds, and the agreements on liquidity provision to NCC, whereunder these resources may be used to

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currencies to settle securities-related payments, make required variation margin payments, and meet other payment obligations on time 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 payment obligation to the CCP in extreme but plausible market conditions. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should consider maintaining additional liquidity resources sufficient to cover a wider range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would generate the largest aggregate payment obligation to the CCP in extreme but plausible market conditions.	currencies to settle securities-related payments, make required variation margin payments and meet other payment obligations on time? What potential stress scenarios (including, but not limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation in extreme but plausible market conditions) does the CCP use to make this determination? Q.7.4.2: What is the estimated size of the liquidity shortfall in each currency that would need to be covered, following the default of the participant and its affiliates that would generate the largest aggregate payment obligation to the CCP in extreme but plausible market conditions? How frequently does the CCP estimate this?	perform NCC's obligations, including obligations to CMs. The sufficiency of liquid funds to perform NCC's obligations in full as they mature (liquidity stress testing) is determined by liquidity ratios. Liquid resources sufficiency = GAP - liquidity gap between maturities in different currencies / Liabilities) where: - GAP is the liquidity gap (difference between NCC's claims and liabilities, including the refinancing sources) calculated on accrual basis with a breakdown by maturities of assets and liabilities in case of the stress testing scenario realization; - NCC's liabilities include the clients' call deposits, clients' term deposits, term deposits of the companies-members of Moscow Exchange, and NCC's own funds (capital). To generate the stress testing scenarios for the liquid resources the outflow of individual clearing collateral resources is modelled: - outflow of individual clearing collateral resources for the three largest balances of CMs; - outflow of up to 100% of the individual clearing collateral resources, calculated in accordance with the Methodological Recommendations for Liquidity Analysis of NCC; A.7.4.2: Given the use of the liquidity stress testing parameters, there is no liquidity gaps. Reverse liquidity stress-testing shows that liquidity ratios for the scope of currencies become negative at the modeled outflow of 90% of client funds within 2 days and 100% within 180 days. The liquidity stress inputs are calculated on a weekly basis.
	Risk profile and systemic importance in multiple jurisdictions Q.7.4.3: Do any of the CCP's activities have a more complex risk profile (such as clearing financial instruments that are characterised by	A.7.4.3: Not applicable.

<table>
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<td></td>
<td>discrete jump-to-default price changes or that are highly correlated with potential participant defaults)? Is the CCP systemically important in multiple jurisdictions?

Q.7.4.4: If the CCP is involved in activities with a more complex risk profile or is systemically important in multiple jurisdictions, has the CCP considered maintaining additional resources sufficient to cover a wider range of stress scenarios that would include the default of the two participants and their affiliates that would generate the largest aggregate payment obligation to the CCP in extreme but plausible market conditions?</td>
<td>A.7.4.4. Not applicable.</td>
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<td>Key consideration 5: For the purpose of meeting its minimum liquid resource requirement, an FMI's qualifying liquid resources in each currency include cash at the central bank of issue and at creditworthy commercial banks, committed lines of credit, committed foreign exchange swaps, and committed repos, as well as highly marketable collateral held in custody and investments that are readily available and convertible into cash with prearranged and highly reliable funding arrangements, even in extreme but plausible market conditions. If an FMI has access to routine credit at the</td>
<td>Size and composition of qualifying liquid resources
Q.7.5.1: What is the size and composition of the FMI's qualifying liquid resources in each currency that is held by the FMI? In what manner and within what time frame can these liquid resources be made available to the FMI?
Availability and coverage of qualifying liquid resources

Q.7.5.2: What prearranged funding arrangements has the FMI established to convert its readily available collateral and investments into cash? How has the FMI established that these arrangements would be highly reliable in extreme but plausible market conditions? Has the FMI identified any potential barriers to accessing its liquid resources?

Q.7.5.3: If the FMI has access to routine</td>
<td>A.7.5.1, A.7.5.2, A.7.5.3: The main sources of liquid assets for NCC are:
- cash of CMs deposited as collateral;
- cash comprising the Guarantee funds;
- NCC's own funds.
To form the reserve of liquid assets, NCC maintains a sufficient amount of funds at clearing accounts with NSD, correspondent accounts at CBR and reliable correspondent banks, in order to ensure timely settlement. As of October 9th, 2015 the volume of funds on the correspondent and clearing accounts equaled 690.5 bn. RUB.
In addition, NCC has access to the following liquidity sources which may be used if necessary in the times of market stress.

<table>
<tr><th>Refinancing source</th><th>Availabilit y term</th><th>Volume</th><th>Comment</th></tr>
<tr><td>Overdraft with CBR</td><td>On demand</td><td>30.0 bn. RUB</td><td>Volume of collateral under the loans of CBR, subject to the adjustment factor</td></tr>
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<td>central bank of issue, the FMI may count such access as part of the minimum requirement to the extent it has collateral that is eligible for pledging to (or for conducting other appropriate forms of trades with) the relevant central bank. All such resources should be available when needed.</td>
<td>credit at the central bank of issue, what is the FMI’s relevant borrowing capacity for meeting its minimum liquid resource requirement in that currency?

Q.7.5.4: To what extent does the size and the availability of the FMI’s qualifying liquid resources cover its identified minimum liquidity resource requirement in each currency to effect settlement of payment obligations on time?</td>
<td>
<table>
<tr><td>Lombard loan of CBR/ REPO trade</td><td>1 to 7 days</td><td colspan="2">The volume of REPO trade with CBR is limited to NCC’s securities portfolio eligible for such trade.</td></tr>
<tr><td>SWAP with CBR</td><td>On demand</td><td>-</td><td>The features and volume are indicated in the agreement</td></tr>
<tr><td>Overdrafts with foreign banks</td><td>On demand</td><td>-</td><td>The features and volumes are subject to change</td></tr>
</table>

A.7.5.4: The size and availability of NCC’s liquid resources fully enable it to settle clearing obligations on time as indicated in A.7.1.3 and A.7.5.1-7.5.3.</td>
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<td rowspan="2">Key consideration 6: An FMI may supplement its qualifying liquid resources with other forms of liquid resources. If the FMI does so, then these liquid resources should be in the form of assets that are likely to be saleable or acceptable as collateral for lines of credit, swaps, or repos on an ad hoc basis following a default, even if this cannot reliably prearranged or guaranteed in extreme market conditions. Even if an FMI does not have access to routine central bank credit, it should still take account of what collateral is typically accepted by the relevant central bank, as such assets</td>
<td>Size and composition of supplemental liquid resources
Q.7.6.1: What is the size and composition of any supplemental liquid resources available to the FMI?</td>
<td>A.7.6.1: NCC may use investment securities portfolio as collateral to raise cash, should it not be used to obtain qualifying liquid resources.</td>
</tr>
<tr>
<td>Availability of supplemental liquid resources

Q.7.6.2: How and on what basis has the FMI determined that these assets are likely to be saleable or acceptable as collateral to obtain the relevant currency, even if this cannot be reliably prearranged or guaranteed in extreme market conditions?

Q.7.6.3: What proportion of these supplemental assets qualifies as potential collateral at the relevant central bank?

Q.7.6.4: In what circumstances would the FMI use its supplemental liquid resources in advance of, or in addition to, using its</td>
<td>A.7.6.2 – A.7.6.5: NCC forms investment portfolio of the securities included in the Lombard List of CBR only; therefore it provides some confidence in their liquidity. Even if this cannot be reliably prearranged or guaranteed in extreme market conditions, NCC expects that they are saleable (or acceptable as collateral not only by CBR, if this is needed).</td>
</tr>
</table>

may be more likely to be liquid in stressed circumstances. An FMI should not assume the availability of emergency central bank credit as a part of its liquidity plan.	qualifying liquid resources? Q.7.6.5: To what extent does the size and availability of the FMI's supplemental liquid resources, in conjunction with its qualifying liquid resources, cover the relevant liquidity needs identified through the FMI's stress test programme for determining the adequacy of its liquidity resources (see key consideration 9)?	
Key consideration 7: An FMI should obtain a high degree of confidence, through rigorous due diligence, that each provider of its minimum required qualifying liquid resources, whether a participant of the FMI or an external party, has sufficient information to understand and to manage its associated liquidity risks, and that it has the capacity to perform as required under its commitment. Where relevant to assessing a liquidity provider's performance reliability with respect to a particular currency, a liquidity provider's potential access to credit from the central bank of issue may be taken into account. An FMI should regularly test its procedures for accessing its liquid resources at a liquidity provider.	*Use of liquidity providers* Q.7.7.1: Does the FMI use a liquidity provider to meet its minimum required qualifying liquidity resources? Who are the FMI's liquidity providers? How and on what basis has the FMI determined that each of these liquidity providers has sufficient information to understand and to manage their associated liquidity risk in each relevant currency on an ongoing basis, including in stressed conditions?	A.7.7.1: NCC's liquidity facilities are indicated in A.7.5.1.
	Reliability of liquidity providers Q.7.7.2: How has the FMI determined that each of its liquidity providers has the capacity to perform on its commitment in each relevant currency on an ongoing basis? Q.7.7.3: How does the FMI take into account a liquidity provider's potential access to credit at the central bank of issue? Q.7.7.4: How does the FMI regularly test the timeliness and reliability of its procedures for accessing its liquid resources at a liquidity	A.7.7.2: The liquidity providers' financial conditions are assessed on a quarterly basis in accordance with the internal rating methodology, and their debt servicing quality. The overall volumes of claims and obligations to the liquidity providers are assessed daily. A.7.7.3: Within Russia CBR itself is deemed to be the most reliable liquidity provider for NCC, commercial banks can be accounted as potential liquidity providers only if they have access to refinancing in CBR as well. All foreign liquidity providers are either systemically important or at least investment-grade rated organizations. A.7.7.4: The counterparty assessment methodology is regularly tested and revised in case of any changes in market conditions and the composition of counterparties. The adequacy of the obtained assessment results is compared to the expert opinions at least once

	provider?	a year.
Key consideration 8: An FMI with access to central bank accounts, payment services, or securities services should use these services, where practical, to enhance its management of liquidity risk.	Q.7.8.1: To what extent does the FMI currently have, or is the FMI eligible to obtain, access to accounts, payment services and securities services at each relevant central bank that could be used to conduct its payments and settlements and to manage liquidity risks in each relevant currency? Q.7.8.2: To what extent does the FMI use each of these services at each relevant central bank to conduct its payments and settlements and to manage liquidity risks in each relevant currency? Q.7.8.3: If the FMI employs services other than those provided by the relevant central banks, to what extent has the FMI analysed the potential to enhance the management of liquidity risk by expanding its use of central bank services? Q.7.8.4: What, if any, practical or other considerations to expanding its use of relevant central bank services have been identified by the FMI?	A.7.8.1: NCC has access to the services of CBR in course of making payments and settlements in RUB, and it is qualified to obtain liquidity from CBR. A.7.8.2: NCC maintains the above arrangements in state of permanent readiness and uses those if necessary. A.7.8.3: The settlement banks are selected by their credit quality and operating potential to conduct payments and settlements in respective currency. The infrastructure of commercial banks is used in cases when the infrastructure of CBR and NSD cannot be used. In course of making payments and settlements in foreign currencies, NCC uses the services of foreign settlement banks (including relevant central banks), as well as the Russian settlement organizations, viz. NSD and commercial banks. A.7.8.4: Presently, NCC uses the entire range of services of CBR available to its instrumental.
Key consideration 9: An FMI should determine the amount and regularly test the sufficiency of its liquid resources through rigorous stress testing. An FMI should have clear procedures to	*Stress test programme* Q.7.9.1: How does the FMI use stress testing to determine the amount and test the sufficiency of its liquid resources in each currency? How frequently does the FMI stress-test its liquid resources?	A.7.9.1: NCC conducts the stress testing of its liquid resources on a monthly basis, using the scenarios described in the answers to the questions Q.7.1.1 to Q.7.1.3.

report the results of its stress tests to appropriate decision makers at the FMI and to use these results to evaluate the adequacy of and adjust its liquidity risk-management framework. In conducting stress testing, an FMI should consider a wide range of relevant scenarios. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions. Scenarios should also take into account the design and operation of the FMI, include all entities that might pose material liquidity risks to the FMI (such as settlement banks, nostro agents, custodian banks, liquidity providers, and linked FMIs), and where appropriate, cover a multiday period. In all cases, an FMI should document its supporting rationale for, and should have appropriate governance arrangements	Q.7.9.2: What is the process for reporting on an ongoing basis the results of the FMI's liquidity stress tests to appropriate decision-makers at the FMI, for the purpose of supporting their timely evaluation and adjustment of the size and composition of the FMI's liquidity resources and liquidity risk management framework?	A.7.9.2: The management reporting on stress testing of liquid resources, which is included in the comprehensive report on the results of stress testing of NCC's financial stability as of the reporting dates, is submitted for approval to the Management Board of NCC. The data contained in the management reporting on stress testing are provided to the Supervisory Board of NCC.
	Stress test scenarios Q.7.9.3: What scenarios are used in the stress tests, and to what extent do they take into account a combination of peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions? Q.7.9.4: To what extent do the scenarios and stress tests take into account the FMI's particular payment and settlement structure (for example, real-time gross or deferred net; with or without a settlement guarantee; DVP model 1, 2 or 3 for SSSs), and the liquidity risk that is borne directly by the FMI, by its participants, or both? Q.7.9.5: To what extent do the scenarios and stress tests take into account the nature and size of the liquidity needs, and the associated sources of liquidity risks, that arise in the FMI to settle its payment obligations on time, including the potential that individual entities and their affiliates may play multiples roles	A.7.9.3, 7.9.4, 7.9.5: Liquidity stress testing is performed in accordance with the framework of stress-testing procedure. The stress scenarios are generated using the changes in risk factors related to basic market indicators, such as: • Change of RUB rate against the basket of USD and EUR currencies; • Moscow Exchange Index; • Interest rates; • Index volatility. The use of a DvP settlement model and the possibility to net the defaulters positions are incorporated in the loss calculation model defined by the stress-testing procedure. The withdrawal of funds caused by NCC's need to fulfil its obligations to CMs in case of CMs default is modeled by means of an indicator similar to VaR with the confidence level of 99.99%.

relating to, the amount and form of total liquid resources it maintains.	with respect to the FMI?	
	Review and validation Q.7.9.6: How frequently does the FMI assess the effectiveness and appropriateness of stress test assumptions and parameters? How does the FMI's stress test programme take into account various conditions, such as a sudden and significant increase in position and price volatility, position concentration, change in market liquidity, and model risk including shift of parameters? Q.7.9.7: How does the FMI validate its risk management model? How frequently does it perform this validation? Q.7.9.8: Where and to what extent does the FMI document its supporting rationale for, and its governance arrangements relating to, the amount and form of its total liquid resources?	A.7.9.6: The historical and hypothetical scenarios used are revised at least once a month, and the Methodology – once a year. Furthermore, the scenarios may be revised upon the initiative of the risk management unit if necessary (for example, if market conditions have changed). A.7.9.7: The risk management model is validated via back testing and independent assessment at least annually. A.7.9.8: NCC has adopted out two documents regulating the procedure of liquidity calculation: the regulation on the stress testing procedure and the liquidity analysis methodology.
Key consideration 10: An FMI should establish explicit rules and procedures that enable the FMI to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen and potentially uncovered liquidity shortfalls and should aim to avoid unwinding,	*Same day settlement* Q.7.10.1: How do the FMI's rules and procedures enable it to settle payment obligations on time following any individual or combined default among its participants?	A.7.10.1: To enable NCC to fulfil trade obligations, NCC's rules and procedures contemplate the provision of collateral available for settlements by CM (clause 2.4 of Clearing Rules for Standardised OTC Derivatives market). The collateral provided by CMs is deposited on NCC's clearing accounts in the settlement organization (clause 2.5 of Clearing Rules) and is recorded by NCC for the respective CMs in the clearing registers (clause 22.1 of Clearing Rules for Standardised OTC Derivatives market). The trade obligations (settlements) are performed during the clearing session by means of NCC changing the values of the clearing registers where the collateral posted by CMs is recorded (clause 29.10 of Clearing Rules in Standardised OTC Derivatives Market). If the size of the collateral provided by CM exceeds the required

revoking, or delaying the same-day settlement of payment obligations. These rules and procedures should also indicate the FMI's process to replenish any liquidity resources it may employ during a stress event, so that it can continue to operate in a safe and sound manner.		collateral value calculated by NCC for this particular CM, then such CM may remit the excess collateral from NCC's clearing account to its own account (clause 23 of Clearing Rules). NCC shall possess the required cash amount. If the collateral is insufficient to settle the trades executed by one or several CMs, NCC performs its obligations to those CMs who have performed their obligations to NCC, out of resources of the Guarantee fund and also using its own resources within the liability limit. The Guarantee fund is formed out of the contributions of all CMs (clause 25 of Clearing Rules). To prevent further default on trade obligations, NCC may apply to CM who fails to perform its obligations to NCC the procedure of trades termination (positions close-out) (clause 32 of Clearing Rules in Standardised OTC Derivatives Market). In the Securities market, NCC and the defaulting CM having total net obligations in cash/securities fully or partially uncovered by collateral, execute NCC's REPO trades and/or loan agreements. To perform obligations to the non-defaulting CM, NCC uses free own cash and/or own securities, and if these are insufficient, it executes the REPO trades and/or Loan Agreements with CMs. In the FX market and Precious metals market, in case of partial or full non-performance by CM of its total net obligations in relevant currency / relevant precious metal, the 2nd type additional session is held. During this session the buy and sell trades in foreign currency / precious metals, including swap trades, swap contracts and futures contracts are executed between the defaulting CM and NCC without submitting orders. To perform its obligations to the non-defaulting CM, NCC uses free own cash / precious metals, and if these are insufficient, it executes swap trades in the following sequence: with the authorized trading participants (except CBR), with CBR, and with the non-defaulting CMs. In the Derivatives market, if there is a margin call not paid by the defaulting CM, a mandatory positions' close-out is carried out for all sections of the positions register.
	Q.7.10.2: How do the FMI's rules and procedures address unforeseen and potentially uncovered liquidity shortfalls and	A.7.10.2. The procedure described in the A.7.10.1 rules out any risk

	avoid unwinding, revoking or delaying the same day settlement of payment obligations?	of potential liquidity shortfalls. Furthermore, NCC's liquidity management instruments and providers are mentioned in A.7.5.1 and A.7.7.3.
	Replenishment of liquidity resources Q.7.10.3: How do the FMI's rules and procedures allow for the replenishment of any liquidity resources employed during a stress event?	A.7.10.3. The replenishment of any liquidity resources employed during a stress event is incorporated in the default management process and described in clause 21 of Clearing Rules.
Final conclusion on the Principle 7	NCC has set up and operates a comprehensive framework for managing the liquidity risk arising in course of NCC's activities. The liquidity risk management framework identifies and analyzes various sources of liquidity risk (CMs, settlement organizations and liquidity providers), including the treasury's monitoring of intraday liquidity and maintaining its adequacy. In case of market stress NCC is able to promptly raise liquidity from CBR and top-tier foreign banks.	
Assessment of the Principle 7	**Observed**	
Recommendations and comments	**-**	

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.		
Key consideration 1: An FMI's rules and procedures should clearly define the point at which settlement is final.	*Point of settlement finality* Q.8.1.1: At what point is the settlement of a payment, transfer instruction or other obligation final, meaning irrevocable and unconditional? Is the point of settlement finality defined and documented? How and to whom is this information disclosed?	A.8.1.1: The settlement of payment, transfer instruction or other obligation is final at the moment when the funds are credited to the correspondent account of the settlement organization. The obligations admitted to clearing are deemed to be settled (discharged) from the moment when NCC changes the values of the clearing registers where the collateral provided by CM is recorded. This procedure is described in Clearing Rules disclosed at NCC's website. The information about the changes in the clearing registers is provided to CMs upon the results of the clearing session, in form of reports. In the Securities market, trade settlements are final after the change

		of values of the clearing registers where the collateral of CM for the amount of the performed total net obligation / net claim in cash is recorded, and after receipt of the report on the performance of transactions on the sections from the settlement depository. In the FX market, trade settlements are final after the change of values of the clearing registers where the collateral of CM for the amount of the performed total net obligation / net claim is recorded. In the FX market, the obligation of NCC to refund cash to CM is deemed to be performed after the settlement organization or the settlement bank where NCC opened its clearing bank account or correspondent account to record the collateral, writes off the cash from the relevant account of NCC. In the Precious metals market, trade settlements are final after the relevant precious metal is credited to the collateral account of CM. In the Derivatives market, variation margin settlements are final at the moment the cash collateral registers are changed. The moment of settlement finality is defined by Clearing Rules. Information about the timeline of trade settlements in the securities market is disclosed to CMs in the reports provided by NCC. In the Standardised OTC Derivatives market, trade obligations (settlements) are deemed to be performed at the moment during the clearing session when NCC changes the values of the clearing register where the collateral provided by CM is recorded.
	Q.8.1.2: How does the FMI's legal framework and rules, including the applicable insolvency law(s), acknowledge the discharge of a payment, transfer instruction or other obligation between the FMI and its participants, or between participants?	A.8.1.2. The procedure for the performance of clearing obligations is stipulated in NCC Clearing Rules indicating that the obligations included in the clearing pool are terminated in the clearing session. CM's payment obligations are offset against NCC's obligation to repay the individual clearing collateral. According to the Federal Law dated February 7th, 2011 No. 7-FZ "On Clearing and Clearing Activities", the invalidity of a treaty, the obligations under which were terminated as a result of netting, does not imply the invalidity of transactions made in the course of the netting and netting results.
	Q.8.1.3: How does the FMI demonstrate that there is a high degree of legal certainty that finality will be achieved in all relevant jurisdictions (for example, by obtaining a well reasoned legal opinion)?	A.8.1.3. Clearing Rules contain lucid and precise provisions regulating the procedure for performance of obligations by NCC and CMs. Clearing Rules are subject to mandatory legal examination, and

		are to be registered by CBR. The Clearing Agreements between CMs and NCC are concluded within the Russian jurisdiction, and the applicable law is the law of the Russian Federation. NCC does not provide clearing services in other jurisdictions. According to the Federal Law dated February 7th, 2011 No. 7-FZ "On Clearing and Clearing Activities", suspension of operations on the trading or clearing accounts are not allowed in respect of the property, which is necessary for the performance (termination) of obligations admitted for clearing. The rules established by this Article apply with respect to russian and foreign entities. However. NCC's accounts at foreign banks (settlement organizations) are beyond Russian jurisdiction, thus laws of the foreign state apply to these accounts if the agreement between NCC and the foreign bank does not indicate otherwise.
	Finality in the case of links Q.8.1.4: How does the FMI ensure settlement finality in the case of linkages with other FMIs? a) For an SSS, how is consistency of finality achieved between the SSS and, if relevant, the LVPS where the cash leg is settled? b) For a CCP for cash products, what is the relation between the finality of obligations in the CCP and the finality of the settlement of the CCP claims and obligations in other systems, depending on the rules of the relevant CSD/SSS and payment system?	A.8.1.4. The settlement depository and settlement organization furnish NCC with settlement reports. NCC obligations are discharged upon the discharge of obligations in the settlement depository and the settlement organization.
Key consideration 2: An FMI should complete final settlement no later than the end of the value date, and preferably intraday or in real time, to reduce settlement risk. An LVPS or SSS should consider adopting RTGS or	*Final settlement on the value date* Q.8.2.1: Is the FMI designed to complete final settlement on the value date (or same day settlement)? How does the FMI ensure that final settlement occurs no later than the end of the intended value date?	A.8.2.1. NCC's time regulations have been designed to ensure that settlements would be completed on the value date. In the Standardised OTC Derivatives market, the obligations with current maturity are fulfilled during the clearing session. The clearing sessions are held every business day (clause 26.1 of Clearing Rules). A.8.2.2. NCC has never experienced deferral of final settlement

multiple-batch processing during the settlement day.	Q.8.2.2: Has the FMI ever experienced deferral of final settlement to the next business day that was not contemplated by its rules, procedures or contracts? If so, under what circumstances? If deferral was a result of the FMI's actions, what steps have been taken to prevent a similar situation in the future?	which was not contemplated by NCC's rules. In any circumstances NCC conducts its best efforts to conduct timely settlements for non-defaulting CMs.
	Intraday or real-time final settlement Q.8.2.3: Does the FMI provide intraday or real-time final settlement? If so, how? How are participants informed of the final settlement?	A.8.2.3. In the FX market and Precious metals market, obligations can be fully or partially performed on an intraday basis. In the Securities market, obligations can be performed on an intraday basis upon consent of the counterparty, by executing intraday and due trades, or by submitting urgent settlement orders (to be fulfilled online). According to the time regulations, trade obligations are performed twice a day: during the trading and upon the results of the trading (for performance on an intraday basis). In the Derivatives market, there is an intraday clearing session to determine and perform obligations to pay variation margin (for performance on an intraday basis). NCC performs cash obligations in RUB by means of multivoyage payment processing system for the payments of CBR via Banking electronic immediate payments. In the Standardised OTC Derivatives market, the obligations with current maturity are fulfilled during the clearing session by means of changing the values of the clearing registers (clause 29.10 of Clearing Rules), i.e. on an intraday basis and in real-time mode. CMs are informed by means of reports upon conclusion of the clearing session (clause 38 of Clearing Rules).
	Q.8.2.4: If settlement occurs through multiple-batch processing, what is the frequency of the batches and within what time frame do they operate? What happens if a participant does	A.8.2.4. Early settlement in the securities market is conducted from 04:00 p.m. to 05:00 p.m., and the settlements upon the trading results are performed from 07:00 p.m. to 08:00 p.m. In Derivatives market, the intraday clearing session is held from 02:00 p.m. to 02:03 p.m., and the evening clearing session is held from

	not have enough funds or securities at the settlement time? Are trades entered in the next batch? If so, what is the status of those trades and when would they become final? Q.8.2.5: If settlement does not occur intraday or in real time, how has the LVPS or SSS considered the introduction of either of these modalities?	06:45 p.m. to 07:00 p.m. The completion of settlements occurs in accordance with A. 8.1.1. If CM has no sufficient funds at the moment of settlements, then the procedure follows the requirements of A. 7.10.1. The trades included in the settlements in any given clearing session, will not be included in the next clearing session. A.8.2.5. Settlements are performed in accordance with A. 8.2.3.
Key consideration 3: An FMI should clearly define the point after which unsettled payments, transfer instructions, or other obligations may not be revoked by a participant.	Q.8.3.1: How does the FMI define the point at which unsettled payments, transfer instructions or other obligations may not be revoked by a participant? How does the FMI prohibit the unilateral revocation of accepted and unsettled payments, transfer instructions or obligations after this time? Q.8.3.2: Under what circumstances can an instruction or obligation accepted by the system for settlement still be revoked (for example, queued obligations)? How can an unsettled payment or transfer instruction be revoked? Who can revoke unsettled payment or transfer instructions? Q.8.3.3: Under what conditions does the FMI allow exceptions and extensions to the revocation deadline? Q.8.3.4: Where does the FMI define this information? How and to whom is this information disclosed?	A.8.3.1 Transfer instructions cannot be revoked (except cash withdrawal orders in the FX market and Precious metals market). In the FX market and the Precious metals market, cash withdrawal orders cannot be revoked once it has been cancelled. Cash withdrawal orders may be sent during the day until the moment indicated in the timeframe. The accurate list of currencies and time of cash withdrawal orders are indicated in the Appendix to Clearing Rules. A.8.3.2. Cash withdrawal orders can be revoked by the sending CM within timeframe set in the FX and the Precious metals markets Clearing Rules. A.8.3.3. Extension is not allowed. A.8.3.4 The timelines for submission and fulfillment of instructions by CMs are determined by the time regulations which constitute an appendix to the respective Clearing Rules of NCC, made available at NCC's website.

Final conclusion on the Principle 8	NCC’s rules and procedures clearly define the moment of settlement finality, and this information is provided in the relevant Clearing Rules available to CMs. According to NCC’s rules and procedures, all the settlements are conducted at least daily, and CMs are provided with various options for intraday performance of obligations, depending on the market. NCC clearly defines the moment whereafter the unsettled transfer instructions are no longer revocable.	
Assessment of the Principle 8	**Observed**	
Recommendations and comments	-	
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.		
Key consideration 1: An FMI should conduct its money settlements in central bank money, where practical and available, to avoid credit and liquidity risks.	Q.9.1.1: How does the FMI conduct money settlements? If the FMI conducts settlement in multiple currencies, how does the FMI conduct money settlement in each currency? Q.9.1.2: If the FMI does not settle in central bank money, why is it not used?	A.9.1.1. - A.9.1.2. NCC does not conduct money settlements on its own. To conduct money settlements in RUB, it uses the payment system of CBR and the payment system of NSD, and in foreign currency – settlements through the correspondent accounts in foreign banks and the payment system of NSD.
Key consideration 2: If central bank money is not used, an FMI should conduct its money settlements using a settlement asset with little or no credit or liquidity risk.	Q.9.2.1: If central bank money is not used, how does the FMI assess the credit and liquidity risks of the settlement asset used for money settlement?	A.9.2.1: The main currencies used for settlement are fully convertible and liquid. For other currencies usually settlement banks are chosen in the country of origin. NCC assesses its credit exposure to settlement organizations (including central banks) via internal ratings and by setting international credit rating requirements for them. To mitigate risks, NCC sets credit risk and liquidity limits. NCC’s own cash can also be used to meet additional liquidity requirements for clearing and settlement, if required. All these measures ensure that risks arising from using commercial bank money are adequately mitigated. A.9.2.2: NCC selects its settlement banks using the criteria of operational reliability and ability to ensure settlements when needed, and on the basis of the counterparty’s credit quality analysis. For foreign settlement banks, for instance, one of the mandatory criteria of credit quality assessment is the investment-level international rating.

	Q.9.2.2: If the FMI settles in commercial bank money, how does the FMI select its settlement banks? What are the specific selection criteria the FMI uses?	The list of settlement banks is disclosed at NCC's website http://www.nkcbank.com/viewCatalog.do?menuKey=42
Key consideration 3: If an FMI settles in commercial bank money, it should monitor, manage, and limit its credit and liquidity risks arising from the commercial settlement banks. In particular, an FMI should establish and monitor adherence to strict criteria for its settlement banks that take account of, among other things, their regulation and supervision, creditworthiness, capitalisation, access to liquidity, and operational reliability. An FMI should also monitor and manage the concentration of credit and liquidity exposures to its commercial settlement banks.	Q.9.3.1: How does the FMI monitor the settlement banks' adherence to criteria it uses for selection? For example, how does the FMI evaluate the banks' regulation, supervision, creditworthiness, capitalisation, access to liquidity and operational reliability? Q.9.3.2: How does the FMI monitor, manage and limit its credit and liquidity risks arising from the commercial settlement banks? How does the FMI monitor and manage the concentration of credit and liquidity exposures to these banks?	A.9.3.1: Counterparties are assessed at least on a quarterly basis, and resident banks are assessed monthly. Assessment is conducted in accordance with the requirements of the internal rating methodology, and on the basis of the performance of obligations to the companies of Moscow Exchange estimate. A.9.3.2: Credit risks are measured and monitored at least once per quarter, based upon the data in the financial statements. Furthermore, the financial indicators of CMs are monitored monthly. NCC conducts daily open sources monitoring, searching for information about any changes in the international ratings and negative information about its counterparties. The operational control of NCC's liquid position is conducted by the treasury operations centre on the basis of the following: • data on NCC's liquidity position at the beginning of the operational day, i.e. balances on nostro accounts for major currencies on the morning of the current day; • data on the interbank loans received and provided by NCC, and about other liquid assets; • data on the cash flows received from the Group's members; • data on the expected balance of credits/debits of the funds provided by clients-CM; • data on the payments to buy/sell the securities; • data on own conversion transactions; • data on specific payments related to business administration; • data on other transactions affecting the liquidity position. Operational analysis and liquidity control is conducted for individual currencies in which NCC performs transactions. If there is a shortage of operating liquidity in normal market

		conditions, the following actions are taken: • attracting the required volume of funds in the interbank loans market, including SWAP trades; • foreign currency purchase/sale trades in the required volumes; • reduction of securities portfolios and performance of REPO transactions; • use of CBR loans; • determining payments priority. NCC's prospective liquidity is regularly analyzed and evaluated by Risk Department and includes: • analyzing prospective liquidity across all time horizons using the GAP analysis, including forecasting of cash flows in accordance with the actual timelines for assets sale, settlement and enforcement of obligations; • determining NCC's reasonable liquidity needs, including calculation of liquidity excess/shortage; • analyzing prospective liquidity using the liquidity excess/shortage ratios; • analyzing the structure and concentration of NCC's assets and liabilities, status of claims (especially overdue claims) and obligations (especially if there is a risk of early demand for repayment); The prospective liquidity risk is assessed and monitored for all major currencies in which NCC performs transactions.
	Q.9.3.3: How does the FMI assess its potential losses and liquidity pressures as well as those of its participants if there is a failure of its largest settlement bank?	A.9.3.3: All settlement banks, are subject to regular assessment of their financial conditions aimed to identify the signs of potential insolvency. Only the most reliable banks are used as settlement banks. In addition, NCC monitors concentration risk on a permanent basis. If a certain concentration level is exceeded, the excess liquidity not used in settlements is transferred to other banks. Furthermore, NCC aims at diversifying its correspondent network by engaging banks which could potentially perform settlement bank functions.

		NCC determines the liquidity shortfall to be covered in case of the largest defaults and uses this estimate choosing liquidity suppliers. The current list of liquidity suppliers is monitored and assessed on a quarterly basis.
Key consideration 4: If an FMI conducts money settlements on its own books, it should minimise and strictly control its credit and liquidity risks.	Q.9.4.1: If an FMI conducts money settlements on its own books, how does it minimise and strictly control its credit and liquidity risks?	A.9.4.1. NCC does not conduct clearing settlements on its own. NCC mitigates its credit and liquidity risks as described in A.9.3.3.
Key consideration 5: An FMI's legal agreements with any settlement banks should state clearly when transfers on the books of individual settlement banks are expected to occur, that transfers are to be final when effected, and that funds received should be transferable as soon as possible, at a minimum by the end of the day and ideally intraday, in order to enable the FMI and its participants to manage credit and liquidity risks.	Q.9.5.1: Do the FMI's legal agreements with its settlement banks state when transfers occur, that transfers are final when effected, and that funds received are transferable? Q.9.5.2: Are funds received transferable by the end of the day at the latest? If not, why? Are they transferable intraday? If not, why?	A.9.5.1: The correspondent account agreements with the settlement banks (or account terms and conditions – in case of non-resident banks) stipulate that cash withdrawals/credits from/to the correspondent account shall be made no later than on the "current business day" value date, and that the transfers are final when effected, and also that the bank may dispose of the cash on its correspondent account once it is credited to such account. A.9.5.2: Settlements on correspondent accounts are conducted throughout the entire operation day of the relevant correspondent bank.
Final conclusion on the Principle 9	NCC conducts settlements using the payment system of CBR (in RUB), the payment system of NSD (in RUB and foreign currencies), and via commercial settlement banks (in foreign currencies). To mitigate the credit and liquidity risks, NCC selects for settlements the most reliable counterparties; such selection includes credit rating, credit quality and operational reliability requirements. NCC monitors and controls concentration of funds on the correspondent accounts. NCC does not conduct clearing settlements on its own.	
Assessment of the Principle 9	**Observed**	

Recommendations and comments	-

Principle 10: Physical deliveries An FMI should clearly state its obligations with respect to the delivery of physical instruments or commodities and should identify, monitor, and manage the risks associated with such physical deliveries.		
Key consideration 1: An FMI's rules should clearly state its obligations with respect to the delivery of physical instruments or commodities.	Q.10.1.1: Which asset classes does the FMI accept for physical delivery? Q.10.1.2: How does the FMI define its obligations and responsibilities with respect to the delivery of physical instruments or commodities? How are these responsibilities defined and documented? To whom are these documents disclosed? Q.10.1.3: How does the FMI engage with its participants to ensure they have an understanding of their obligations and the procedures for effecting physical delivery?	A.10.1.1. NCC accepts bonds, equities, foreign currencies and commodities (precious metals) for physical delivery. A.10.1.2. NCC defines its obligations based upon the results of trade obligations netting. The netting procedure is defined in Clearing Rules for the respective market. NCC furnishes CMs with reports on the calculated total net obligations / net claims. Clearing Rules and other documents describing NCC's responsibilities including qualities of physically delivered instruments are publicly available at NCC's website (e.g, «Good delivery» precious metals bars etc.). A.10.1.3. This information is made available in Clearing Rules for the respective market. Moreover, this objective is achieved by providing reports and information in the clearing system.
Key consideration 2: An FMI should identify, monitor, and manage the risks and costs associated with the storage and delivery of physical instruments or commodities.	Q.10.2.1: How does the FMI identify the risks and costs associated with storage and delivery of physical instruments or commodities? What risks and costs has the FMI identified?	A.10.2.1. For securities, such costs mean the costs of keeping the clearing depo account in the settlement depository; Costs for precious metals: 1) NCC pays to the depository operator for precious metal bars safekeeping under the safekeeping agreement; 2) NCC pays for the balances of precious metals on the numbered metal correspondent accounts opened by NCC with the non-resident correspondent bank under the numbered metal correspondent account agreement. 3) The local central depository - NSD performs the storage and settlements of securities both in documentary and non-documentary forms. NCC pays NSD according to its agreed tariffs. The risks in this case are negligible as NSD also belongs to the Moscow Exchange

		group.
	Q.10.2.2: What processes, procedures and controls does the FMI have to monitor and manage any identified risks and costs associated with storage and delivery of physical instruments or commodities?	A.10.2.2. Control of proper charging in accordance with the rates of the settlement depository and the precious metals depository. The precious metal bars that belong to NCC, stored and/or transported by a specialized organization, are insured by the Russian insurance companies and reinsured with the international reinsurer with a rating of at least A+, assigned by at least two of the three international rating agencies on the terms enabling direct payment of insurance compensation by the reinsurer of NCC. All of the respondent's operations related to provision or withdrawal of precious metal bars under the numbered metal correspondent account agreement are subject to mandatory prior approval of NCC; moreover, pursuant to the provisions of the numbered metal correspondent account agreement, NCC has no obligation to the respondent as to physical return of precious metals from the account.
	Q.10.2.3: If an FMI can match participants for delivery and receipt, under what circumstances can it do so, and what are the associated rules and procedures? Are the legal obligations for delivery clearly expressed in the rules and associated agreements?	A.10.2.3. NCC does not match CMs for delivery and receipt. The legal obligations related to delivery are clearly stated in Clearing Rules for the respective market.
	Q.10.2.4: How does the FMI monitor its participants' delivery preferences and, to the extent practicable, ensure that its participants have the necessary systems and resources to be able to fulfil their physical delivery obligations?	A.10.2.4. The delivery procedures are discussed during user committees meetings.
Final conclusion on the Principle 10	NCC determines its obligations related to physical delivery of instruments or goods, and also controls and manages the risks associated with physical delivery.	
Assessment of the Principle 10	**Observed**	
Recommendations and	-	

comments	

Principle 12: Exchange-of-value settlement systems If an FMI settles trades that involve the settlement of two linked obligations (for example, securities or foreign exchange trades), it should eliminate principal risk by conditioning the final settlement of one obligation upon the final settlement of the other.		
Key consideration 1: An FMI that is an exchange-of-value settlement system should eliminate principal risk by ensuring that the final settlement of one obligation occurs if and only if the final settlement of the linked obligation also occurs, regardless of whether the FMI settles on a gross or net basis and when finality occurs.	Q.12.1.1: How do the FMI's legal, contractual, technical and risk management frameworks ensure that the final settlement of relevant financial instruments eliminates principal risk? What procedures ensure that the final settlement of one obligation occurs if and only if the final settlement of a linked obligation also occurs? Q.12.1.2: How are the linked obligations settled – on a gross basis (trade by trade) or on a net basis? Q.12.1.3: Is the finality of settlement of linked obligations simultaneous? If not, what is the timing of finality for both obligations? Is the length of time between the blocking and final settlement of both obligations minimised? Are blocked assets protected from a claim by a third party? Q.12.1.4: In the case of a CCP, does the CCP rely on the DvP or PvP services provided by another FMI, such as an SSS or payment system? If so, how would the CCP characterise the level of its reliance on such services? What contractual relationship does the CCP have with the SSS or payment	A.12.1.1. Principal risk towards CMs can occur in securities, foreign exchange and precious metals trades. It is eliminated through settlements on DvP terms or preliminary delivery by CMs. The procedures for securing this mechanism are specified in NCC Clearing Rules: • NCC determines net obligations of CMs to deliver/settle in every relevant security, currency or precious metal for each date. • At the settlement time (also specified in Clearing Rules for each asset that is exchanged via NCC) NCC checks if CM fulfilled his settlement or delivery obligation. Delivery and settlement is done via the same accounts that are used for posting collateral, therefore NCC always has access to information about balances on these accounts. • If the whole amount of obligation was fulfilled by CM, NCC also fulfills the related obligation toward CM. If the obligation was fulfilled partially, NCC also fulfills related obligation partially. • Unfulfilled portion of obligation is rolled over to next settlement day via repo or swap trade with non-delivering CM. • If it's not possible to roll over the obligation (for example, in case of consecutive non-delivery for 4 days in the same security, or 2 days in cash), the position is closed out and the obligation is terminated. These procedures ensure that the final settlement of one obligation occurs if and only if the final settlement of a linked obligation also occurs

	system to ensure that final settlement of one obligation occurs only when the final settlement of any linked obligations occurs?	A.12.1.2. Linked obligations are settled on a net basis. A.12.1.3. Trades in foreign currencies, precious metals and securities are settled on DvP terms. Therefore, the finality of settlements for foreign currencies, precious metals, securities and cash is simultaneous. The assets used for clearing and recorded on trading and clearing accounts are protected from third-party claims until completion of clearing settlements. A.12.1.4. No, NCC independently controls compliance with the DvP principle.
Final conclusion on the Principle 12	Principal risk is eliminated through settlements on DvP terms.	
Assessment of the Principle 12	**Observed**	
Recommendations and comments	-	
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.		
Key consideration 1: An FMI should have default rules and procedures that enable the FMI to continue to meet its obligations in the event of a participant default and that address the replenishment of resources following a default.	*Participant default rules and procedures* Q.13.1.1: Do the FMI's rules and procedures clearly define an event of default (both a financial and an operational default of a participant) and the method for identifying a default? How are these events defined?	A.13.1.1. NCC's rules and procedures stipulate a range of grounds for NCC to announce an operational or technical default of a CM (Article 11 of Clearing Rules) and provide for the actions to be taken in case if NCC declares a CM's default (Article 32 of Clearing Rules). The cases of operational default comprise CM's fail to perform its trade obligations in full and within the established time period, as well its failure to pay the margin call in full and within the established time period. The cases of financial default comprise: – withdrawal (revocation) of the banking license issued to CM-

		credit institution by CBR. The fact of withdrawal (revocation) of the license is confirmed with a written notice of CBR submitted to NCC and/or information on such decision published at the website of CBR; – appointment of temporary administration or issuance of arbitration award on introduction of any bankruptcy procedure in relation to CM-non-credit institution. The fact of appointment of a temporary administration or issuance of arbitration award on introduction of any bankruptcy procedure in relation to the non-resident non-credit Institution is confirmed with a written notice issued by the competent state authority of the country where the non-resident non-credit institution was established, submitted to NCC, and/or the relevant information published on the website of the competent state authority of the country where the non-resident non-credit institution was established or at the website of the non-resident non-credit institution. – withdrawal (revocation) of a special permit (a license or other document) issued by the competent authority of the registration country of the non-resident bank, whereunder the non-resident bank is authorized to conduct banking operations stipulated by the domicile law of the non-resident bank. The fact of withdrawal (revocation) of such permit (a license or other document) is confirmed with a written notice issued by the competent state authority of the registration country of the non-resident bank, submitted to NCC, and/or the relevant information published at the website of the competent state authority of the registration country of the non-resident bank, and/or a respective e-mail message sent by the competent authority to NCC's e-mail address. The actions taken in case NCC announces CM's default include: • termination of all trades executed by CM, whose default has been declared by NCC; • hedging the risks arising in case of termination of all trades executed by CM, whose default has been declared by NCC; • holding an auction among other CMs to eliminate the risk

		arising in case of termination of all the trades executed by CM, whose default has been declared by NCC.
	Q.13.1.2: How do the FMI's rules and procedures address the following key aspects of a participant default: a) the actions that the FMI can take when a default is declared; b) the extent to which the actions are automatic or discretionary; c) changes to normal settlement practices; d) the management of trades at different stages of processing; e) the expected treatment of proprietary and customer trades and accounts; f) the probable sequencing of actions; g) the roles, obligations and responsibilities of the various parties, including non-defaulting participants; and h) the existence of other mechanisms that may be activated to contain the impact of a default?	A.13.1.2. How NCC addresses a CM's default: a) Operational default: - the performance of obligations is deferred to the next settlement day by executing SWAP or REPO trades; - if deferral is not possible, "closing" trades are concluded or obligations are terminated (cash settlement); - collateral is sold; - defaulting CM contributions to Guarantee funds are used. Financial default: Termination of clearing services, termination of trade obligations on the date of clearing services' termination, and liquidation netting. b) In case of operational default, actions are taken automatically. In case of financial default, NCC acts in accordance with Clearing Rules and internal procedures. c) In case of financial default, termination of obligations and calculation of the net obligation / net claim in course of liquidation netting is performed on the date preceding the date of license revocation. d) In case of operational default – standard and automatic. In case of financial default – as described in the internal regulations for liquidation netting procedures. e) In case of operational default – standard and automatic. In case of financial default – as described in the internal regulations for liquidation netting procedures. f) the probable sequence of actions is determined by Clearing Rules. g) In case of operational default – use of NCC's own funds to perform obligations to the non-defaulting CMs; execution of REPO or SWAP trades with cash suppliers. In the FX market, the role of cash supplier is played by CBR.

		In case of financial default, NCC may take measures contemplated in its Financial Recovery Plan.
	Use of financial resources Q.13.1.3: How do the FMI's rules and procedures allow the FMI to promptly use any financial resources that it maintains for covering losses and containing liquidity pressures arising from default, including liquidity facilities? Q.13.1.4: How do the FMI's rules and procedures address the order in which the financial resources can be used? Q.13.1.5: How do the FMI's rules and procedures address the replenishment of resources following a default?	A.13.1.3. NCC maintains in permanent readiness all of its available extra liquidity provision instruments (see A.7.5.1). Furthermore, NCC may ask no-defaulting CMs to replenish their Guarantee funds contributions (see A.4.7.2). A.13.1.4. The procedure for use of resources in case of a CM's default is defined in the clause 16 of Clearing Rules. Common Part, and for the markets where NCC operates as the CCP is the following: 1) Collateral of the Defaulting CM (segregated clients' collateral is not used); 2) Collateral for Stress of the Defaulting CM; 3) Contributions of the Defaulting CM to the Guarantee funds; 4) NCC's dedicated capital (Skin-in-the-game); 5) Contributions of the Non-defaulting CMs to the Guarantee fund of the relevant markets; 6) Additional dedicated capital of NCC (Supervisory Board may make such decision); A.13.1.5. The procedures set in Clearing Rules stipulate that, once the non-defaulting CMs' contributions are used, NCC notifies CMs that the funds have been used and additional funds are to be posted. Furthermore, if NCC used its dedicated capital (Skin-in-the-game), Supervisory Board of NCC may decide to allocate additional dedicated capital.
Key consideration 2: An FMI should be well prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in its	Q.13.2.1: Does the FMI's management have internal plans that clearly delineate the roles and responsibilities for addressing a default? What are these plans?	A.13.2.1. Yes, NCC does have such plans. NCC has developed internal regulations describing the interaction across its divisions in case of default. A.13.2.2 NCC regularly informs CBR about suspension/termination of admission to clearing services, about technical defaults and

rules.	Q.13.2.2: What type of communication procedures does the FMI have in order to reach in a timely manner all relevant stakeholders, including regulators, supervisors and overseers? Q.13.2.3: How frequently are the internal plans to address a default reviewed? What is the governance arrangement around these plans?	performance of liquidation netting, about the use of NCC's financial resources to cover losses arising from a CM's default. A.13.2.3 The internal plans are reviewed by relevant divisions once a year.
Key consideration 3: An FMI should publicly disclose key aspects of its default rules and procedures.	Q.13.3.1: How are the key aspects of the FMI's participant default rules and procedures made publicly available? How do they address: a) the circumstances in which action may be taken; b) who may take those actions; c) the scope of the actions which may be taken, including the treatment of both proprietary and customer positions, funds and assets; d) the mechanisms to address an FMI's obligations to non-defaulting participants; and e) where direct relationships exist with participants' customers, the mechanisms to help address the defaulting participant's obligations to its customers?	A.13.3.1. Clearing Rules which stipulate the order of default management procedures are to be registered by CBR and disclosed at least 5 days prior to their effective date. a) 1) margin calls are made in case collateral is insufficient; 2) such procedures as forced closure of positions and enforcement of collateral are conducted in case of unfulfilled margin call or outstanding debt; 3) if the individual clearing collateral is insufficient to repay the defaulter's debt or fulfil its margin call, then its contribution to the Guarantee fund is used. If its contribution to the Guarantee fund is insufficient, then NCC's dedicated capital (Skin-in-the-game) is used, after that, the non-defaulting CMs' contributions to the Guarantee fund are used. 4) in case of events contemplated by Clearing Rules and indicating unsatisfactory financial condition of CM, NCC may transfer positions of segregated clients; 5) in case if bankruptcy procedures are initiated against CM, or if its banking license is revoked, a liquidation netting procedure is applied and position of segregated client may be transferred. 6) cross-default procedure is implemented that defines the sequence of guarantee funds and other funds usage and replenishment in order to cover CM's default at the relevant market. b) default management procedures are conducted by the responsible units of NCC.

		c) the scope of the actions which may be taken in case of a margin call or debt depends on the type of the account used to record the non-performed obligations - proprietary or client. First, the close out is conducted in respect of the positions recorded in the registers where the debt arose. Then NCC uses positions and collateral recorded in other registers of the same CM, except for the registers of segregated clients, if no non-performance event has been recorded in those. The collateral at clients' registers is not used to cover own (CM's) or another client's losses. The position deferral procedures employ only segregated clients' positions and collateral. Clearing Rules enable the transfer of collateral and obligations of segregated clients from CM in pre-default condition to another CM. In case of liquidation netting, all positions – both client and proprietary ones – are used, but in case of segregated clients there is a separate calculation of net obligation. Furthermore, the transfer of segregated clients' positions is possible. d) in case of CM's default, NCC executes balancing trades with non-defaulting CM, similar to the trades which NCC executed with the defaulter. e) there are no direct relationships between the CMs' clients.

Key consideration 4: An FMI should involve its participants and other stakeholders in the testing and review of the FMI's default procedures, including any close-out procedures. Such testing and review should be conducted at least annually or following material changes to the rules and procedures to ensure that they are practical and effective.	Q.13.4.1: How does the FMI engage with its participants and other relevant stakeholders in the testing and review of its participant default procedures? How frequently does it conduct such tests and reviews? How are these tests results used? To what extent are the results shared with the board, Risks Committee and relevant authorities? Q.13.4.2: What range of potential participant default scenarios and procedures do these tests cover? To what extent does the FMI test the implementation of the resolution regime for its participants?	A.13.4.1, 13.4.2. NCC does not involve CMs in the testing and review of NCC's default procedures. NCC's internal divisions carry out the tests and revision.
Final conclusion on the Principle 13	NCC has clear rules and procedures in place to respond to a CM's default, aiming to ensure NCC's timely performance of its obligations to the non-defaulting CMs and to limit NCC's losses. NCC makes available Clearing Rules containing the description of NCC's actions in case of a CM's default.	
Assessment of the Principle 13	Broadly observed	
Recommendations and comments	The frequency of testing of the default management procedures has to be formalized. NCC is aimed at addressing this discrepancy in the near future. Furthermore, NCC shall involve CMs in the process of default procedures' testing and review.	
Principle 14: Segregation and portability A CCP should have rules and procedures that enable the segregation and portability of positions of a participant's customers and the collateral provided to the CCP with respect to those positions.		

Key consideration 1: A CCP should, at a minimum, have segregation and portability arrangements that effectively protect a participant's customers' positions and related collateral from the default or insolvency of that participant. If the CCP additionally offers protection of such customer positions and collateral against the concurrent default of the participant and a fellow customer, the CCP should take steps to ensure that such protection is effective.	*Customer protection from participant default* Q.14.1.1: What segregation arrangements does the CCP have in place to effectively protect a participant's customers' positions and related collateral from the default or insolvency of that participant? Q.14.1.2: What are the CCP's portability arrangements? Q.14.1.3: If the CCP serves a cash market and does not provide segregation arrangements, how does the CCP achieve protection of customers' assets? Has the CCP evaluated whether the applicable legal or regulatory framework achieves the same degree of protection and efficiency for customers that would otherwise be achieved by segregation and portability arrangements?	A.14.1.1. Clearing Rules for all markets require CMs to keep mandatory separate cash accounting for CMs and the cash of their clients, and, upon request of CM, there is an option of segregated accounting of obligations and collateral of CM's client (hereinafter - the segregated client). CM may ask NCC to count client's (that is a CM) funds separately, so these funds cannot be used to cover. Clearing Rules define the cases and the procedure for the transfer of collateral and obligations of segregated clients from CM, who may be declared to be in default, to another CM. A.14.1.2: A CM may register its segregated client with NCC. In the cases stipulated by Clearing Rules, upon request of the segregated client, NCC transfers the debt and assigns the claims of CM on obligations under the trades executed at the expense of such segregated client, and also transfers the property registered as collateral for performance of such obligations to another CM nominated by such segregated client. A.14.1.3: Without using the segregation arrangements, clients' assets are protected only through the internal separate accounting arrangements. NCC evaluates the extent to which the legal framework protects clients' assets. Nevertheless, presently NCC uses segregation arrangements in all markets.
	Customer protection from participant and fellow customer default Q.14.1.4: If the CCP offers additional protection to customers to protect their positions and collateral against the concurrent default of the participant and a fellow customer, how does the CCP ensure that such protection is effective?	A.14.1.4. In case of an operational default of a CM, the clients' assets recorded under separate settlement codes will not be used to perform obligations of CM recorded under other settlement codes. Settlement code may be opened of a CM's client that is not registered as segregated client and cannot use the procedure of obligations' transfer, however such CM's client's funds are safeguarded. Before occurrence of a CM's financial default, segregated clients may use the procedure of transfer of obligations and transfer of collateral in the cases and in accordance with the procedure stipulated in Clearing Rules. Another client's default will not affect the assets of the segregated

		client.
	Legal basis Q.14.1.5: What evidence is there that the legal basis provides a high degree of assurance that it will support the CCP's arrangements to protect and transfer the positions and collateral of a participant's customers? Q.14.1.6: What analysis has the CCP conducted regarding the enforceability of its customer segregation and portability arrangements, including with respect to any foreign or remote participants? In particular, which foreign laws has the CCP determined to be relevant to its ability to segregate or transfer customer positions and collateral? How have any identified issues been addressed?	A.14.1.5: The possibility of positions and collateral transfer is stipulated in the Federal Law dated February 7th, 2011 No. 7-FZ "On Clearing and Clearing Activities". The provisions regulating the transfer of positions and collateral are also contained in Clearing Rules, which must be agreed with the Legal Department and registered by CBR. A.14.1.6: NCC aims at implementing the norms and procedures of the best foreign practices related to segregation and transfer of positions, including EMIR. NCC has carried out legal expertise that determined compliance of NCC with best international practices, viz. EMIR.
Key consideration 2: A CCP should employ an account structure that enables it readily to identify positions of a participant's customers and to segregate related collateral. A CCP should maintain customer positions and collateral in individual customer accounts or in omnibus customer accounts.	Q.14.2.1: How does the CCP segregate a participant's customers' positions and related collateral from the participant's positions and collateral? What type of account structure (individual or omnibus) does the CCP use for the positions and related collateral of participants' customers? What is the rationale for this choice?	A.14.2.1. Clearing Rules require mandatory separate accounting of CM's own funds and the clients' funds (on the omnibus account). CM may demand that NCC record the client's funds on its individual account. The segregation procedure implemented by NCC satisfies the requirements of the Federal Law "On Clearing and Clearing Activities". Standardised OTC Derivatives market: NCC uses segregated and unsegregated clearing registers (cash collateral registers and position accounting registers) to record the clients' positions and collateral (clauses 9.3, 9.5 of Clearing Rules). The segregated clearing registers have the account structure of the "individual" type – only one segregated position accounting register may match the segregated cash collateral register (clause 9.8 of

	Q.14.2.2: If the CCP (or its custodians) holds collateral supporting customers' positions, what does this collateral cover (for example, initial margin or variation margin requirements)? Q.14.2.3: Does the CCP rely on the participant's records containing the sub-accounting for individual customers to ascertain each customer's interest? If so, how does the CCP ensure that it has access to this information? Is customer margin obtained by the CCP from its participants collected on a gross or net basis? To what extent is a customer's collateral exposed to "fellow customer risk"?	Clearing Rules). The unsegregated clearing registers have the account structure of the "omnibus" type – one or several unsegregated position accounting registers may match the unsegregated cash collateral register (clause 9.8 of Clearing Rules). The collateral recorded in the cash collateral register covers all trade obligations recorded in the position accounting registers corresponding to this cash collateral register. NCC does not rely on CM's records containing the sub-accounting for individual clients; instead, it conducts its own accounting for CM's clients in cash collateral registers and position accounting registers. The value of collateral on the positions recorded in the position accounting registers corresponding to one cash collateral register is calculated on a net basis. The segregated client's positions and collateral may be transferred from one CM to another prior to announcement of default of CM. After CM is declared to be in default, NCC may use the collateral posted by all clients (both segregated and unsegregated) of such CM. A.14.2.2. Collateral covers initial margin requirements. A.14.2.3. NCC does not rely on CM's records containing the sub-accounting for individual clients in order to determine the rights of each client. NCC relies on information about asset balances on accounts and on crediting of assets to NCC's accounts, which it receives from the Settlement Depository, Settlement Organization and Settlement Banks. The collateral for the clients' positions in the FX market and Securities market is calculated with breakdown by accounts opened by CMs to record the clients' positions and assets: omnibus or individual ones. In the Derivatives market, collateral is calculated for CM in total,

		according to the “long leg" principle. If collateral is recorded on the omnibus account, then one client's collateral is exposed to “fellow customer risk”. If collateral is recorded on the client’s individual account, then it is not exposed to “fellow customer risks”, including the risk of bankruptcy of CM (in line with latest legislation changes).
Key consideration 3: A CCP should structure its portability arrangements in a way that makes it highly likely that the positions and collateral of a defaulting participant’s customers will be transferred to one or more other participants.	Q.14.3.1: How do the CCP’s portability arrangements make it highly likely that the positions and collateral of a defaulting participant’s customers will be transferred to one or more other participants? Q.14.3.2: How does the CCP obtain the consent of the participant(s) to which positions and collateral are to be ported? Are the consent procedures set out in the CCP’s rules, policies or procedures? If so, please describe them. If there are any exceptions, how are they disclosed?	A.14.3.1. Segregation and portability arrangements are indicated in Clearing Rules. The rules stipulate the grounds for the transfer of positions, the procedure and timeline for such transfer. CMs must act in accordance with Clearing Rules. Clearing Rules contemplate fulfillment of the following conditions: • the ground for transfer, as established by NCC; • receipt of an application for transfer from the segregated client, indicating CM to whom the transfer is made; and • consent of CM to whom the transfer is made. The orders for transfer of collateral are generated by NCC, and collateral accounts are under control of NCC and are protected against third-party claims till completion of clearing settlements on the date when such claims are presented. The transfer of the segregated client’s positions and collateral by changing the accounting of positions and collateral in the clearing registers. The transfer is conducted in full; partial transfer of positions and collateral is not allowed. A.14.3.2: The procedure for transfer of obligations and collateral, and the procedure for obtaining consent thereto are described in Clearing Rules for all the markets. By signing the clearing agreement, CMs accede to Clearing Rules which stipulate the right of segregated clients to submit application for transfer of positions in case of a CM's default. NCC registers a segregated client (the Segregated Brokerage Firm in case of the Derivatives market), which constitutes consent of the Main CM to the transfer of obligations and collateral of such client upon its application submitted to NCC in the cases stipulated in Clearing Rules. In case of the events set forth by Clearing Rules, the Segregated Client (Authorized Account Owner in the Derivatives market) submits

		to NCC an application for transfer of obligations and collateral. NCC submits to the recipient CM indicated by the Segregated Client in its application for transfer of obligations and collateral the information about such Segregated Client's obligations and collateral, and the recipient CM is entitled to give NCC its consent to accept the obligations/claims of the Main CM. NCC performs the transfer of obligations and collateral of the Segregated Client from the Main CM to the recipient CM only upon receipt of consent of the recipient CM.
Key consideration 4: A CCP should disclose its rules, policies, and procedures relating to the segregation and portability of a participant's customers' positions and related collateral. In particular, the CCP should disclose whether customer collateral is protected on an individual or omnibus basis. In addition, a CCP should disclose any constraints, such as legal or operational constraints, that may impair its ability to segregate or port a participant's customers' positions and related collateral.	Q.14.4.1: How does the CCP disclose its segregation and portability arrangements? Does the disclosure include whether a participant's customers' collateral is protected on an individual or omnibus basis? Q.14.4.2: Where and how are the risks, costs and uncertainties associated with the CCP's segregation and portability arrangements identified and disclosed? How does the CCP disclose any constraints (such as legal or operational) that may impair the CCP's ability to fully segregate or port a participant's customers' positions and collateral?	A.14.4.1. The segregation and portability arrangements are stated in Clearing Rules, which are subject to mandatory disclosure at NCC's website. Clearing Rules state whether collateral is protected on an individual or omnibus basis. A.14.4.2. NCC discloses information about operational procedures, requirements and costs associated with the segregation and portability arrangements in Clearing Rules. There are no legal constraints, except those which are stipulated in Clearing Rules.
Final conclusion on the Principle 14	NCC provides the degree of segregation stipulated by the Russian legislation as well as international best practices, including the possibility to segregate the clients' collateral and positions both on the basis of the omnibus accounting	

	principle and on an individual basis. NCC's procedures, and, in particular, its liquidation netting procedure, enable the transfer of positions of CM's client to another CM in case of CM's default.
Assessment of the Principle 14	**Observed**
Recommendations and comments	-

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 materialize. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.		
Key consideration 1: An FMI should have robust management and control systems to identify, monitor, and manage general business risks, including losses from poor execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses.	Q.15.1.1: How does the FMI identify its general business risks? What general business risks has the FMI identified? Q.15.1.2: How does the FMI monitor and manage its general business risks on an ongoing basis? Does the FMI's business risk assessment consider the potential effects on its cash flow and (in the case of a privately operated FMI) capital?	A.15.1.1: NCC identifies general business risks by analyzing revenues and expenses arising from conducting its services. NCC has identified general business risks arising from the conduction of unprofitable services and launch of unnecessary products. A.15.1.2: To monitor and mitigate general business risk, NCC takes the following actions: • NCC adheres to the Moscow Exchange Group's strategy, developed with participation of the Commission for Strategic Planning by the Supervisory Board of Moscow Exchange; • Implementation of new projects involves analyzing revenues and expenditures; a groupwide business planning, control and analysis is conducted weekly. • capital forecasting and cash flow analysis is undertaken and presented to the Management at least on a quarterly basis to consider the potential effects of arising business risks.
Key consideration 2: An FMI should hold liquid net assets funded by equity (such as common stock, disclosed reserves, or other retained earnings) so that it can continue operations and services as a going concern if	Q.15.2.1: Does the FMI hold liquid net assets funded by equity so that it can continue operations and services as a going concern if it incurs general business losses? Q.15.2.2: How does the FMI calculate the amount of liquid net assets funded by equity to cover its general business risks? How does	A.15.2.1. NCC has dedicated 25% of its annual operational expenses from capital to account for general business risk in accordance with CBR's regulation based on the CPSS-IOSCO PFMI. A.15.2.2. The calculation procedures are indicated in CBR's regulation. The length of time and associated operating costs of achieving a recovery or orderly wind-down of critical operations and services is determined in compliance with CPSS-IOSCO PFMI and is

it incurs general business losses. The amount of liquid net assets funded by equity an FMI should hold should be determined by its general business risk profile and the length of time required to achieve a recovery or orderly wind-down, as appropriate, of its critical operations and services if such action is taken.	the FMI determine the length of time and associated operating costs of achieving a recovery or orderly wind-down of critical operations and services?	set as 6 months.
Key consideration 3: An FMI should maintain a viable recovery or orderly wind-down plan and should hold sufficient liquid net assets funded by equity to implement this plan. At a minimum, an FMI should hold liquid net assets funded by equity equal to at least six months of current operating expenses. These assets are in addition to resources held to cover participant defaults or other risks covered under the financial resources principles. However, equity held under international risk-based capital standards can be included where relevant and appropriate to avoid duplicate capital requirements.	*Recovery or orderly wind-down plan* Q.15.3.1: Has the FMI developed a plan to achieve a recovery or orderly wind-down, as appropriate? If so, what does this plan take into consideration (for example, the operational, technological and legal requirements for participants to establish and move to an alternative arrangement)?	A.15.3.1. NCC has developed and implemented a financial recovery plan. It does not imply that NCC's operations shall move to another entity; instead, it mainly focuses on restoring NCC's financial stability and recovering its functions. Therefore, such plan does not set any requirements for CMs as to move to an alternative arrangement. It is worth stressing that the plan has been developed in accordance with CBR's recommendations.
	Resources Q.15.3.2: What amount of liquid net assets funded by equity is the FMI holding for purposes of implementing this plan? How does the FMI determine whether this amount is sufficient for such implementation? Is this amount at a minimum equal to six months of the FMI's current operating expenses? Q.15.3.3: How are the resources designated to cover business risks and losses separated from resources designated to cover participant defaults or other risks covered under the financial resources principles? Q.15.3.4: Does the FMI include equity held	A.15.3.2: NCC has dedicated capital funds amounting to 50% of its annual operational expenses for orderly wind-down. For more information see A.15.1.2.-15.2.2. A.15.3.3: NCC's dedicated CCP capital (Skin-in-the-game), funds to cover general business risk and orderly wind-down are all segregated on different capital accounts according to CBR legislation. A.15.3.4: NCC is doing its best to comply with international

	under international risk-based capital standards to cover general business risks?	standards, which are being implemented by CBR's regulation. According to the regulation NCC segregates its dedicated CCP capital (Skin-in-the-game), funds to cover general business risk and orderly wind-down from capital required to cover all other risks under a regulatory approach. Furthermore NCC regularly assesses additional capital required to cover stress losses.
Key consideration 4: Assets held to cover general business risk should be of high quality and sufficiently liquid in order to allow the FMI to meet its current and projected operating expenses under a range of scenarios, including in adverse market conditions.	Q.15.4.1: What is the composition of the FMI's liquid net assets funded by equity? How will the FMI convert these assets as needed into cash at little or no loss of value in adverse market conditions? Q.15.4.2: How does the FMI regularly assess the quality and liquidity of its liquid net assets funded by equity to meet its current and projected operating expenses under a range of scenarios, including in adverse market conditions?	A.15.4.1. NCC's assets are subject to strict liquidity and quality criteria stated in CBR's regulation and approved by the Supervisory Board, thus they can easily be converted into cash in adverse market conditions at little or no loss of value. They are mainly composed of correspondent accounts, sovereign and other CBR eligible bonds. A.15.4.2. The quality and liquidity of NCC's assets is monitored at least on a monthly basis and scrutinized by CBR. Furthermore, NCC conducts liquidity, market risk and credit risk stress tests comprising various scenarios. For more information on NCC's stress tests see A.4.5.1, A.4.6.1, A.7.9.3.
Key consideration 5: An FMI should maintain a viable plan for raising additional equity should its equity fall close to or below the amount needed. This plan should be approved by the board of directors and updated regularly.	Q.15.5.1: Has the FMI developed a plan to raise additional equity? What are the main features of the FMI's plan to raise additional equity should its equity fall close to or fall below the amount needed? Q.15.5.2: How frequently is the plan to raise additional equity reviewed and updated? Q.15.5.3: What is the role of the FMI's board (or equivalent) in reviewing and approving the FMI's plan to raise additional equity if needed?	A.15.5.1. Plan to raise additional equity is an integral part of the Financial Recovery Plan. This plan is to be implemented if capital adequacy ratio moves close to the minimum requirements set by CBR. Main equity supplier is to be the sole shareholder, Moscow Exchange Group. A.15.5.2. The plan to raise additional equity is updated within the process of reviewing the Financial Recovery Plan on an annual basis. A.15.5.3. The Financial Recovery Plan is approved by the Supervisory Board. The issue of raising additional equity requires examination by the Supervisory Board. The final decision on raising additional equity is made by the sole shareholder on the basis of the proposals submitted by the Supervisory Board.
Final conclusion on the Principle 15	NCC manages its general business risk adhering to the single strategy of Moscow Exchange, conducts business planning and analysis of revenues and expenditures.	

	NCC has developed the Financial Recovery Plan, which provides a range of measures and arrangements for their implementation to maintain continuity of NCC's functions as a credit organization and the CCP in case of material deterioration of NCC's financial condition and general market conditions. NCC has also segregated sufficient capital funds to cover business risks and orderly wind-down in compliance with CBR's regulation and CPSS-IOSCO PFMI.
Assessment of the Principle 15	Observed
Recommendations and comments	-

Principle 16: Custody and investment risks An FMI should safeguard its own and its participants' assets and minimize 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.		
Key consideration 1: An FMI should hold its own and its participants' assets at supervised and regulated entities that have robust accounting practices, safekeeping procedures, and internal controls that fully protect these assets.	Q.16.1.1: If the FMI uses custodians, how does the FMI select its custodians? What are the specific selection criteria the FMI uses, including supervision and regulation of these entities? How does the FMI monitor the custodians' adherence to these criteria?	A.16.1.1: NCC selects its custodians using the following criteria set by the regulator: • inclusion into the List of organizations where the Russian custodians may open accounts to keep record of their rights to foreign securities, for the purpose of issuance of the Russian depositary receipts, approved by the Order of the Russian Federal Service on Financial Markets dated July 28th, 2011 No. 11-35/pz-n; • status of central depository in the country of origin; • custodian/depositary rating of at least "A+" according to the classification of the international rating company Thomas Murray; • international rating of at least "B"; • being a member of a banking group (holding), which parent company has an international rating of at least "B"; • decisions of the custodian's management bodies may be directly and materially influenced by an organization with an international rating of at least "B"; • custodian has a status of a settlement depository under the Russian law; • custodian is a specialized depository for investment funds, mutual funds and private pension funds, conducting depositary

	Q.16.1.2: How does the FMI verify that these entities have robust accounting practices, safekeeping procedures, and internal controls that fully protect its and its participants' assets?	activities for over 5 years on the basis of the relevant Russian Federal Service on Financial Markets license; • the custodian has been conducting depositary activities for over 5 years on the basis of the relevant Russian Federal Service on Financial Markets license, its equity equals at least 250 M RUB as of any of the two most recent reporting dates; • custodian has opened a separate nominee depo account in the depository meeting one of the criteria listed in the previous paragraphs of this section, designed solely to keep record of NCC's securities, and included in the separate nominee depo account agreement with the depository the right of CBR to obtain information certifying NCC's rights to securities upon request sent to such depository. Criteria compliance check is performed while preparing the agreement with the custodian, and also as part of the quarterly counterparty risk assessment. A.16.1.2: To conclude the agreement, the custodian is requested to provide the relevant documents.
Key consideration 2: An FMI should have prompt access to its assets and the assets provided by participants, when required.	Q.16.2.1: How has the FMI established that it has a sound legal basis to support enforcement of its interest or ownership rights in assets held in custody? Q.16.2.2: How does the FMI ensure that it has prompt access to its assets, including securities that are held with a custodian in another time zone or legal jurisdiction, in the event of participant default?	A.16.2.1: The possibility of enforcement is stipulated in the Federal Law dated February 7th, 2011 "On Clearing and Clearing Activities". The procedure for the enforcement of collateral of the defaulting CM is stipulated in the agreement between NCC and CM. A.16.2.2. All assets, including the securities required for settlement, are kept on the clearing and trading accounts opened with a settlement organization (settlement depository) within the Russian jurisdiction. NCC has a right of disposal in respect of any/ all accounts used for settlement. The cash in foreign currencies on NCC's correspondent accounts with non-resident settlement banks is accessed in a real-time mode throughout the counterparty's trading day. Presently, NCC holds no assets with custodians located in other time zones.
Key consideration 3: An FMI should evaluate and	Q.16.3.1: How does the FMI evaluate and understand its exposures to its custodian	A.16.3.1: Credit exposures are measured and monitored for all counterparties, including custodians, at least once per quarter. The

understand its exposures to its custodian banks, taking into account the full scope of its relationships with each.	banks? In managing those exposures, how does it take into account the full scope of its relationship with each custodian bank? For instance, does the FMI use multiple custodians for the safekeeping of its assets to diversify exposure to any single custodian? How does the FMI monitor concentration of risk exposures to its custodian banks?	main settlement depository for securities is NSD, which has a status of the Russian central depository and is also part of the Moscow Exchange Group. To monitor concentration of risk exposures to its custodian and settlement banks NCC sets limits depending on the quality and financial conditions of the banks. These limits are monitored on an online basis and reviewed at least annually.
Key consideration 4: An FMI's investment strategy should be consistent with its overall risk-management strategy and fully disclosed to its participants, and investments should be secured by, or be claims on, high-quality obligors. These investments should allow for quick liquidation with little, if any, adverse price effect.	*Investment strategy* Q.16.4.1: How does the FMI ensure that its investment strategy is consistent with its overall risk management strategy? How and to whom does the FMI disclose its investment strategy? Q.16.4.2: How does the FMI ensure on an ongoing basis that its investments are secured by, or are claims on, high-quality obligors?	A.16.4.1. NCC has developed a Treasury Policy (http://nkcbank.ru/viewCatalog.do?menuKey=187), which determines the major guidelines for NCC's investment strategy (hereinafter the "Treasury Policy"). The Treasury Policy has been developed in accordance with NCC's Risk Management Policy and has been coordinated with NCC's Risk Department and approved by the Risk Committee of NCC's Supervisory Board. The major provisions of the Treasury Policy are disclosed on NCC's website. A.16.4.2. Strict investment restrictions are posed on NCC's investments according to a special CBR Directive No. 2919-U "On Assessment of the Management Quality of a Credit Organization Performing the Functions of a CCP" dated December 3rd, 2012. Its criteria are replicated in NCC's Treasury policy and only allow investments in government bonds, and other short-term financial instruments (correspondent accounts, bonds, deposits, REPO transactions) and entities of certain international rating grades closest to the sovereign level. To ensure this NCC sets limits depending on the quality and financial conditions of its counterparties and issuers. These limits are monitored on an online basis and reviewed at least annually.
	Risk characteristics of investments Q.16.4.3: How does the FMI consider its overall exposure to an obligor in choosing investments? What investments are subject to limits to avoid concentration of credit risk exposures?	A.16.4.3: All counterparties and all investment transactions are subject to limits based on the assessment of the counterparty's financial condition and the way the investment transaction in question would affect capital adequacy. Furthermore, structural limits have been set, in particular the limits on the aggregate volume of corporate bonds and investments in the banking sector.

	Q.16.4.4: Does the FMI invest participant assets in the participants' own securities or those of its affiliates? Q.16.4.5: How does the FMI ensure that its investments allow for quick liquidation with little, if any, adverse price effect?	A.16.4.4: NCC allows investment (own funds and those of CMs) in securities / assets issued by CMs. At the same time, when analyzing counterparties' credit exposure NCC considers both their exposures as CMs and their exposures as counterparties/security issuers when allocating funds. Moreover, the overwhelming part of the portfolio (over 50%) is invested in Russian Sovereign bonds. A.16.4.5: NCC invests cash only in highly liquid financial instruments, sets limits for the share of acquired securities in the total volume of issued securities, and conducts monitoring of the forecasted portfolio liquidation period. In a drastic lack of liquidity, the securities is eligible for CBR REPO facilities. Furthermore, the overall maturity of corporate bonds' portfolio is limited to 1.5 years, thus market risks, i.e. risks of negative revaluation of bond's prices, are mitigated. For more information please refer to A.16.4.2 and Principle 7. Liquidity risk.
Final conclusion on the Principle 16	NCC considers custodian risk as insignificant because NCC applies strict criteria and uses NSD as the main custodian. Investment Strategy is conservative as there is a number of regulatory and internal limitations. NCC invests CMs money in highly liquid assets only and the major part of NCC's portfolio is Sovereign Russian bonds. NCC's Risk department and CBR monitor NCC's portfolio on a regular basis.	
Assessment of the Principle 16	**Observed**	
Recommendations and comments	-	

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.		
Key consideration 1: An FMI should establish a robust operational risk-management	*Identification of operational risk* Q.17.1.1: What are the FMI's policies and processes for identifying the plausible sources	A.17.1.1. NCC's operational risk-management is an integral part of Moscow Exchange's operational risk-management, thus Moscow Exchange has adopted the Operational Risk Management Policy

framework with appropriate systems, policies, procedures, and controls to identify, monitor, and manage operational risks.	of operational risks? How do the FMI's processes identify plausible sources of operational risks, whether these risks arise from internal sources (for example, the arrangements of the system itself, including human resources), from the FMI's participants or from external sources? Q.17.1.2: What sources of operational risks has the FMI identified? What single points of failure in its operations has the FMI identified?	describing the methodology for identifying possible sources of operational risks. This methodology has been developed taking into account the specifics of NCC's main business, viz. performance of the function of a clearing centre and CCP, as well as NCC's treasury operations. The process of managing NCC's operational risk includes not only identifying an operational risk event, but also analyzing its reasons and taking actions to mitigate the risk, followed by subsequent control of comprehensiveness and sufficiency of such actions. A.17.1.2. NCC has identified the following major sources of operational risks: • Suboptimal, insufficient or ineffective processes and procedures; • inadequate personnel actions (due to fraud or mistake); • system failures; • adverse external events (including fraud and emergencies). NCC has identified the following: • Risk of malfunctions of the systems and equipment due to the absence of a joint (Moscow Exchange/ NCC/ NSD) full cycle testing and corresponding processes and procedures (current procedures do not fully meet the requirements set for testing significant modifications; and modification processes are not unified). • Risk of malfunctions of the systems and equipment due to absence of joint (NCC and NSD) testing contour (the existing IT infrastructure does not fully enable full cycle testing within companies).
	Management of operational risk Q.17.1.3: How does the FMI monitor and manage the identified operational risks? Where are these systems, policies, procedures and controls documented?	A.17.1.3. According to the provisions of the Operational Risk Management Policy and the Procedure for Monitoring Operational Risks, NCC conducts an ongoing monitoring of the Key Risk Indicators. The monitoring system includes: − development and assessment of efficiency of the Key Risk Indicators;

		- gathering information required for calculation of the Key Risk Indicators; - calculation and control of current values of the Key Risk Indicators; - prompt response if the Key Risk Indicators values reach critical level. The reports on loss events and key risk indicators are submitted to the management bodies on a regular basis. In respect of the already identified risks, NCC develops measures to mitigate such risks and regularly checks their implementation. Operational risks are being measured and managed in accordance with Operational risk policy. Operational risk events are collected in accordance with Loss Collection procedure, mitigation action plans are elaborated and being monitored on regular basis.
	Policies, processes and controls Q.17.1.4: What policies, processes and controls does the FMI employ that are designed to ensure that operational procedures are implemented appropriately? To what extent do the FMI's systems, policies, processes and controls take into consideration relevant international, national and industry-level operational risk management standards? Q.17.1.5: What are the FMI's human resources policies to hire, train and retain qualified personnel, and how do such policies mitigate the effects of high rates of personnel turnover or key-person risk? How do the FMI's human resources and risk management policies address fraud prevention?	A.17.1.4: To ensure proper performance of operational procedures, NCC uses the following: - Trading day regulations for clearing of the trades executed in different market segments; - Control of performance of operational procedures with available means (checklists, processing incidents, service requests). - The applicable systems, policies and processes are periodically checked for compliance with the following requirements: CBR's regulations, requirements of the international standard ISO 9001:2008 (in accordance with the compliance certificate issued for the implemented Quality Management System in 2012), requirements of the group of standards ISO 31000). A.17.1.5. In compliance with the Quality Management System implemented within NCC, the organization has established, and is properly adhering to, all requirements of the standard ISO 9001:2008 section 6.2 "Human Resources" as regards managing personnel, ensuring competencies and mitigating the risk of high personnel turnover.

MOSCOW EXCHANGE

	Q.17.1.6: How do the FMI's change management and project management policies and processes mitigate the risks that changes and major projects inadvertently affect the smooth functioning of the system?	Fraud prevention measures are taken as part of the Information Security Management System and include: – Data Leakage Prevention System; – ranking data by degree of confidentiality and secrecy; – separating the employees' rights of access to information and data. A.17.1.6. To avoid negative effect of changes and large projects on uninterrupted functioning of the system, NCC creates an independent project office system operating within the entire Moscow Exchange and enables functioning of the Committee for Coordination of Technical Modifications.
Key consideration 2: An FMI's board of directors should clearly define the roles and responsibilities for addressing operational risk and should endorse the FMI's operational risk-management framework. Systems, operational policies, procedures, and controls should be reviewed, audited, and tested periodically and after significant changes.	*Roles, responsibilities and framework* Q.17.2.1: How has the board of directors defined the key roles and responsibilities for operational risk management? Q.17.2.2: Does the FMI's board explicitly review and endorse the FMI's operational risk management framework? How frequently does the board review and endorse the FMI's operational risk management framework?	A.17.2.1. NCC's Supervisory Board supervises operational risk management: approves the structure of the operational risk management system, general guidelines for functioning of the main elements of this system, and the internal documents governing operational risk management. A.17.2.2. According to the requirements of the Operational Risk Management Policy, the first competence level is represented by the Supervisory Board of NCC. The Supervisory Board holds meetings dedicated to operational risk issues on a quarterly basis and in accordance with the results of analysis of prepared data and information obtained during the reporting period, Supervisory Board is authorized to make decisions, including the decisions to revise and approve the operational risk management structure. The Risk Committee of the Supervisory Board conducts operational risk management and meets on a regular basis.
	Review, audit and testing Q.17.2.3: How does the FMI review, audit and test its systems, policies, procedures and controls, including its operational risk management arrangements with participants? How frequently does the FMI conduct these reviews, audits and tests with participants?	A.17.2.3: NCC performs stress testing of its software and hardware at least once in 6 months. The systems are tested in case of any modifications, and stress testing covers the actions and recovery of the systems in emergencies. In a number of scenarios CMs are involved in such stress testing. In addition, there are regular volume tests of trading and clearing systems and the ability to switch from them to reserve equipment.

	Q.17.2.4: To what extent, where relevant, is the FMI's operational risk management framework subject to external audit?	A.17.2.4: The annual mandatory audit of financial reporting also covers the issues related to operational risks. The annual audit of the quality management system also touches upon the issues of operational risk management both within the company as a whole and directly in the audited activities. The results of all audits are provided to the management bodies.
Key consideration 3: An FMI should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives.	Q.17.3.1: What are the FMI's operational reliability objectives, both qualitative and quantitative? Where and how are they documented?	A.17.3.1: NCC uses the following qualitative and quantitative operational reliability objectives: - IT systems availability ratio, set as a consolidated figure for all the companies of Moscow Exchange and all technological systems, set as one of the group's KPIs. - Quality objectives in accordance with the requirements of the international standard ISO 9001:2008 (set in NCC's Quality Management Policy and Objectives), - The Key Risk Indicators approved by the top management of the organization.
	Q.17.3.2: How do these objectives ensure a high degree of operational reliability?	A.17.3.2. The IT systems availability ratio is set as a consolidated figure for all the companies of Moscow Exchange and all technological systems,. This ratio reflects the systems' reliability level to a significant extent. Maintaining this ratio on the prescribed level requires adequate and uninterrupted functioning of all systems, which is determined by the existing management system both in the field of IT infrastructure and within its supporting divisions. The required work and control efficiency indicators have been set for all company employees.
	Q.17.3.3: What are the policies in place that are designed to achieve the FMI's operational reliability objectives to ensure that the FMI takes appropriate action as needed?	A.17.3.3: The following documents have been developed, approved and implemented in this organization: 1. Policies: Operational Risk Management Policy of NCC. 2. Procedures: - Procedure for Self-Assessment of Operational Risk in NCC; - Loss collection procedure in NCC; - Procedure for Monitoring Operational Risk in NCC; - Business Continuity and Recovery Plan of NCC.

		3. Methodologies: - Methodologies for operational risk level assessment (by risk type); - Methodologies for risk control indicators calculation; 4. Internal classification handbooks: - Business Activities Handbook; - Handbook of the Operational Losses Types; - Handbook of the Operational Risk Types; - Operational Risk Map.
Key consideration 4: An FMI should ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives.	Q.17.4.1: How does the FMI review, audit and test the scalability and adequacy of its capacity to handle, at a minimum, projected stress volumes? How frequently does the FMI conduct these reviews, audits and tests? Q.17.4.2: How are situations where operational capacity is neared or exceeded addressed?	A.17.4.1. The testing, review and audit procedure is indicated in A.17.2.3. the tests are carried out once per 6 months. A.17.4.2. Based upon information about critical values of the systems' carrying capacity, discovered during operational risks monitoring, the management bodies take measures to eliminate the problem by updating the program codes, equipment renewal, installation of backup processes and hardware.
Key consideration 5: An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats.	*Physical security* Q.17.5.1: What are the FMI's policies and processes, including change management and project management policies and processes, for addressing the plausible sources of physical vulnerabilities and threats on an ongoing basis? Q.17.5.2: Do the FMI's policies, processes, controls and testing appropriately take into consideration relevant international, national and industry-level standards for physical security?	A.17.5.1. In accordance with the Russian law, NCC has set up a physical security system ensuring continuity of the existing management processes. A.17.5.2. NCC and Moscow Exchange have comprehensive physical and information security protections, policies and procedures that identify and address potential vulnerabilities and threats. In relation to systems security, to ensure that NCC security practices and protocols are in line with industry standards, its network infrastructure and security protocols are subjected to periodic independent third party vulnerability assessment (penetration testing). The Moscow Exchange security management maintains a high degree of collaboration and cooperation with local and national law enforcement and intelligence agencies receiving timely intelligence briefings and threat assessments. System security standards are set

		and monitored at the Moscow Exchange Group level. A team of Moscow Exchange employees are dedicated to assessing, identifying, and remediating potential application security issues. These teams rely on internal processes, with the goal to ensure that vulnerabilities are not introduced that may jeopardize the confidentiality, integrity, or availability of internal systems.
	Information security Q.17.5.3: What are the FMI's policies and processes, including change management and project management policies and processes, for addressing the plausible sources of information security vulnerabilities and threats on an ongoing basis? Q.17.5.4: Do the FMI's policies, processes, controls and testing appropriately take into consideration relevant international, national and industry-level standards for information security?	A.17.5.3. NCC has carried out several documents regarding information security: Information Security Policy and Data Protection and Security Rules that defines general guidelines for managing changes. Furthermore, there is the Malware Protection Policy that describes the process of tracking external security threats. To avoid negative effect of changes and large projects NCC has an independent project office system operating within the Moscow Exchange Group and enables functioning of the Committee for Coordination of Technical Modifications. A.17.5.4. NCC takes into account the following international standards: STO BR IBBS-1.0 and ISO 27001.
Key consideration 6: An FMI should have a business continuity plan that addresses events posing a significant risk of disrupting operations, including events that could cause a wide-scale or major disruption. The plan should incorporate the use of a secondary site and should be designed to ensure that critical information technology (IT) systems can resume operations within two hours following disruptive events. The plan should be designed	*Objectives of business continuity plan* Q.17.6.1: How and to what extent does the FMI's business continuity plan reflect objectives, policies and procedures that allow for the rapid recovery and timely resumption of critical operations following a wide-scale or major disruption?	A.17.6.1: The approved business continuity policy describes the process of managing business continuity in the organization. The Business Continuity and Recovery Plan determines the procedure for recovering business processes (with a detailed action plan) in case of large-scale or global breakdowns.
	Design of business continuity plan Q.17.6.2: How and to what extent is the FMI's business continuity plan designed to enable critical IT systems to resume operations within two hours following disruptive events, and to enable the FMI to facilitate or complete settlement by the end of the day even in extreme circumstances?	A.17.6.2. As part of the Business Continuity Program, NCC develops plans of recovery of critical IT systems which also determine the duration of recovery. The majority of IT systems are recovered in less than 2 hours.

to enable the FMI to complete settlement by the end of the day of the disruption, even in case of extreme circumstances. The FMI should regularly test these arrangements.	Q.17.6.3: How is the contingency plan designed to ensure that the status of all trades can be identified in a timely manner, at the time of the disruption; and if there is a possibility of data loss, what are the procedures to deal with such loss (for example, reconciliation with participants or third parties)? Q.17.6.4: How do the FMI's crisis management procedures address the need for effective communications internally and with key external stakeholders and authorities?	A.17.6.3. In case of any malfunctions in IT systems, there will be no data loss, as NCC uses many forms of data copying and storage. According to the relevant contingency plans there are constantly tested back-up systems ready to plug-in at different offices. All trading data is replicated in different storages (hot and cold systems). The trading activity, hardware and software functionality are monitored on an online basis. A.17.6.4. The Business Continuity and Recovery Plan stipulates the procedure of communication in case of an emergency. Furthermore, NCC has developed an internal Regulation for actions of bank divisions in emergencies occurring during trading and clearing; it describes the procedure for informing clients and competent authorities during a crisis situation.
	Secondary site Q.17.6.5: How does the FMI's business continuity plan incorporate the use of a secondary site (including ensuring that the secondary site has sufficient resources, capabilities, functionalities and appropriate staffing arrangements)? To what extent is the secondary site located a sufficient geographic distance from the primary site such that it has a distinct risk profile? Q.17.6.6: Has the FMI considered alternative arrangements (such as manual, paper-based procedures or other alternatives) to allow the processing of time-critical trades in extreme circumstances?	A.17.6.5: NCC has a secondary site. The requirements to a secondary site have been developed and contain the description of technical characteristics of such secondary site (including geographic distance) and minimum required resources for recovery of critical processes. The secondary site is located at a sufficient geographic distance – in another district of the city. A.17.6.6. The structural units' business continuity plans have a separate section dedicated to alternative process arrangements (for example, remote access), but in most cases the recovery of critical processes would require the recovery of IT systems.
	Review and testing Q.17.6.7: How are the FMI's business continuity and contingency arrangements	A.17.6.7. The review and improvement of business continuity

	reviewed and tested, including with respect to scenarios related to wide-scale and major disruptions? How frequently are these arrangements reviewed and tested? Q.17.6.8: How does the review and testing of the FMI's business continuity and contingency arrangements involve the FMI's participants, critical service providers and linked FMIs as relevant? How frequently are the FMI's participants, critical service providers and linked FMIs involved in the review and testing?	arrangements is contemplated by the Business Continuity Policy, just as the planning of annual testing, including the scenarios where primary site is inaccessible or the scenarios of large-scale breakdowns. A.17.6.8: The testing of business continuity arrangements involves primary and secondary service providers (including correspondent banks). In addition, certain types of testing involve participation of the regulator and CMs.
Key consideration 7: An FMI should identify, monitor, and manage the risks that key participants, other FMIs, and service and utility providers might pose to its operations. In addition, an FMI should identify, monitor, and manage the risks its operations might pose to other FMIs.	*Risks to the FMI's own operations* Q.17.7.1: What risks has the FMI identified to its operations arising from its key participants, other FMIs, and service and utility providers? How and to what extent does the FMI monitor and manage these risks?	A.17.7.1. By now, the following operational risks associated with external factors have been identified: - Loss or restriction of cooperation with external service providers; At present, a list of key service providers has been developed, and for each category of such providers an action plan was drawn up in case if the provider is inaccessible. This plan has been reviewed by the Risk Committee at the Supervisory Board of Moscow Exchange and the Commission for Technical Policy at the Supervisory Board of Moscow Exchange. - Malfunctions in the operation of a telecommunication service provider; - Breakdown of the primary site due to utility incidents; - Breakdown of the primary Data Processing Centre due to utility incidents; - Breach of NCC's information security. To monitor and manage these risks: - NCC has developed a plan to ensure functioning of NCC in case of realization of such risks, introduced a rule of storing the source code of the products under development inside NCC, and hired employees with required expertise; - NCC has 4 independent telecommunication service providers; - NCC has a secondary site and the business continuity program;

		– NCC has a secondary Data Processing Centre and annually tests the latter; – NCC has implemented the Information Security Management System (ISMS) and is implementing the standard ISO 27001.
	Q.17.7.2: If the FMI has outsourced services critical to its operations, how and to what extent does the FMI ensure that the operations of a critical service provider meet the same reliability and contingency requirements they would need to meet if they were provided internally?	A.17.7.2. NCC does not outsource critical services. Most outsourced services are conducted by the Moscow Exchange Group companies. The outsourcing agreement is supplemented with the Service Level Agreement provisions. The quality of delivered services is regularly monitored.
	Risks posed to other FMIs Q.17.7.3: How and to what extent does the FMI identify, monitor and mitigate the risks it may pose to another FMI?	A.17.7.3. As part of the polls conducted by other Financial Market Infrastructures, NCC asks to report significant risks associated with NCC operations. Once such risks are identified, they are handled in accordance with the Operational Risk Management Policy. By now, NCC has not received any information about such risks.
	Q.17.7.4: To what extent does the FMI coordinate its business continuity arrangements with those of other interdependent FMIs?	A.17.7.4. All interdependencies have been described in the Business Continuity and Recovery Plan; in case if NCC identifies any material dependence on third parties in critical processes, it analyzes such dependence and, if necessary, considers the possibility to seek for an alternative provider (if any) or to review the process in order to find an alternative solution. Considering the only possible interdependent FMI for NCC is part of the Moscow Exchange Group (NSD), its business continuity arrangements are coordinated on Group level.
Final conclusion on the Principle 17	NCC has functioning control systems, policies, procedures and tools enabling identification, assessment, control and management of operational risks. NCC identifies operational risks both by registering operational risk events and by conducting regular self-assessments. Operational risks levels are monitored using the Key Risk Indicators developed by NCC. NCC has set high target criteria of operational business stability, and its systems ensure compliance with the set target levels. To ensure stability, including the same in case of increased transaction volumes, NCC regularly conducts load-testing of the IT systems. Furthermore, NCC has developed policies and procedures to ensure physical and information security, aimed at ongoing elimination of the relevant risks.	

	To ensure continuity and recovery of business processes in case of large-scale or global breakdowns, NCC has developed the Business Continuity Policy and the Business Continuity Plan. Pursuant to the Business Continuity Policy NCC sets target recovery deadlines for IT systems, depending on how critical they are. At that, the majority of IT systems are recovered in less than 2 hours. The testing process involves primary and secondary service suppliers, and certain types of testing also involve the participation of the regulator.
Assessment of the Principle 17	**Observed**
Recommendations and comments	-

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.		
Key consideration 1: An FMI should allow for fair and open access to its services, including by direct and, where relevant, indirect participants and other FMIs, based on reasonable risk-related participation requirements.	*Participation criteria and requirements* Q.18.1.1: What are the FMI's criteria and requirements for participation (such as operational, financial and legal requirements)?	A.18.1.1. The following types of requirements are applied to CMs (the specific lists of requirements are stipulated in Clearing Rules for each market): − requirements for the financial conditions of the CM; − a signed agreements with NCC and other applicable service providers (e.g. NSD); − contribution to the Guarantee fund; − a banking license (for banks); − a set of legal documents confirming the legal capacity and reliability of the CM; − compliance with technical requirements. Clearing Rules stipulate, inter alia, the following requirements for financial stability: − CM's activities shall not give grounds for bankruptcy prevention measures in accordance with the laws of the Russian Federation on insolvency (bankruptcy) or in accordance with the personal law of CM; − credit institutions and non-resident banks shall comply with mandatory indicators set by CBR, adopted for credit institutions, or mandatory indicators adopted by the competent body of the

	Q.18.1.2: How do these criteria and requirements allow for fair and open access to the FMI's services, including by direct and, where relevant, indirect participants and other FMIs, based on reasonable risk-related participation requirements?	country of registration of the non-resident bank (if such mandatory indicators must be adopted in accordance with the national legislation of the country of registration of the non-resident bank); – the activities of CMs - credit institutions shall give no grounds for revocation by CBR of their banking license in accordance with the banking laws of the Russian Federation; – the activities of CMs - non-resident banks shall give no grounds for revocation of their banking license in accordance with the personal law of the non-resident bank; – credit institutions shall have in their balance sheet a positive current-year financial result as of the most recent reporting date; – state corporations, international organizations, non-credit organizations shall have in their balance sheet a positive financial performance result as of the most recent reporting date, determined as profit after taxation; and – non-residents shall have in their financial reports as of the most recent reporting date a positive financial performance result determined as profit after taxation. A.18.1.2. A fair and open access to NCC's services is based on the fact that these criteria and requirements are the same and apply to all CMs belonging to the same category.
	Access to trade repositories Q.18.1.3: For a TR, how do the terms of access for use of its services help ensure that competition and innovation in post-trade processing are not impaired? How are these terms designed to support interconnectivity with other FMIs and service providers, where requested?	Not applicable
Key consideration 2: An FMI's participation requirements should be justified in terms of the safety and efficiency of the FMI and the markets it serves,	*Justification and rationale of participation criteria* Q.18.2.1: How are the participation requirements for the FMI justified in terms of the safety and efficiency of the FMI and its	A.18.2.1: NCC's clearing membership requirements are designed to address risks that must be managed by a CCP to ensure the safety and efficiency of the markets. Many of the clearing membership

be tailored to and commensurate with the FMI's specific risks, and be publicly disclosed. Subject to maintaining acceptable risk control standards, an FMI should endeavour to set requirements that have the least-restrictive impact on access that circumstances permit.	role in the markets it serves, and tailored to and commensurate with the FMI's specific risks?	requirements reinforce regulatory requirements that are directly binding on CMs. For example, the requirements that CMs must maintain reliable financial condition and rigorous anti-money-laundering procedures reflect the public policy purpose of regulatory requirements for financial intermediaries to reduce systemic risk and protect clients. NCC's reinforcement of certain of those requirements is designed to reduce the risk in its clearing arrangements, and thereby to reinforce the safety of the markets served. Additional clearing membership requirements apply to make NCC a secure and safe CCP.
	Q.18.2.2: Are there participation requirements that are not risk-based but required by law or regulation? If so, what are these requirements?	A.18.2.2: Neither laws, nor regulations stipulate the requirements for admission to clearing services. The Clearing Law requires CMs to inform their clients about their rights for segregation, accounting rules and tariffs.
	Q.18.2.3: Are all classes of participants subject to the same access criteria? If not, what is the rationale for the different criteria (for example, size or type of activity, additional requirements for participants that act on behalf of third parties, and additional requirements for participants that are non-regulated entities)?	A.18.2.3. The CMs belonging to the same category are subject to the same access criteria. For instance, execution of client trades requires a broker license or a securities management license. Banking institutions and non-bank organizations are subject to financial stability requirements. There are variations in requirements for different types of CMs (banks, financial companies and non-residents), stemming from regulatory specifics and peculiarities of their particular business (for example, there are variations in composition of the requested reporting).
	Least restrictive access Q.18.2.4: How are the access restrictions and requirements reviewed to ensure that they have the least restrictive access that circumstances permit, consistent with maintaining acceptable risk controls? How frequently is this review conducted?	A.18.2.4. Access restrictions and requirements are unified for all the markets. The requirements are revised in case of introduction of new products or changes in regulatory requirements. In addition, the requirements are revised in case of changes in procedures and access schemes in accordance with Clearing Rules.

	Disclosure of criteria Q.18.2.5: How are participation criteria, including restrictions in participation, publicly disclosed?	A.18.2.5. The participation criteria, including restrictions in participation, are regulated by Clearing Rules, which are publicly available at NCC's official website.
Key consideration 3: An FMI should monitor compliance with its participation requirements on an ongoing basis and have clearly defined and publicly disclosed procedures for facilitating the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements.	*Monitoring compliance* Q.18.3.1: How does the FMI monitor its participants' ongoing compliance with the access criteria? How are the FMI's policies designed to ensure that the information it uses to monitor compliance with participation criteria is timely and accurate? Q.18.3.2: What are the FMI's policies for conducting enhanced surveillance of, or imposing additional controls on, a participant whose risk profile deteriorates?	A.18.3.1. NCC monitors its CMs' ongoing compliance with the access criteria via automated reports on monitoring of financial and non-financial information on the daily, monthly and quarterly basis, using data analysis resources and internal specialized software platforms. A.18.3.2. CMs with deteriorating risk profile are recorded in the internal observation history database, using the results of financial analysis (identification of the major markers of financial indicators dynamics), internal information (from NCC's divisions) and public information made available in the information and analytical resources and mass media.
	Suspension and orderly exit Q.18.3.3: What are the FMI's procedures for managing the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements? Q.18.3.4: How are the FMI's procedures for managing the suspension and orderly exit of a participant disclosed to the public?	A.18.3.3. In accordance with Clearing Rules, NCC may restrict services to CM violating or incompliant with the established requirements, to the point of complete termination of clearing services. The grounds for such measures may include, in particular, default on obligations, revocation of the license, violation of mandatory performance indicators, losses, and other deterioration of the financial condition. The procedures and order for interaction between NCC's units are determined in its internal documents. A.18.3.4. The participation criteria, including restrictions in participation, are regulated by Clearing Rules, which are publicly available at NCC's official website.
Final conclusion on the Principle 18	NCC guarantees access to clearing services provided that CMs comply with the access criteria, which are the same for all the markets. CMs that belong to the same category are subject to the same access criteria. There are variations in requirements for different types of CMs (banks, financial companies and non-residents), stemming from regulatory specifics and peculiarities of their particular business (for example, there are reporting variations). NCC exercises an ongoing control of CMs' compliance with access criteria.	
Assessment of the Principle 18	**Observed**	

Recommendations and comments	-

Principle 19: Tiered participation arrangements An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.		
Key consideration 1: An FMI should ensure that its rules, procedures, and agreements allow it to gather basic information about indirect participation in order to identify, monitor, and manage any material risks to the FMI arising from such tiered participation arrangements.	*Tiered participation arrangements* Q.19.1.1: Does the FMI have any tiered participation arrangements? If so, describe these arrangements. Q.19.1.2: How does the FMI gather basic information about indirect participation? Which information is collected and how frequently is it updated?	A.19.1.1, 19.1.2. NCC does not use any tiered participation arrangements; at that, NCC offers both direct participation in a role of CM and indirect participation in a role of CM's client. Clearing Rules stipulate necessary requirements for the direct participation in a role of CM. In case of the indirect participation as CM's client, such client is registered on the basis of the information provided by CM. The requirements for information provided for a client's registration are set by CBR. In case of any changes in the information for client's registration, CM shall provide such amended information. Trades may be executed in the interests and at the expense of CM or in the interests and at the expense of CM's client. At that, CM is counterparty for obligations under all trades.
	Risks to the FMI Q.19.1.3: How does the FMI evaluate its risks arising from these arrangements? Q.19.1.4: What material risks to the FMI arising from tiered participation arrangements has the FMI identified? How has it mitigated these risks?	A.19.1.3. NCC evaluates risks for the trades recorded in the position accounting registers which correspond to the same cash collateral register, on the basis of the collateral recorded in this cash collateral register. Risks are evaluated in the same manner for own cash collateral registers of CM and for the client cash collateral registers. Given the unified risk evaluation approach, tiered participation arrangements do not generate any material risks for NCC. A.19.1.4.Under the principal-to-principal contractual structure established in Clearing Rules, a CM is responsible for the financial servicing of all contracts registered in their client accounts. As a result, whilst NCC does not have a direct relationship with clients, these 'indirect participants' may pose a risk to NCC if they experience extreme losses, large enough to cause distress to a direct participant CM.
Key consideration 2: An FMI should identify material dependencies between direct	Q.19.2.1: How does the FMI identify material dependencies between direct and indirect participants that might affect the FMI?	A.19.2.1. NCC evaluates interdependency risks in accordance with its internal criteria. NCC conducts monthly monitoring of the reporting and other information about CMs' interdependencies. This is only

and indirect participants that might affect the FMI.		applicable to CMs and collateral related wrong-way risk as there is no tiered participation.
Key consideration 3: An FMI should identify indirect participants responsible for a significant proportion of trades processed by the FMI and indirect participants whose trade volumes or values are large relative to the capacity of the direct participants through which they access the FMI in order to manage the risks arising from these trades.	Q.19.3.1: Has the FMI identified (a) the proportion of activity that each direct participant conducts on behalf of indirect participants in relation to the direct participants' capacity, (b) direct participants that act on behalf of a material number of indirect participants, (c) indirect participants responsible for a significant proportion of turnover in the system, and (d) indirect participants whose trade volumes or values are large relative to the capacity of the direct participant through which they access the FMI to manage risks arising from these trades? Q.19.3.2: What risks to the FMI arise, and how does the FMI manage these risks arising from key indirect participants?	A.19.3.1. Not applicable. A.19.3.2. Not applicable.
Key consideration 4: An FMI should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate.	Q.19.4.1: What are the FMI's policies for reviewing its rules and procedures in order to mitigate risks to the FMI arising from tiered participation? How frequently is this review conducted? Q.19.4.2: What criteria does the FMI use to determine when mitigating actions are required? How does the FMI monitor and mitigate its risks?	A.19.4.1: Not applicable. A.19.4.2: NCC monitors positions of CMs and their clients; position coverage is checked at least once a day. The grounds for taking risk mitigation measures are: actual volatility is higher than calculated volatility, market crisis characterized by the deteriorating financial condition of a significant share of CMs.
Final conclusion on the Principle 19	NCC does not use any tiered participation arrangements. NCC offers both direct participation (CM) and indirect participation (CM's client). Clearing Rules set the requirements for such participation and contain procedures for evaluation and control of the risks which may arise for NCC. NCC does not have to analyze the risks of CMs' clients as CMs are in charge of them due to the clearing model that NCC currently operates.	
Assessment of the Principle 19	**Not applicable**	

Recommendations and comments	-

Principle 20: FMI links An FMI that establishes a link with one or more FMIs should identify, monitor, and manage link-related risks.		
Key consideration 1: Before entering into a link arrangement and on an ongoing basis once the link is established, an FMI should identify, monitor, and manage all potential sources of risk arising from the link arrangement. Link arrangements should be designed such that each FMI is able to observe the other principles in this report.	Q.20.1.1: What process is used to identify potential sources of risk (such as, legal, credit, liquidity, custody and operational risks) arising from prospective links? How does this affect the FMI's decision whether to establish the link? Q.20.1.2: What links have been established with other FMIs? How does the FMI identify, monitor and manage the risks arising from an established link on an ongoing basis? Q.20.1.3: How does the FMI ensure that link arrangements are designed so that it is able to remain observant of the other principles? How frequently is this analysis conducted?	A.20.1.1, 20.1.2, 20.1.3. NCC interacts with NSD, which conducts clearing settlements and central depository services on the basis of local legislation and agreements.
Key consideration 2: A link should have a well-founded legal basis, in all relevant jurisdictions, that supports its design and provides adequate protection to the FMIs involved in the link.	Q.20.2.1: In which jurisdictions has the FMI established links? What are the relevant legal frameworks supporting the established links? Q.20.2.2: How does the FMI ensure that its links have a well founded legal basis that support its design and provide it with adequate protection in all relevant jurisdictions? How does the FMI ensure that such protections are maintained over time?	A.20.2.1. NCC has established links within the Russian jurisdiction. Interaction with NSD takes place on the basis of the Interaction Agreement. A.20.2.2. The interaction agreements contemplate the liability of the parties for improper performance of their obligations under the agreement.
Key consideration 3: Credit and liquidity risks control across CSDs.		Not applicable

Key consideration 4: Transfer timeframes for CSDs.		Not applicable
Key consideration 5: CSD members' right protection.		Not applicable
Key consideration 6: Additional risks control across CSDs.		Not applicable
Key consideration 7: Before entering into a link with another CCP, a CCP should identify and manage the potential spill-over effects from the default of the linked CCP. If a link has three or more CCPs, each CCP should identify, assess, and manage the risks of the collective link arrangement.	*Linked CCP default* Q.20.7.1: Prior to establishing any links, what analysis was undertaken by the CCP to identify and assess the spillover effects of a linked CCP's default? Q.20.7.2: How does the CCP manage any identified spillover effects of a linked CCP's default? *Collective link arrangements (three or more CCPs)* Q.20.7.3: Prior to establishing any links, what analysis was conducted by the CCP to identify and assess the potential spillover effects of a link arrangement involving three or more CCPs? Q.20.7.4: In the case of collective link arrangements, what processes are in place for the CCP to identify, assess and manage risks arising from the collective link arrangement? In the case of links between CCPs, is there a clear definition of the respective rights and obligations of the different CCPs?	A.20.7. NCC has no links with other CCPs.
Key consideration 8: Each CCP in a CCP link arrangement should be able to cover, at least on a daily basis,	*Exposures and coverage of exposures* Q.20.8.1: What processes are in place to measure, monitor and manage inter-CCP exposures?	A.20.8. NCC has no links with other CCPs.

its current and potential future exposures to the linked CCP and its participants, if any, fully with a high degree of confidence without reducing the CCP's ability to fulfil its obligations to its own participants at any time.	Q.20.8.2: How does the CCP ensure, on an ongoing basis, that it can cover its current exposure fully? Q.20.8.3: How does the CCP ensure that it covers its potential future exposure with a high degree of confidence, without reducing its ability to fulfil its own obligations? *Management of risks* Q.20.8.4: What arrangements do the linked CCPs have in place to manage the risks arising from the link (such as a separate default fund, increased margin requirements or contributions to each other's default funds)? Q.20.8.5: If the CCPs contribute to each other's default funds, how is it ensured that the contribution to another CCP's default fund does not affect the ability of the CCP to fulfil its obligations to its own participants at any time? *Information provided to participants* Q.20.8.6: How do the linked CCPs ensure that participants are informed about their exposures to the potential sharing of uncovered losses and uncovered liquidity shortfalls from the link arrangement?	
Key consideration 9: Additional operational risks of a CSD.		Not applicable
Final conclusion on the Principle 20	NCC interacts with NSD, which conducts clearing settlements in securities and cash on the basis of the relevant agreements.	
Assessment of the Principle 20	**Observed**	
Recommendations and comments	-	

Principle 21: Efficiency and effectiveness An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.		
Key consideration 1: An FMI should be designed to meet the needs of its participants and the markets it serves, in particular, with regard to choice of a clearing and settlement arrangement; operating structure; scope of products cleared, settled, or recorded; and use of technology and procedures.	Q.21.1.1: How does the FMI determine whether its design (including its clearing and settlement arrangement, its operating structure, its delivery systems and technologies, and its individual services and products) is taking into account the needs of its participants and the markets it serves? Q.21.1.2: How does the FMI determine whether it is meeting the requirements and needs of its participants and other users and continues to meet those requirements as they change (for example, through the use of feedback mechanisms)?	A.21.1.1. CMs' needs are discussed at the users' committees, which consist of the market participants. Moscow Exchange has established a number of specialized users' committees, in particular: • Committees for various markets; • Committee for settlements and registration of operations; • Committee for information technology services. A.21.1.2. Meeting CMs' needs is evaluated after implementing new technologies, rules, procedures, products and services as part of the existing feedback procedure. Different user committees are established for each market operated by Moscow Exchange providing regular feedback.
Key consideration 2: An FMI should have clearly defined goals and objectives that are measurable and achievable, such as in the areas of minimum service levels, risk-management expectations, and business priorities.	Q.21.2.1: What are the FMI's goals and objectives as far as the effectiveness of its operations is concerned? Q.21.2.2: How does the FMI ensure that it has clearly defined goals and objectives that are measurable and achievable? Q.21.2.3: To what extent have the goals and objectives been achieved? What mechanisms does the FMI have to measure and assess this?	A.21.2.1. NCC's strategic goals and objectives are described in A.2.1.1. All goals are measurable and achievable. A.21.2.2. NCC measures its performance against KPIs that are set annually and revised twice a year. A.21.2.3. The Supervisory Board of NCC decides whether goals have been achieved or not. Based on the results of the previous Strategy the majority of NCC's goals were accomplished successfully.

Key consideration 3: An FMI should have established mechanisms for the regular review of its efficiency and effectiveness.	Q.21.3.1: What processes and metrics does the FMI use to evaluate its efficiency and effectiveness? Q.21.3.2: How frequently does the FMI evaluate its efficiency and effectiveness?	A.21.3.1 - 21.3.2. NCC conducts assessment of efficiency and progress in achieving the goals set for the running year on a yearly basis. Furthermore, there is an ongoing monitoring of the project implementation, and the progress reports are provided to the management at least once per quarter. NCC's statement of financial results is drawn up each quarter as well.
Final conclusion on the Principle 21	When determining the procedure for transactions and services, NCC takes into account the interests of CMs and the markets by forming user committees, with whom it discusses the changes prior to their introduction, and by means of the feedback arrangements, which make it possible to assess how satisfied CMs are. To ensure an adequate level of NCC's performance efficiency, NCC sets strategic goals, monitors the progress in their achievement and conducts their regular revision.	
Assessment of the Principle 21	**Observed**	
Recommendations and comments	**-**	

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.		
Key consideration 1: An FMI should use, or at a minimum accommodate, internationally accepted communication procedures and standards.	*Communication procedures* Q.22.1.1: Does the FMI use an internationally accepted communications procedure and, if so, which one(s)? If not, how does the FMI accommodate internationally accepted communication procedures? Q.22.1.2: If the FMI engages in cross-border operations, how do the FMI's operational procedures, processes and systems use or otherwise accommodate internationally accepted communication procedures for cross-border operations?	A.22.1.1 - 22.1.2. NCC conducts settlements and payments by means of the internationally accepted system, viz. SWIFT.
	Communication standards Q.22.1.3: Does the FMI use an internationally accepted communications standard and, if so, which one(s)? If not, how does the FMI	A.22.1.3 – A.22.1.5: NCC uses the SWIFT standards in communication. As regards IT interaction NCC's systems use the SWIFT standards as well.

	accommodate internationally accepted communication standards? Q.22.1.4: If the FMI engages in cross-border operations, how do the FMI's operational procedures, processes and systems use or otherwise accommodate internationally accepted communication standards for cross-border operations? Q.22.1.5: If no international standard is used, how does the FMI accommodate systems that translate or convert message format and data from international standards into the domestic equivalent and vice versa?	
Final conclusion on the Principle 22	NCC uses internationally accepted communications standards to communicate with CMs, settlement organizations, and other counterparties.	
Assessment of the Principle 22	**Observed**	
Recommendations and comments	-	

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.		
Key consideration 1: An FMI should adopt clear and comprehensive rules and procedures that are fully disclosed to participants. Relevant rules and key procedures should also be publicly disclosed.	*Rules and procedures* Q.23.1.1: What documents comprise the FMI's rules and procedures? How are these documents disclosed to participants? Q.23.1.2: How does the FMI determine that its rules and procedures are clear and comprehensive?	A.23.1.1. Information is disclosed in the cases stipulated by the effective legislation and, additionally, to the extent contemplated by the Regulation on Information Policy of NCC, dated March 28th, 2013. The documents regulating the rules and procedures consist of Clearing Rules, clearing regulations, forms used in document exchange with CMs and approved by NCC's management bodies. These documents are made publicly available at NCC's website. A.23.1.2. NCC Clearing Rules are published on its website. The relevant rules and procedures are fully accessible to all CMs and any other interested parties, including the general public. NCC staff

		are available to answer questions from CMs on Clearing Rules and procedures.
	Disclosure Q.23.1.3: What information do the FMI's rules and procedures contain on the procedures it will follow in non-routine, though foreseeable, events? Q.23.1.4: How and to whom does the FMI disclose the processes it follows for changing its rules and procedures? Q.23.1.5: How does the FMI disclose relevant rules and key procedures to the public?	A.23.1.3. NCC's rules and procedures contemplate events obstructing clearing services provision to CMs (i.e. emergencies) and the measures aimed to resolve such situations (emergencies). The information about the emergency and the measures taken to resolve the situation is provided to the exchange, CMs, settlement organizations and CBR in any possible way. A.23.1.4. Clearing Rules are preliminarily reviewed and endorsed by the Risk Committee of the Supervisory Board. The approval of Clearing Rules is conducted by NCC's Supervisory Board, and subsequently they must be registered by CBR and disclosed at least 5 days prior to their effective date. The establishment and modification of the size of the CCP liability and clearing rule changes relating to changes in the rules of the arbitration agreement shall become effective no earlier than three months after the disclosure. Moreover, in due time before the modification or introduction of a new technological process, it is discussed at the specialized committees of Moscow Exchange. A.23.1.5. NCC discloses its Clearing Rules and the documents developed in accordance with Clearing Rules at NCC's website. NCC holds meetings with CMs in order to clarify Clearing Rules.
Key consideration 2: An FMI should disclose clear descriptions of the system's design and operations, as well as the FMI's and participants' rights and obligations, so that participants can assess the risks they would incur by participating in the FMI.	Q.23.2.1: What documents comprise information about the system's design and operations? How and to whom does the FMI disclose the system's design and operations? Q.23.2.2: How and to whom does the FMI disclose the degree of discretion it can exercise over key decisions that directly affect the operation of the system?	A.23.2.1-23.2.2. NCC's information is disclosed in the cases stipulated by the effective legislation and, additionally, to the extent contemplated by the Regulation on Information Policy of NCC. The recipients of such information are NCC's clients, CMs, NCC's shareholder, supervisory bodies and regulators, potential investors, members of NCC's Supervisory Board, professional securities market participants, mass media, etc. The disclosure / provision requirements, in particular, apply to information about stress testing of the risk management system, documents regulating the operation of such system, and other

		relevant decisions of NCC's management bodies. The procedure and actions taken by NCC in course of its clearing activities are described in Clearing Rules for the relevant market. Clearing Rules shall be registered by CBR and disclosed to all stakeholders at least 5 days prior to their effective date. NCC's Clearing Rules and the Trading Rules of the Exchange stipulate possibilities for making key decisions affecting NCC's operations. The list of rights and obligations of CMs and NCC is provided in Clearing Rules.
	Q.23.2.3: What information does the FMI provide to its participants about their rights, obligations and risks incurred through participation in the FMI?	A.23.2.3. Along with Clearing Rules, the following documents are available at NCC's website: • Risk Management Policy; • Methodology for determining risk parameters of the securities market of MICEX Stock Exchange • Methodology for determining risk parameters of the FX market and precious metals market of Moscow Exchange; • Criteria of NCC for identifying the persons or entities linked with a CM; • Methodology for selecting and evaluating foreign currencies and securities accepted as collateral; • Principles for guarantee collateral calculation on Derivative market; • Major guidelines of the Methodological Recommendations for individual assessment of credit exposures to counterparties / securities issuers at NCC; • Methodology for calculation of counterparties internal ratings; • Methodology for calculation of risks on Standardised OTC Derivatives market; • Methodology for determining limits on arrangements price movements on Derivative market. http://www.nkcbank.ru/viewCatalog.do?menuKey=128 Clearing Rules of the Bank National Clearing Centre (JCS): • Part I. General part,

		• Part II. Tariffs, • Part III. Clearing Rules for Securities Market, • Part IV. Clearing Rules for FX and Precious Market, • Part V. Clearing Rules for Derivatives Market, Clearing Rules for Standardised OTC Derivatives Market. http://www.nkcbank.ru/viewCatalog.do?menuKey=244
Key consideration 3: An FMI should provide all necessary and appropriate documentation and training to facilitate participants' understanding of the FMI's rules and procedures and the risks they face from participating in the FMI.	Q.23.3.1: How does the FMI facilitate its participants' understanding of the FMI's rules, procedures and the risks associated with participating?	A.23.3.1. When launching a new project, NCC sends information letters to CMs, uploads information (instructions) to its website, provides advice and explains the changes by phone and instructs on the actions CMs should take to continue proper operation. In order for CMs to understand NCC's rules and procedures, NCC makes available at its website the information materials explaining NCC's rules and procedures and containing the contact information of the persons who could provide further explanations and answer questions.
	Q.23.3.2: Is there evidence that the means described above enable participants' understanding of the FMI's rules, procedures and the risks they face from participating in the FMI?	A.23.3.2. If CM is required to take any actions, NCC checks and records the accuracy and timeliness of such actions on the part of all CMs.
	Q.23.3.3: In the event that the FMI identifies a participant whose behaviour demonstrates a lack of understanding of the FMI's rules, procedures and the risks of participation, what remedial actions are taken by the FMI?	A.23.3.3. If NCC identifies any CM whose conduct demonstrates absence of understanding of NCC's rules and procedures, NCC holds consultations with the CM and, as a result thereof, amends and supplements the information materials made available at its website.

Key consideration 4: An FMI should publicly disclose its fees at the level of individual services it offers as well as its policies on any available haircuts. The FMI should provide clear descriptions of priced services for comparability purposes.	Q.23.4.1: Does the FMI publicly disclose its fees at the level of its individual services and policies on any available haircuts? How is this information disclosed? Q.23.4.2: How does the FMI notify participants and the public, on a timely basis, of changes to services and fees? Q.23.4.3: Does the FMI provide a description of its priced services? Do these descriptions allow for comparison across similar FMIs? Q.23.4.4: Does the FMI disclose information on its technology and communication procedures, or any other factors that affect the costs of operating the FMI?	A.23.4.1. The charges for the clearing services provided by NCC to CMs are determined by the document Clearing Rules Part II. Tariffs disclosed at http://www.nkcbank.com/UserFiles/File/CK22/NCC%20Pravila%20kliringa.%20Tarifi%20(1%20redakziya%202015).pdf A.23.4.2. The information about the new version of Clearing Rules containing the rates shall be disclosed pursuant to the provisions of the Russian legislation 5 days prior to the effective date of such new version. A.23.4.3. The priced services are described in Clearing Rules in a manner enabling them to be compared with the services provided by the similar Financial Market Infrastructures. A.23.4.4. Clearing Rules contain information about the technologies used during interaction between Financial Market Infrastructure's subjects: NCC, trade organizer, settlement organization, settlement depository, and CMs. Furthermore, NCC participates in the meetings of the IT committees held jointly with market participants.
Key consideration 5: An FMI should complete regularly and disclose publicly responses to the CPSS-IOSCO disclosure framework for financial market infrastructures. An FMI also should, at a minimum, disclose basic data on trade volumes and values.	Q.23.5.1: When did the FMI last complete the CPSS-IOSCO *Disclosure framework for financial market infrastructures*? How frequently is it updated? Is it updated following material changes to the FMI and its environment and, at a minimum, every two years? Q.23.5.2: What quantitative information does the FMI disclose to the public? How often is this information updated?	A.23.5.1: NCC completed the last CPSS-IOSCO Disclosure framework for financial market infrastructures in March, 2015. NCC is aimed at disclosing the most relevant information about itself, thus the questionnaire is updated in case of any material changes and at least once in two years. A.23.5.2: NCC and Moscow Exchange publicly disclose the quantitative information, including the following data: • existing risk parameters used to determine the Initial margin requirements; • trading results, including trading volumes, various prices (settlement prices, market prices, etc.), volume of positions opened for each futures contract / option contract; • intraday trading dynamics.

	Q.23.5.3: What other information does the FMI disclose to the public? Q.23.5.4: How does the FMI disclose this information to the public? In which language(s) are the disclosures provided?	A.23.5.3: In addition, NCC publicly discloses a significant volume of other information, including: • Description of products/services provided; • Description of the risk management framework; • Requirements for CMs; • Principal information about the policy of allocation of own funds and collateral of CMs. A.23.5.4: The information is disclosed on the websites of NCC (www.nkcbank.ru) and Moscow Exchange (www.moex.com) in Russian and in English.
Final conclusion on the Principle 23	NCC discloses the documents determining the rules and procedures associated with clearing activities, approved by NCC's bodies. To ensure the clarity of wording and comprehensiveness of the contents, these documents undergo internal approval process and are coordinated with CMs (Risks Committee). Clearing Rules disclose the rights and obligations of CMs, risk management measures taken by NCC, and NCC's rates. NCC and Moscow Exchange disclose the principal information about the volume and value of the trades executed via NCC as CCP. NCC conducts regular assessments of compliance with CPSS-IOSCO PFMI and is aimed at disclosing information about itself as promptly as possible.	
Assessment of the Principle 23	**Observed**	
Recommendations and comments	-	