

ANNUAL REPORT

**of Central Counterparty National Clearing Centre
for the Year 2019**

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1. EXECUTIVE SUMMARY

Central Counterparty National Clearing Centre (“CCP NCC” or the “Company”) was established in 2005 as the Joint-Stock Commercial Bank “National Clearing Centre” (Closed Joint Stock Company)”, briefly the CJSC JSCB National Clearing Centre, by resolution of the General Meeting of Founders and registered with Interdistrict Federal Tax Service Office No. 50 for the City of Moscow on 30 May 2006 (Legal entity state registration certificate series 77 No. 010075586 of 30.05.2006, Primary State Registration Number (OGRN) 1067711004481).

CCP NCC was issued Credit Organization Registration Certificate No. 3466 by the Bank of Russia on 30 May 2006 and license No. 3466 for banking operations in rubles and foreign currencies (without a right to raise retail cash deposits) on 16 August 2006.

In 2014, CCP NCC was reorganized through merger with the Non-Banking Credit Organization “RTS Clearing House” Credit Organization (Closed Joint Stock Company) and the Closed Joint Stock Company RTS Clearing Center. CCP NCC is a legal successor to the above legal entities with all their rights and obligations transferred to it, including the those disputed by the parties.

By the resolution of CCP NCC’s sole shareholder, in 2015 the trade names of NCC were made consistent with the applicable laws and changed accordingly to the “Bank National Clearing Centre (Joint Stock Company)” and briefly “NCC Bank (JSC)”. On 17 March 2015, license No. 3466 for banking operations in rubles and foreign currencies (without a right to raise retail cash deposits) was renewed to reflect the name change, along with the license for raising and placing deposits in precious metals.

In 2015, CCP NCC was accredited by the Bank of Russia to perform functions of a commodity delivery operator (CDO).

In 2017, based on the sole shareholder’s resolution, CCP NCC changed its status from the bank to the non-banking credit organization – central counterparty, and was renamed accordingly as credit organization Central Counterparty National Clearing Centre, briefly CCP NCC.

On 28 November 2017, the Bank of Russia assigned CCP NCC the central counterparty status (hereinafter referred to as CCP).

Pursuant to the Federal Law on Clearing, Clearing Services and Central Counterparty, and for the purposes of its clearing activity, CCP NCC also maintains the clearing license dated 18.12.2012.

Due to the changes made into the Federal Law dated 02.12.1990 No. 395-1 “On Banks and Banking Activity” and the Instruction of the Bank of Russia dated 02.04.2010 No. 135-I “On Procedure of Taking a Decision by the Bank of Russia Concerning the State Registration of

Credit Companies and Issuing Licenses for Bank Transactions” and related to renaming of bank transactions with precious metals, on 16.04.2019 the NCC updated the license for bank transaction for credit organizations – central counterparties No. 3466-CCP and Modifications No. 1 agreed with the Bank of Russia on 05.04.2019 and registered by the FTS of Russia Directorate for Moscow on 11.04.2019 were made to the NCC Articles of Association.

CCP NCC also holds the license for development, generation and distribution of encryption (cryptographic) tools, information and telecommunication systems protected with use of encryption (cryptographic) tools, works and services related to encryption of information, maintenance of encryption (cryptographic) tools, information and telecommunication systems protected with use of encryption (cryptographic) tools, except for maintenance of the encryption (cryptographic) tools for legal entities’ or individual entrepreneurs’ internal needs.

Principal Place of Business:

13, Bolshoi Kislovskiy pereulok, Moscow, 125009.

Mailing address:

13, Bolshoi Kislovskiy pereulok, Moscow, 125009.

During the reporting period, the following structural units were operating:

- Sredniy Kislovskiy Additional Office of CCP NCC at 1/13, Sredniy Kislovskiy pereulok, bldg. 8, Moscow;
- Spartakovskiy Additional Office of CCP NCC at 12, Spartakovskaya Street, Moscow.

Management bodies.

According to the Articles of Association, CCP NCC’s management bodies are as follows:

- General Shareholders Meeting is a supreme management body;
- Supervisory Board as a management body responsible for overall supervision of CCP NCC’s activities. Members of the Supervisory Board are elected by the General Shareholders Meeting to hold office until the next annual General Shareholders Meeting;
- Management Board (a collective executive authority) provides daily management of CCP NCC’s operations; Members of the Management Board are elected by the Supervisory Board; each member’s term of office being determined by resolution of the Supervisory Board but for not more than five years;
- CEO (hereinafter the “sole executive body”) provides daily management of CCP NCC’s operations and is elected by the Supervisory Board for a term to be determined by the Supervisory Board but for not more than five years.

By resolution of the sole shareholder, Deloitte & Touche CIS was appointed an independent auditor of CCP NCC for the year 2019.

2. AUTHORIZED CAPITAL AND SHAREHOLDING STRUCTURE

When establishing the Company, the General Meeting of Founders approved its Authorized Capital totaling RUB235,000,000.00 and divided into 235,000 registered ordinary shares with par value of RUB1,000.00 each.

Between 2006 and 2013, CCP NCC’s authorized capital was increased from RUB235,000,000.00 to RUB15,170,000,000.00 via placement of additional of registered uncertified ordinary shares in NCC. Further increase of the authorized capital was connected

with reorganization of CCP NCC in 2014 through merger and two additional issues of ordinary registered uncertified shares in CCP NCC in the aggregate number of 1,500,000 (not exceeding the number of authorized shares) through conversion of shares of the acquired entities: Non-Banking Credit Organization “RTS Clearing House” (closed joint-stock company) and closed joint-stock company RTS Clearing Center.

As of the end of the reporting period, the authorized capital of the Company was RUB16,670,000,000.00 and divided into 16,670,000 registered uncertified ordinary shares with par value of RUB1,000.00 each.

Shareholding structure

As of 31 December 2019, the share of CCP NCC contained entry of one shareholder only, namely Public Joint-Stock Company Moscow Exchange MICEX-RTS.

During the reporting period, CCP NCC Register of Shareholders was maintained by Joint Stock Company “Registration Company STATUS”.

3. INDUSTRY POSITION OF CCP NCC

In 2019, Moscow Exchange preserved its positions as the attractive for investors and active global trading venue representing the wide range of trading and post-trading services at the modern technological platform. It required sustaining the duly development dynamics in key areas of the NCC activity and the stable performance of the clearing company and central counterparty functions by the Company in the markets of the Moscow Exchange Group - FX and precious metals market, securities market and deposits market, derivatives markets an standardized derivatives (SD) market and commodities market of the National Mercantile Exchange JSC.

In the reporting period, CCP NCC performed its activity according to strategic development targets while focusing its main efforts on implementing the following projects and objectives:

- Implementing the projects of clearing business and services development including the ones related to unification of clearing procedures at all markets of the Moscow Exchange Group; adaptation of specific clearing procedures while taking into account external negative challenges; strengthening operational reliability in stressful situations; increasing the level of central counterparty protection from legal risks.
- Implementing the set of measures to improve risk management processes; supporting the CCP management quality at the required level in accordance to the national regulatory requirements and international standards.
- Developing the project to create the access channel to the global OTC liquidity in order to expand options for offering the OTC service to FX market participants to enter F X buy-sale trades with the major international banks via NCC as a CCP.
- Implementing the plans to form the revenue part of CCP NCC budget out of commissions and interest incomes.
- Optimization and automatizing of operational procedures related to clearing and risk management in order to enhance reliability and continuity of clearing systems and the systems providing for functionality of the risk management system.

Same as in the previous period CCP NCC took the position of one most capitalized and high-tech clearing houses in the world while performing its activities according to international standards, the Russian law, requirements of the Bank of Russia as well as taking into account recommendations of the sole shareholder – PJSC Moscow Exchange. According to bank rankings, at both the reporting year and the year 2018 CCP NCC had the 4th place among

Russian credit organizations as for the volume of assets that was 3.9 trn rubles as of 31.12.2019.

In 2019, CCP NCC implemented strategic projects and scheduled objectives for development of clearing services and implementation of risk management against the continuing sanction regime and risks related to it, stressful situations occurred at some exchange market segments and due to realization of certain legal and custodial risk events that made certain challenges for the Company and the Group in general.

In 2019, compared with 2018, the volumes of cash collateral in rubles and USD posted by clearing members continued decreasing that was mostly resulted from changes in the market conditions. Despite it, the accumulated income from transactions on the FX, money and securities market could be provided for the reporting period at the level of the previous year, mostly, due to the effective asset profile and maturity management during the period when market interest rates for rubles and USD were considerably volatile. The signing of the General Agreement with the Federal Treasury concerning purchase (sale) of securities upon REPO contracts also contributed to this. In general, in the reporting year the positive growth dynamics of the CCP NCC business profitability was supported that helped to make the significant input into formation of the income part of the whole Group Budget.

The important aspect of legal risk reduction was introduction of the mode in 2019 within the default-management that helped to settle down obligations of defaulting clearing members by the most market method based on the transactions concluded by CCP.

During the reporting period, CCP NCC continued developing the compliance culture based on distribution of authorities between structural subdivisions and the CCP NCC employees in the process of risk identification, assessment and risk management in compliance with COSO (the Committee of Sponsoring Organization of the Treadway Commission) concept according to the "three lines of defense" model.

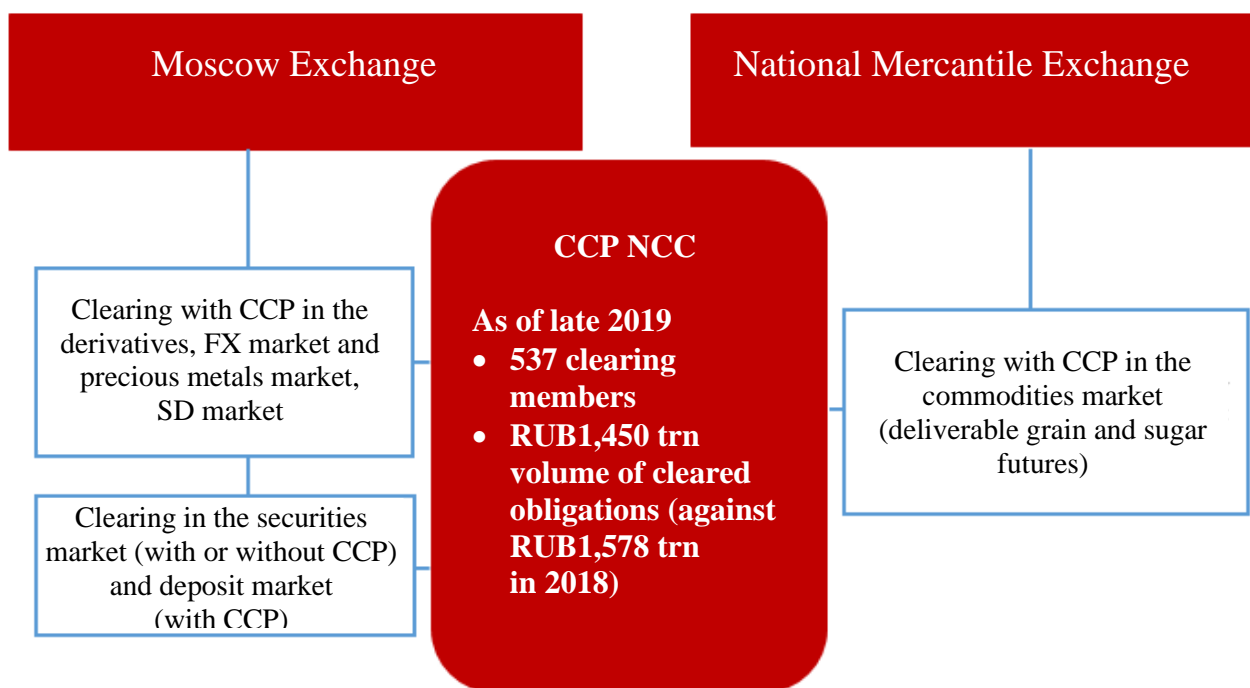
The first defense line: all employees of CCP NCC business functions and operational subdivisions engaged in an identification of the risks inherent to the day-to-day activity as well as in development and implementation of policies and procedures defining current business processes.

The second defense line: the Internal Control Service, the Credit Risk Department, the Market Risk Department, the Officer responsible for the operational risk management, the Legal Officer, the Officer responsible for reputation risk management, the Financial Monitoring Service as well as other subdivisions supporting subdivisions of the first defense line as for risk identification issues, development and implementation of control procedures and performing the internal interaction to minimize the likelihood of risks arising.

The third defense line: The Internal Audit Service monitoring effectiveness of risk management.

In 2019, CCP NCC continued taking part in the activity of CCP12 (Global Association of Central Counterparties and the EACH (European Association of Central Counterparty Clearing Houses) as a full member. At this, alongside the active participation in working out of international rules and standards of central counterparty activities, CCP NCC stood for and achieved recognition by the EACH of the need to maintain the balance in the Association's activity's emphases when its influence and opportunities are used in favor of both the CCP members from the EU and other members, central counterparties of third countries, CCP NCC belongs to.

The general scheme of CCP NCC's clearing activity at exchange markets as for the end of 2019 was as follows s:



I

The past year's most important results and events worth mentioning include:

I. **Implementation of the project “Unified Clearing for the Standardized Derivatives Market” that was gradually implemented by solution of several issues:**

- enforcement of unified clearing rules including description of the SD market;
- unification of transactions and operations for posting and returning collateral on the SD market with other Moscow Exchange markets (FX, securities and derivatives markets);
- integration of the SD market into the unified collateral pool technology.

II. FX market participants are provided by the new Request for Stream (RFS) service that allows closing major FX transaction on the market for the best prices due to holding microauctions with the wide range of liquidity providers. The RFS service is available to both the professional financial market players and the Russian non-financial companies and the foreign financial institutions. Due to the new service, financial and non-financial companies may convert the large volume of currency for the best price and with the zero negotiable fee having all liquidity providers as counterparties. At this, FX liquidity providers get the chance to work with hundreds of counterparties while continuing to take only the CCP NCC risks and to use the Company's settlement infrastructure. Implementation of the project will allow the market participants to get access to the global FX liquidity with minimum risks and for the best prices while keeping their usual interfaces of the Russian infrastructure, advantages and convenience of work of the CCP. Trading in the new mode are held as an anonymous auction with all ruble couples traded on the Moscow Exchange. The minimum amount of the order is 5 mln currency units. At the end of the auction, the OTC transaction is closed between players with settlements via the CCP. The asymmetric tariff model is used: the fee will be zero for liquidity consumers and 16 currency units (0.0016%) fee for 1 mln of the currency for liquidity providers.

III. Automatization of the closeout netting process in regard to the clearing participant if such procedure is initiated when relevant restrictive signs are discovered in all trading systems of the Moscow Exchange Group and active orders and transactions are waived. This function does not enable actions resulting into enhancement of positions held by the closed-out clearing participant, hereby reducing risks of unauthorized actions during the closeout netting.

IV. The project “Links with Foreign Liquidity Providers” was further developed in regard to expansion of FX pairs and the increased number of liquidity providers. In addition to EUR-USD and GBR-USD pairs, USD-TRL, USD-JPY and USD-RMB pairs were included that allowed to attract the additional liquidity to the Russian financial market.

Within this project, **the trade link for transactions with precious metals with foreign liquidity providers was also completed.** Transactions using this service are closed between CCP NCC and clearing members provided that there is a counter quotation of the liquidity provider CCP NCC closes the transaction with within the ISDA agreement. Clearing and settlements for transactions are made by CCP NCC performing the CCP functions that allows members to use benefits and services of the unified collateral pool including cross margining with all markets and unified requirements to the collateral. This service enables the growth of precious metals trade volumes using the infrastructure of the Moscow Exchange Group, sales market diversification and increased effectiveness of transaction with the gold for Russian participants of the precious metals market and their customers.

V. CCP NCC was granted the status of the clearing member on the Shanghai Gold Exchange that will allow the Moscow Exchange to implement the trade and clearing link with the Chinese trade platform in the future and, as a result, to get access to the Chinese gold market that is the largest in the world, to enhance the growth of liquidity and precious metals trade volumes, to diversify sales markets, to enhance effectiveness of transactions with the gold while closing transactions with the gold loco Shanghai with settlements via CCP NCC.

VI. Implementation of clearing development projects by the Moscow Exchange Group includes the following:

- **the method is implemented to control the CCP risk concentration for the gradual limitation of the clearing member's activity**, who opens positions with focused risks for any risk factors assessed: the price risk and the risk of changing volatility. That allows to set up limits individually for all risk factors affecting the accumulated risk of the position portfolio.

Due to implementation of this method, the following changes are made into clearing rules:

- the procedure for emergence and execution of marginal calls for the risk of concentration on the issuer is determined;
- the procedure for deposit/return of collateral made to reduce the risk of focusing on the issuer (the issuer's securities group) similar to the procedure for deposit/return of investments into warranty funds and the individual clearing collateral;
- **automatized execution, dispatching and treatment of SWIFT messages via the financial messaging system of the Bank of Russia (hereinafter referred to as the FMS) is implemented in the CCP NCC accounting system.** The FMS operated on the basis of the information and telecommunication system used by the Bank of Russia is made as the alternative inter-banking interaction channel in order to provide for the

secured and continued provision of electronic messaging services concerning financial transaction, reduction or risks affecting safe and confidential provision of financial messaging services.

The FMS implements the function of the Bank of Russia concerning arrangement for provision of financial messaging services including:

- sending SWIFT format messages;
 - sending messages in the users' own formats;
 - control of SWIFT format financial messages;
 - the option for the FMS subscriber to determine the list of their counterparties and types of financial messages received from them is secured;
- **the new bond market OTC mode has been established since June 2019.** It allowed clearing participants to close OTC deals with CCP while getting the extract from the register of tenders (EQM2T) and the extract from the register of OTC deals (EQM3T) from CCP NCC.

The OTC system is the subsystem used to indicate interest and to form quotations of the MOEX Board information system tools, seen on the picture below.



- **in order to improve the collateral and clearing risk management the automatized selection of securities in the NSD is implemented to close unexecuted marginal calls by a clearing member or before regulating procedures executed in regard to the clearing member when the number of porting days is in excess;**
- **the trading and clearing system of the securities market is aligned with requirements of the law in part of limitations introduced by the Federal Law dated 22.04.1996 No. 39-FZ "On the Securities Market" - the clearing activity does not imply any services for accounting and transfer of rights to securities.**

Nowadays, registration of transfer of rights to securities is made by a depository based on the relevant license. Rights for the non-certificated security shall be transferred to the new owner once the depository/registrar makes the relevant record for its depository/personal account. Records of depository accounts are based upon instructions of bailors submitted to the depository or upon any other grounds provided by the RF law

including upon results of the clearing in the clearing organization on the grounds of the instruction submitted by the clearing organization to the depository.

When securities are transferred by trading and clearing system that results into change of the securities holder not upon results of the clearing, CCP NCC has no legal grounds to give instructions to the NSD or take any other measures to transfer the securities from the account of one holder to the account of the other holder.

VII. As a part of development of its risk management framework, CCP NCC:

- **implemented the CCP NCC risk management system in part of enhancement the structure of CCP protection levels** due to the increased amount of the dedicated capital on the standardized derivatives market up to 1 bln rubles and introduction of the collateral for the stress on the SDFI market;
- **together with the PJSC Moscow Exchange implemented the project to launch the new information service for market participants concerning provision of values of indicative securities risk rates.** This information service for provision of values of indicative securities risk rates calculated by CCP NCC allows market participants to get values of S0, S0L and S0H rates for shares, bonds and ETF while using the International Securities ID number (ISIN). Due to the fact that such service is provided to market participants within provision of the PJSC Moscow Exchange's information and technical services, the intra-group contract was signed between CCP NCC and the PJSC Moscow Exchange that is the grounds for provision of such information.
- **CCP NCC successfully passed validation of the initial and variation margin value assessment for clearing members as a result of which the overall level of the Company's risk protection was assessed as high.** Validation was made by the international auditing and consulting network of PwC companies in compliance with the Provision of the Bank of Russia dated November 1, 2018 No. 268-P "On Requirements to the Qualified Central Counterparty, the Procedure for Recognition of the Central Counterparty's Management Quality as Satisfactory, On Grounds and Procedures for Taking a Decision on Recognition of the Central Counterparty's Management Quality as Unsatisfactory, the Procedure for Notifying the Central Counterparty about the Decision Taken";
- **the compliance of CPP NCC's IT process levels to the international standards is confirmed as a result of the audit** of these processes performed by Deloitte and Touche CIS in accordance to requirements of the Provision of the Bank of Russia dated March 12, 2015 No. 463-P "On the Requirements for Risk Mitigation in Clearing Operations and the Requirements for a Document (Documents) Stipulating Measures Aimed at Reducing Credit, Operational and Other Risks, Including Risks Related to the Combining of Clearing Operations with Other Activity".

VIII. International rating agency Fitch Ratings increased the long-term issuer default rating (IDR) of CCP NCC in foreign currencies at BBB with Stable outlook and confirmed the long-term issuer default rating (IDR) in national currency at BBB with Stable outlook.

IX. The Analytical Credit Rating Agency (hereinafter referred to as ACRA) confirmed CCP NCC's national scale credit rating at AAA(RU) with Stable outlook. According to

ACRA experts, the credit rating and the outlook assigned to CCP NCC result from its strong and sound business profile, exceptional position in liquidity and capital buffer, which offset the credit organization's risk profile, and CCP NCC's critical systemic importance in the Russian financial market also additionally contributes to the above rating.

X. Compliance of the Quality Management System introduced in CCP NCC with the international standard ISO9001:2015 ‘Quality management systems – Requirements’ (DNV GL Business Assurance Management System Certificate ISO 9001:2015) **was confirmed**. The certificate of conformity was issued by the Det Norske Veritas and the Germanischer Lloyd, International Classification Society, based on the outcomes of the certified audit of CCP NCC carried out by it. The Certificate expires on 10 December 2021 for clearing services, including CCP function.

XI. The CCP NCC's equity is kept at the acceptable level: the Company's equity (capital) according to the financial statements as of 01.01.2020 was **RUB70.6bln**, the net profits before taxation - RUB20.2 bln, dividends paid - RUB11.4bln.

XII. Development of the project “CCP NCC's Reporting” was transformed in 2019 into creation of “Hadoop Data Lake” - the corporate data base containing “the raw data” (the source original data without reduction and transformation) of the initial treatment sources system as well as storage of source documents. CCP NCC started from quite simple objectives – saving “the raw data” for the single tool, i.e. transactions with liquidity providers and provision of them to consumers.

As of 31 December 2019:

- the total number of clearing members was 537 organizations (552 clearing members in 2018);
- the volume of clearing members' obligations determined on the basis of the clearing results for 2019 was RUB1,450 trn (RUR1,578 trn in 2018);
- the number of trades cleared in 2019 was 765 mln trades (806 mln trades in 2018);
- the amount of the received fees was RUB9,505 mln, being 1.17 times higher the similar figure for 2018 (RUB8,105 mln).

Abbreviations of exchange markets used in charts 1-4:

- FM – Forex market
- PMM – Precious metals market
- SM – Securities market
- MM – Money market
- DM – Derivatives market
- CM – Commodity market of the NME
- SD – Standardized derivatives market

Chart 1: Number of clearing members in markets against the total number of all clearing members

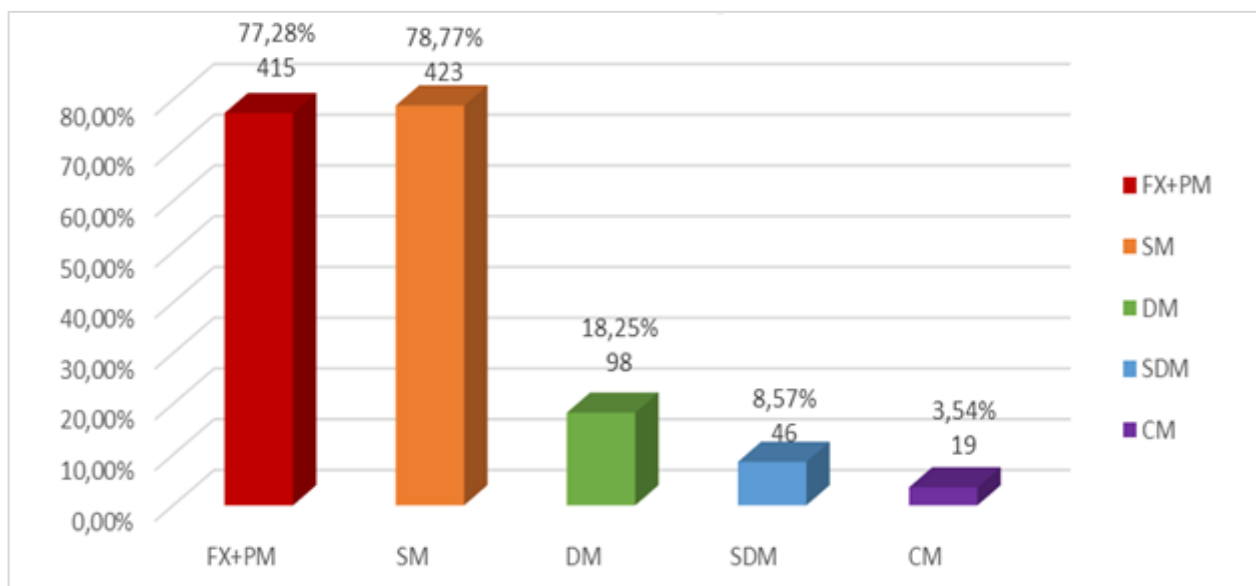


Chart 2: Volume of obligations based on clearing results, RUB bln.

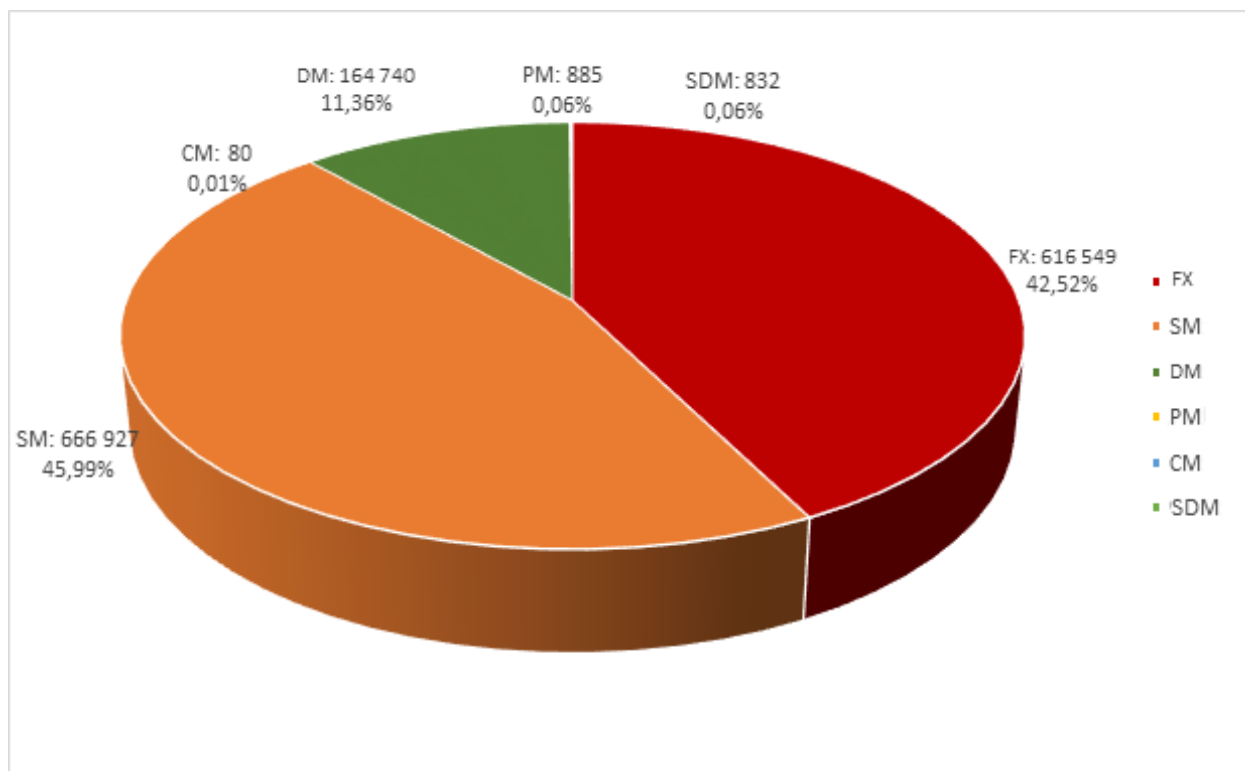


Chart 3: Number of cleared trades, pcs

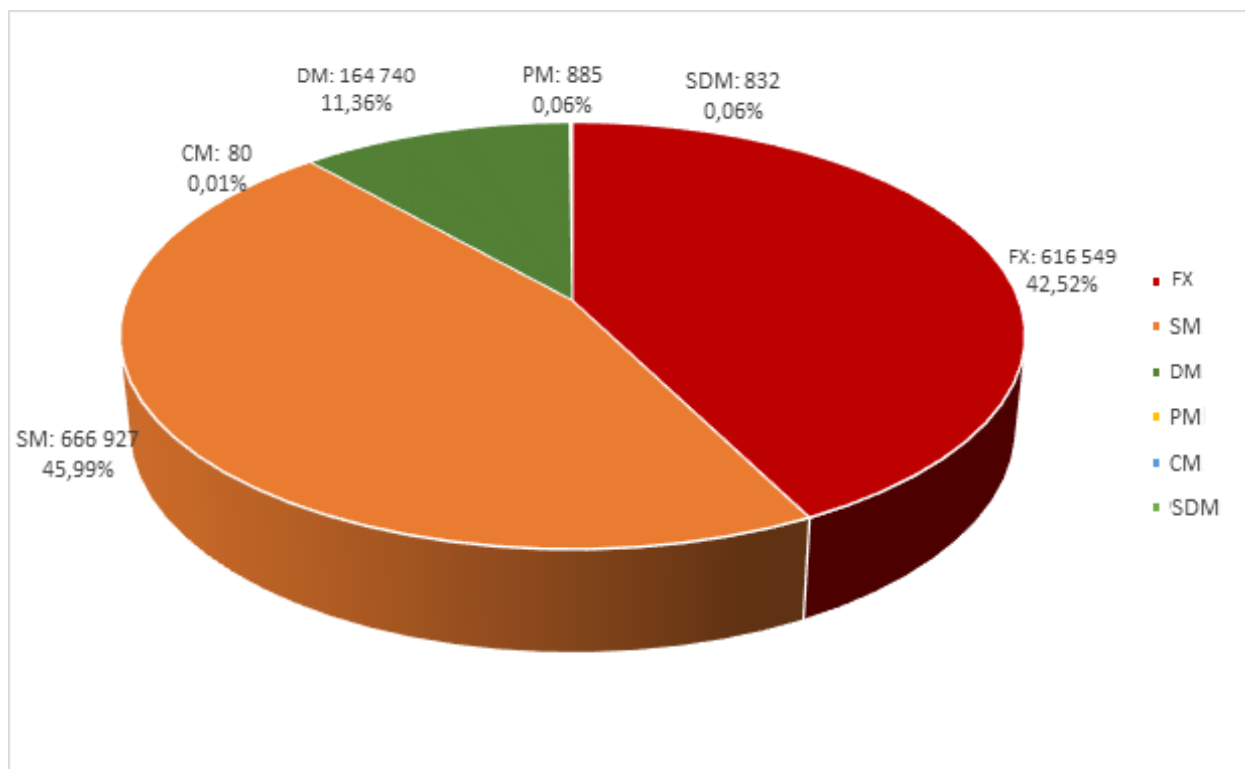
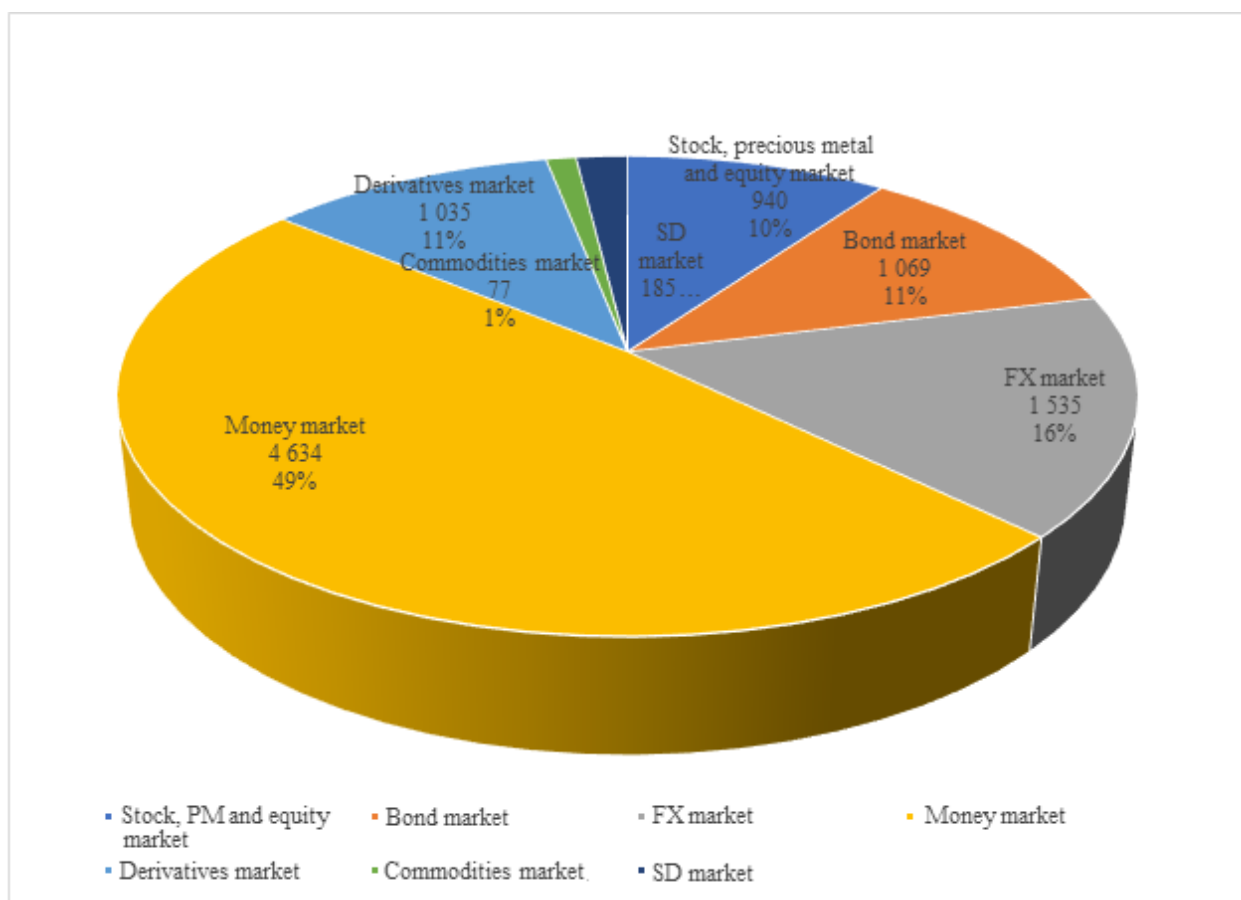


Chart 4: Clearing service fees, RUB mln



4. DEVELOPMENT PROSPECTS

In 2020, CCP NCC, guided by the Group's and its affiliates' new development strategy until 2024 taken by the PJSC Moscow Exchange Supervisory Board on October 14, 2019, will continue implementing the strategic objectives of the Company. Implementation of these objectives shall be aimed at further integrating the clearing activities on various markets of the vertically integrated holding, developing effective, convenient and attractive clearing services as well as improving the framework for management of all risks.

At the same time, some important projects are to be implemented including the following ones:

A. Creating a Unified Clearing Infrastructure Required for Building a Unified Clearing Platform

In 2020, technological implementation of the project “*Segregation of the statuses of clearing members and trading participants in the securities market*”, which will enable clearing members, who are not trading participants, including non-residents, to get access to clearing services, and enable counterparties, who are not clearing members, to get admission to trading.

The project for segregation of the statuses of market participants and clearing members was successfully implemented in the FX and precious metals markets and the derivatives market and the SD market and allowed to enroll three international clearing members (Bank of America, ICBC, SOVA CAPITAL LIMITED).

The project implementation on other markets will make it possible to unify the services provided for all exchange markets and to enroll many members who are not residents as well as organizations not licensed as a professional member of the securities market. It will also be another step towards creation of the unified clearing platform for all exchange markets of the Moscow Exchange Group.

B. Automatized clearing procedures within the Stabilization 2.0 project

In order to enhance reliability and stability of the Moscow Exchange's information systems, as well as to improve protection of the CCP NCC's data from illegal or accidental actions of clearing members under the increased risk from the growth of members who are closed-out clearing members. In 2020, the Company shall take an active part in one major areas of the Moscow Exchange Group, i.e. in implementation of the Stabilization 2.0 program aimed to automatize key business processes.

C. Further risk management development: the follow-up revision of the model for margining of exchange markets: development of models for financial and non-financial risk assessment for new products and projects within implementation of new strategic initiatives, extending of the pre-project and post-project risk protection and profitability analysis taking into account the risk. Improvement of counterparties' access and monitoring criteria as well as modernization of the risk-culture in regard to the decision-making framework.

D. Further Promotion Of The Links To Foreign Liquidity Providers Project in part of expansion of the tool list and increasing the number of liquidity providers as well as development of the risk control framework in trade links.

E. Increased Transparency For Clearing Members via disclosure of quantitative indicators concerning their activity in view of the requirements imposed by the Bank of Russia and the world's best practices.

F. Focusing efforts on implementation of the strategy to form the asset portfolio of CCP NCC due to continued formation of the significant short-time assets part, in view of the significant change of the asset structure due to significantly increased CCP NCC's obligations for the statutory reservation, related to both the changed procedure for calculation of the mandatory reserve fund and the change in the profile of clearing members' transactions affecting the size of the fund in 2019.

At this, under the soft policy of central banks, and, mostly, the Bank of Russia regarding the change in the key interest rates, the greatest income is forecast from the medium- and long-term investments into financial instruments. Therefore, the principal objective for 2020 will be optimization of the asset maturity to increase income while unconditionally performing CCP NCC's obligations upon results of trades and requirements imposed by the Bank of Russia for the statutory reservation.

5. DEVELOPMENT RESULTS IN MAJOR (PRIORITY) OPERATIONAL AREAS

5.1. Clearing

5.1.1. FX and Precious Metals Markets Clearing

The FX market of Moscow Exchange is Russia's oldest organized on-exchange market, where the foreign currencies have been traded since 1992 and since 2013 trading and clearing of precious metals transactions has been developing. The on-exchange FX market is the center of liquidity in cash operations and the most important segment of the national financial system. The Bank of Russia uses the on-exchange FX market to implement its monetary policy and establishes the official exchange rates for USD and other foreign currencies against Russian Ruble based on the on-exchange trading results. The fixing of Moscow Exchange also serves as the basis for the calculation of the settlement price of futures contracts on the foreign currency exchange rate.

Nowadays, the FX market and precious metals market of Moscow Exchange is a modern on-exchange market meeting all regulatory and the most recent technological standards applying to the on-exchange market, which hosts the organized trade in major global currencies and the major volume of FX transactions. The convenience and the unique character of the on-exchange FX market is provided by the unified trading and post-trading infrastructure of the Moscow Exchange Group, providing its clients with a full range of trading, clearing, settlement and information services to its clients. Trades are executed in accordance with the rules of organized trading of PJSC Moscow Exchange in the FX market and Precious metals market in the double counter-auction mode. Trades are entered automatically, progressively as counter-orders with mutually satisfactory prices are entered into the system. Also, there is a separate mode for the execution of the off-the-book trades (two-sided deals). The functions of the trading organizer and technical center are performed by Moscow Exchange, and functions of the clearing organization and central counterparty are performed by CCP NCC.

CCP NCC has been performing clearing in the FX market since 10 December 2007. Trades entered on this market are cleared and settled with the participation of CCP NCC acting as a central counterparty. The Company performs the CCP functions for all entered trades, securing fulfillment of obligations towards non-defaulting clearing members, thus significantly decreasing the risks of clearing members and relieving them from the need to set limits for each other. The FX market trading is conducted in a partially secured way, using a highly efficient and reliable risk management framework.

CCP NCC performs clearing in compliance with the Clearing Rules. The following currencies are traded in the FX and precious metals markets:

- US dollar (USD), euro (EUR), British pound (GBP), Swiss franc (CHF), Hong Kong dollar (HKD), Chinese yuan (CNY), Japanese yen (JPY), Belarusian ruble (BYR), Kazakhstani tenge (KZT) and Turkish lira (TRY), gold (GLD) and silver (SLV) for Russian rubles (RUB);
- Euro (EUR), British pound (GBP), Swiss franc (CHF), Chinese yuan (CNY), Kazakhstani tenge (KZT), Turkish lira (TRY) for US dollars (USD).

In the FX market and precious metals market, CCP NCC clears spot and swap trades, and since 2014 it has been also clearing financial derivatives (swaps and futures) traded with full or partial prefunding. The collateral may be posted in cash (Russian Rubles, US Dollars, Euro, Chinese Yuan, Hong Kong Dollars, British Pounds and Swiss Francs, and in precious metals (gold, silver). In the FX market and precious metals market, trades may be executed on the basis of on-order book orders (in “blotter”) or off-order book orders. The trades based on on-order book orders are partially secured.

Since 2013, CCP NCC has been clearing trades in precious metals for Russian Rubles. CCP NCC clears this segment of the on-exchange market for trades, which can be settled in the following ways:

- at the expense of clearing members;
- at the expense of clients of clearing members;
- using cash funds in trust management of clearing members.

In December 2014, in the FX market and precious metal market there was established the institute of “general clearing member” – a clearing member entitled to act as a clearing broker and provide services to market participants. According to this model, market participants submit orders and enter trades, while clearing members become a party to such trades and make settlements under the obligations arising from the trade.

In 2016, there was a reduction of the collateral for offset positions under euro and US dollar in the risk management framework due to the introduction of intercommodity spread, which enables market participants and their clients to cut their expenses for operations funding. To unify the collateral calculation, assessment of the interest rate risk for the positions “tomorrow” and margining of the positions for overnight swaps similarly to long swaps was introduced.

For managing the client risks, there was implemented the possibility to register clients’ trade accounts of the 2nd and 3rd levels which will enable market participants to use on-exchange risk management for managing the client positions. At the same time, they have a possibility for netting as to delivery and collateral within the settlement account, under which various client positions are kept. Withdrawal of funds in the amount of the settlement position enables members to be more flexible at managing the intraday liquidity without terminating trading in instruments with “today” settlements.

The Segregation up to the Final Client Project enabled the option for checking payment details for the matching of the beneficiary to the segregated client that makes it possible to protect cash funds of the segregated client.

The technology for delivery of precious metals to the market upon gold futures contracts that links the precious metal market with the derivatives market because delivery is made at the spot precious metals market of the Moscow Exchange. Futures contracts are quoted in rubles per gram with the monthly period of execution starting from November 2018.

In 2018, CCP NCC implemented the facility to convert the individual clearing collateral (hereinafter referred to as ICC) to “another collateral” type in the securities and derivatives markets. The advantage of ICC conversion to another collateral is more rapid clearing of payments. In the past, foreign currency was credited to correspondent accounts of CCP NCC maintained with foreign banks and recorded as other collateral.

Since February 2019, the Moscow Exchange granted the professional FX market members the option to make transactions with currency pairs “KZT-RUB”, “BYR-RUB” and “TRL-RUB” on terms of the partial asset bailment.

In the past, currency pairs were traded with 100% collateral that reduced opportunities for their effective use. CCP NCC acting as the CCP got access to the operative liquidity while entering into the agreement with the greatest players of those FX markets that allowed to adjust terms of KZT, BYR and TRL trading with the most liquid currencies of the on-exchange market.

Thus, traders and their clients can enter into the spot with the currency pairs “KZT-RUB”, “BYR-RUB” and “TRL-RUB” with “today” and “tomorrow” settlements as well as SWAP transaction with various execution periods.

In 2019, Russian companies, being clients of brokers, were granted the option to enter into transactions with the currency pair “USD-RUB” for the average weighted exchange rate of the Moscow Exchange as for 11:30 am MSK on the grounds of which the official rate of the Bank of Russia is determined. Transactions for the average weighted exchange rate enable Russian companies to buy and to sell the currency with the minimum losses as well as to hedge the currency risk in products and contracts attached to the rate of the Bank of Russia for the currency pair “USD-RUB”.

Entering into transactions for the CB rate on the Moscow Exchange is available since April 2019. Currency buy/sell orders are accepted since 9:30 am to 10:00 am MSK and executed for the average weighted rate as for 11:30 am. Since October 2019, the amount of the lot is reduced to 1 thousand USD.

Orders can also be indicated now – it is the option to see whether there are any orders as well as their directions (sale or purchase) for this tool.

In 2019, CCP NCC's clearing rules determined the new procedure for charging the fee for registration of the collateral that will become effective in 2020.

Currency	Calculation of the rate	Rate
EUR	The negative rate fixed by the ECB at the last day of month when services are provided, in % per annum (-0.5%) + -0,2% per annum	- 0.7
CHF	The negative rate fixed by the Swiss National Bank at the last day of month when services are provided, in % per annum (-0.75%)	- 1.25

	+ -0,5% per annum	
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Introduction of reliable and effective clearing service technologies and the qualitative expansion of the range of instruments noteworthy for investors contributed to greater appeal of the FX and precious metals market of the Moscow Exchange Group and exerted positive influence on CCP NCC's performance. The fee earned by the Company for clearing service in 2019 was RUB1,535,110,000 in the FX market, – RUB3,238,000 in the precious metals market.

5.1.2. Securities and Deposit Markets Clearing

The securities market of the Moscow Exchange Group is a modern market platform meeting all regulatory and technological requirements, hosting organized trading in major types of securities traded in Russia. Convenience and the unique character of the securities market for the Moscow Exchange Group are based on the unified trading and post-trading infrastructure of the Group providing the full range of trade, clearing, settlement and information services to its clients.

Since 2017, CCP NCC has been providing the centralized clearing services as a central counterparty under deposit agreements denominated in Russian Rubles. In the securities market and deposit market of the Moscow Exchange Group, CCP NCC provides its clients with the most extensive range of services performing clearing of trades executed in different trading modes, either with or without performance of the central counterparty's functions. CCP NCC has been carrying out its clearing activities in this market since 1 November 2011. Until 19 December 2016 the trading organizer was CJSC MICEX Stock Exchange, and since December 19, 2016 - PJSC Moscow Exchange. Clearing settlements in the securities market are performed by CCP NCC.

In the securities and deposit markets, CCP NCC performs the following types of clearing:

- ***clearing partially secured trades:***
 - for buy/sell trades with CCP entered on the basis of on-order book orders with T+2 settlement (shares, depositary receipts, mortgage participation certificates ISU, ETF) and T+1 settlement (OFZ), as well as for the trades in the above securities entered on the basis of off-order book orders with the settlement from T+0 to T+2;
 - for REPO trades with CCP, including REPO trades in general collateral certificates, entered on the basis of off-order book order and on-order book orders; and
 - for deposit agreements;
- ***clearing fully secured trades:***
 - for buy/sell trades with CCP entered on the basis of orders (off-order book and on-order book) with settlement T+0 (corporate, regional and municipal bonds), as well as the first parts of REPO trades entered on the basis of off-order book orders with T+0 settlement;
- ***clearing non-secured trades:***
 - for REPO trades and buy/sell trades without CCP entered on the basis of off-order book orders, with settlement of buy/sell trades from T+0 to T+30; T+0 to T+2 (for the first parts and REPO trades); from T+0 to T+365 (for the second parts of REPO transactions).

Methods used by CCP NCC to secure the performance of obligations accepted for clearing include the individual clearing collateral of clearing members in Russian Rubles, foreign currencies and securities, and it also uses the collective clearing collateral (default fund) for clearing partially secured trades.

CCP NCC provides clearing as CCP for the following trades entered with or without full prefunding:

- securities buy/sell trades with settlement codes T0 (except placement and redemption trades), K0, Yn;
- REPO trades with settlement codes T0/Yn, Ym/Yn; and
- deposit agreements with settlement codes Ym/Yn.

CCP NCC provides clearing without performing CCP's functions for the following trades:

- securities buy/sell trades with settlement codes Bn, B0-B30, Z0;
- REPO trades with settlement codes Rb, Sn, Z0;
- placement and redemption trades with the settlement code T0;
- placement trades with the settlement code X0.

In the securities market and deposits market, trades may be executed on the basis of on-order book (in "blotter") or off-order book orders. The trades based on on-order book orders can be concluded only with or without full prefunding.

Settlements based on results of the clearing carried out by CCP NCC are performed both during and after the trading day, with the following options:

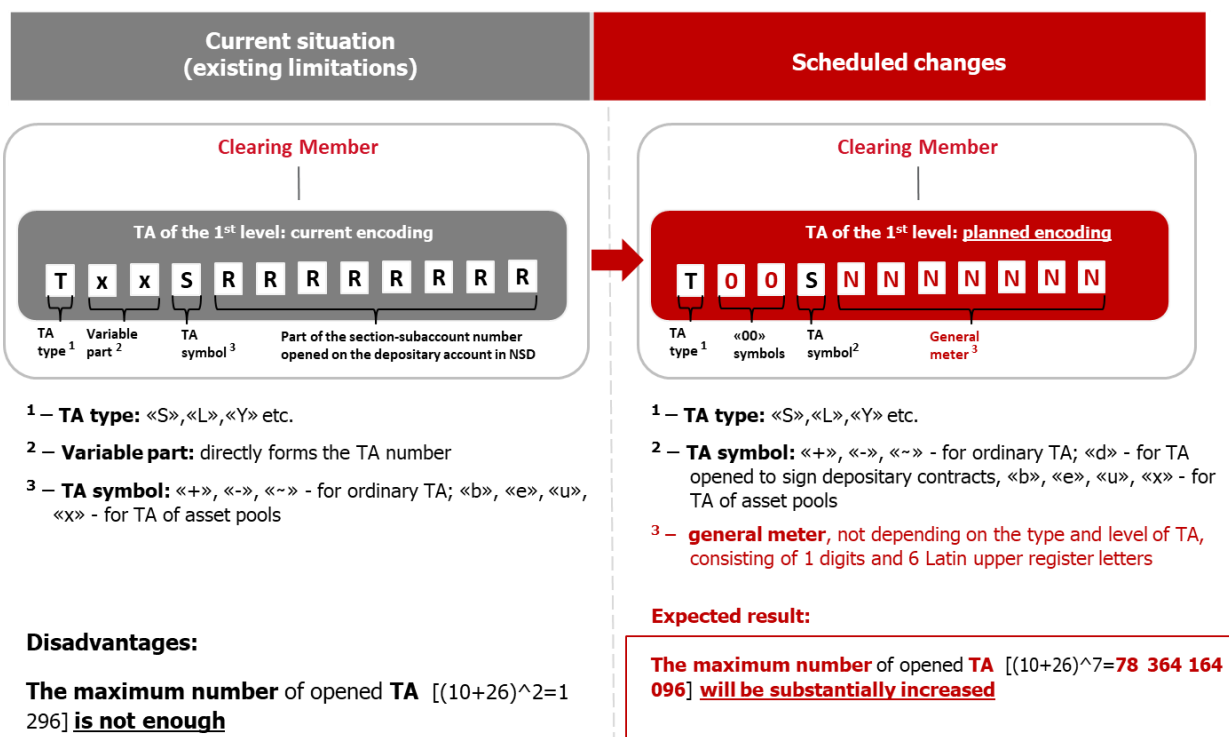
- at the expense of clearing members;
- at the expense of clients of clearing members;
- using cash funds in trust management of clearing members.

Since 2018 options for members to manage liquidity and carry out REPO transactions with the general collateral certificates (GCC) are expanded:

- all bonds allowed to REPO with CCP including the bonds not accepted by CCP NCC as the collateral are included into the GCC GC Expanded asset pool. The GCC of this pool are not included into the settlement of the single limit;
- OFZ (federal loan bonds) and Russian rubles only are included into the GCC OFZ asset pool.

The option of settlements for REPO trades with GCC in USD is implemented. New modes with FX settlements are available only for the banks using their own accounts.

Due to the scheduled enhancement of control of compliance of professional securities market participants with requirements of client cash segregation by the Bank of Russia and development of the segregation law by the Bank of Russia, the number of settlement accounts and trade accounts (TA of the 1st level) is to be considerably increased in trade and clearing systems of securities and FX markets. Thus, such option is offered for TA on the securities market since August 2019.



Advantages for recoding in part of the trade and clearing system of securities and FX markets:

- DOES NOT contain the insider information that could be changed (e.g., the 3rd level doesn't contain the information about the 2nd level);
- WILL NOT require recoding of TA already opened when joined to the unified pool;
- WILL NOT coincide with coding of “old” TA already opened. The option to replace TA in non-settled trades will be additionally created for clearing members that will provide for the option to transfer from old TA to new ones.

The implementation of reliable and efficient clearing service techniques, instruments appealing for investors had a positive impact on CCP NCC’s business results in this market segment. In particular, the clearing service fees received by CCP NCC in the securities and deposit markets in 2019 were RUB6,642 bln which is 1.12 times higher than in 2018 (RUB5,943 bln).

5.1.3. Derivatives Market Clearing

Since 2012, CCP NCC has been providing clearing services in the derivatives market of PJSC Moscow Exchange. The derivatives market is the greatest Russian and one of the leading global platforms for trades in derivative financial instruments combining high liquidity, the wide product range, warranties of the central counterparty and the most modern futures and options trading technologies. Today, the derivative financial instruments are traded on the derivatives market, which basic assets are stock indices, shares of Russian and foreign issuers, federal loan bonds, foreign currency, interest rates, and commodities (oil, precious and industrial metals, agricultural products).

Trading in the derivatives market is conducted both in an anonymous and addressed (negotiable) modes.

When clearing and settling financial derivatives (including variable margin), CCP NCC also acts as CCP and thereby considerably reduces risks of clearing members and releases them from costly procedure of setting limits for each other.

The range of acceptable collateral comprises Russian Rubles as well as foreign currencies and securities on the list approved by the resolution of CCP NCC and compiled in accordance with

the Company's approved Methodology for selection and assessment of foreign currencies and securities acceptable as collateral.

In 2019, the total trade volume on the derivatives market was RUB165 trn or 453 mln of contracts (RUB179 trn or 527 contracts in 2018) including the futures trade volume – RUB155 trn, option trade – RUB10 trn.

The total trade turnover on the derivatives market was decreased mostly due to the decreased FX tools trade volume against the low FX volatility. However, it did not prevent the Moscow Exchange from being included into the top-3 leaders among global platform for the volume of trade with futures contracts of FX tools according to the data of the Futures Industry Association (FIA).

The volume of open positions was increased accordingly for almost all tools that proves the increased long-term investment demand. The total volume of open positions on the derivatives market at the end of 2019 was increased to RUB614.9 bln – 35% more compared with the end of 2018 and the volume of open positions for commodities futures was increased 2.6 times up to RUB131.1 bln.

In 2019, the range of derivative tools for various types of assets continued developing on the derivatives market in order to provide additional trade options for both the individual clients and professional members and portfolio managers as well as for investment portfolio hedging.

In March 2019, trades of delivery futures contracts and options started for ordinary shares of PJSC Polyus and PJSC "Magnitogorsk Metallurgical Plant" (MMP). Thus, at the end of 2019, 24 futures and 24 option contracts for shares of 22 Russian issuers became available to derivatives market participants. For the reporting period the volume of futures and option trades for Russian shares for RUB4.3 trn.

In May 2019, the trades of deliverable futures contracts for the RUSFAR (Russian Secured Funding Average Rate) cash market rate calculated on the basis of orders and deals of the Russian REPO market with the CCP and clearing membership certificates started at the derivatives market.

New contracts provide for various trade strategies to cash market participants:

- hedging of the interest income during depositing/attraction of the cash pledged by the GCC;
- hedging of the securities portfolio;
- investment into one-month cash market tools.

According to results of 2019, the volume of futures trade for the RUSFAR rate was RUB604 mln.

In October 2019, the trade of delivery futures on silver started at the derivatives market. The new contract extended the range of delivery commodities derivatives in view of the fact that the trade of delivery futures on gold had started on the Moscow Exchange one year ago. Gold and silver are delivered to the spot precious metal market of the Moscow Exchange. The new tool enables development of the on-exchange precious metals market, provides for additional trade options to both individual investors and professional members (banks and brokers) as well as to precious metals market members including jewelry companies and base metals processing plants.

In 2019, CCP NCC took measures to further develop its clearing services provided to clearing members in the derivatives markets, in particular:

1. At the beginning of 2019 the derivatives market implemented the option to segregate trade and clearing memberships. As a result, foreign companies became able to do clearing and settlements for their own deals and deals of their clients executed on markets of the exchange. The first foreign company that was granted the status of the individual clearing member on derivatives and FX markets was the British independent institutional broker company Sova Capital. It allowed it to continue offering its institutional clients storage of

the collateral and the cash directly on CCP NCC accounts that reduces counterparty and credit risks for international clients trading on the stock exchange.

2. In August 2019, derivatives market participants were offered the service for online registration of new clients. Thus, online registration of clients became available at all principal markets: securities, FX and derivatives market. Using the new service, the clients of members can get access and start making transactions with futures and options within a few seconds since closing the contract with a broker or a bank. In the past, this procedure took almost one day. More than 220,000 client accounts have been opened since providing the service on the derivatives market.

The clearing service fees received by CCP NCC in the derivatives market in 2019 amounted to RUB1,035 mln, which is 5 times higher compared to the previous year (2018: RUB201 mln).

5.1.4. Commodities Market Clearing. Performing the Functions of a Commodity Delivery Operator

Commodities market of the Moscow Exchange Group is a unique exchange infrastructure holding organized trades in derivatives (deliverable forward and swap contracts) with commodity as the basic asset. Trades are held using the new hi-tech trade and clearing system (TKS Urozhay) allowing to adapt the functionality and specifications to the standards of trading, logistics accepted in the industry and to launch trades with wide range of underlying assets. This technology provides both brokers and end customers with access to trading.

The first trading in grain was launched at the exchange in December 2015 (wheat derivatives contracts). In 2016, corn and barley contracts were added. In March 2017, trading in the new basic asset (sugar) was launched, on-exchange trading in which contributes to increased transparency of pricing at the Russian sugar market enabling both large traders and sugar consumers to purchase sugar directly from its producers. At the same time the full line of on-exchange instruments was implemented in the commodities market: deliverable grain derivatives contracts were supplemented with sugar derivatives contracts as well as grain swap contracts, thus enabling market participants and their clients to borrow against the collateral in form of commodity. In 2018, trading in soy and sunflower was launched with the support of the major participants of the oil and fat industry. In December 2018, clients of brokers, who do not pay VAT, were also admitted to trading in commodities.

For settling trades, the participants' commodity accounts are used, which are maintained with CCP NCC who acts both as CCP in the grain and sugar market and as a clearing organization accounting funds received from buyers in payment of the commodity price and default funds. In addition, CCP NCC is a Commodity Delivery Operator, who maintains participants' commodity accounts for accounting of commodities acting as a keeper for commodities for participants. According to the resolution taken by the Bank of Russia on 28.10.2015, CCP NCC was accredited to perform functions of the commodities delivery operator. Acting as CSO, the Company accredits elevators and warehouses for storing commodities admitted to on-exchange trading.

The CCP NCC protection and commodities market risk monitoring frameworks consists of assessment of technical and financial condition of the counterparty (accreditation), regular independent inspections with rotating surveyors and the insurance coverage that also covers the risk of fraud which amount will be enough to reimburse potential losses according to analysis of the market statistics for previous periods.

However, in 2019, while performing functions of CDO and regular inspections of commodities storage on accredited elevators (warehouses), CCP NCC discovered deficits of the grain that is

used as a collateral for swap exchange deals, probably, as a result of theft. This is the risk resulted from using the counterparty's infrastructure for storage of commodities characteristic to the agricultural commodity market only.

Due to this, CCP NCC initiated the set of essential measures to return the collateral. It submitted 12 petitions for civil and criminal cases, raised requirements to settle deals, to return the partial collateral and to reimburse the insurance coverage. The total amount of the cash assessment of the grain deficit and liabilities of accredited elevators upon storage contracts as for 01.01.2020 was RUB2,336,142,000. The reserve fund for possible losses in the amount of 100% was made due to the liabilities.

When performing functions of the commodities delivery operator, CCP NCC uses the conservative approach and forms the reserve fund – the estimated liability within the cost of the commodity stored by CCP NCC as the CDO. As for January 1, 2020 the reserve is reflected in CCP NCC's balance – the estimated non-credit liability amounting to RUB31 660 upon the cost of the commodity (sugar) stored. Deficits and spoilage of the stored commodity (sugar) were not discovered in the reporting period. CCP NCC regularly does on-site inspections of the remaining stored sugar.

Apart from that, the changes made into the Rules for accreditation of elevators and warehouses by the Central Counterparty National Clearing Centre for performing functions of the commodity delivery operator, into the Rules for commodity storage on the elevator while performing functions of the commodity delivery operator by the Central Counterparty National Clearing Centre and into the Rules of commodity storage at the warehouse while performing functions of the commodity delivery operator by the Central Counterparty National Clearing Centre came into effect at the second quarter of 2019. According to these changes, one of mandatory terms for accreditation of elevators and warehouses is granting the warranty according to which the warrantor shall be responsible to CCP NCC for compliance of the elevator (warehouse) with its liabilities (both effective and future liabilities) upon the commodity storage contract and in certain cases the independent warranty is to be granted that makes the warrantor liable to pay the cash amount to CCP NCC in case of failure to comply or improper compliance of the elevator (warehouse) with their liabilities to CCP NCC upon the commodity storage contract.

The fee received by CCP NCC for the clearing service on the commodities market for 2019 was RUB77 mln.

5.1.5. SD Market Clearing

SD market was established in 2013 in furtherance of G20 resolutions to strengthen the CCP's role in the financial markets and transfer SD trading to exchange venues.

CCP NCC has been clearing in the SD market since 2013 in compliance with the clearing rules and performing the central counterparty's functions under all SD contracts. In this market, the Company clears with partially secured trades with respect to the following derivative financial instruments:

- swap contracts;
- futures contracts;
- forward contracts;
- option contracts;
- and with respect to swap trades and buy/sell trades in foreign currency.

Payments are made using CCP NCC's clearing bank/clearing correspondent accounts opened with NSD. Clearing members post their individual and collective clearing collateral (Default

Fund) both in Russian Rubles and in foreign currency. The minimum amount of contribution to the Default Fund of each clearing member is RUB10 mln.

In 2019, the structure of executed transactions on the SD market was changed. The FX interest and interest swap transactions were fixed as the most active ones. The volume of trading interest derivatives for 2019 was increased for more than twice. The volume of open positions as for 31.12.2019 was increased on 47% compared with the previous year and was RUB440 bln. Maturing of the trades executed in 2019 was increased twice at average. For the reporting period, the client base on the SD market was increased on 14%, the total number of its members was 46.

In 2019, the SD market was connected to the CCP NCC accounting infrastructure and to the unified pool technology that granted members the opportunity to use the unified collateral and the unified account on the Moscow Exchange markets. In May, the new interest risk-hedging tool was launched with the maturity of up to 1 year – Overnight Index Swap for the RusFar rate.

The fee income of the SD market for the reporting period was RUB185 mln against RUB15.3 mln in 2018 that is over 12 times more than the value for 2018.

5.2. Proprietary Transactions in Financial Markets

In 2019, CCP NCC' transactions in financial markets were impacted by the significant dynamics of the accounting rates for various currencies and were under pressure of the excessive liquidity on financial markets.

During the reporting period, CCP NCC's liabilities structure continued changing (see Table 1) was significantly changed again: the collateral provided by the clearing members in Russian Rubles continued decreasing after the pause in 2018; the collateral provided by the clearing members in foreign currency (especially in US dollars) continued declining. At this, the collateral provided by clearing members in EURO substantially grew. The main factor for such changes was primarily accounting rates of the Bank of Russia, the US FRS and ECB, their dynamics and correlation resulting into changed approach to the collateral by the clearing members.

Table 1

Clearing Members' Collateral – Annual Average	RUB mln	USD mln	EUR mln
2015	80,689	6,090	4,891
2016	74,258	4,139	5,128
2017	54,365	3,003	5,349
2018	57,693	2,093	4,182
2019	51,338	1,936	5,541
Change 2019/2018, mln	- 6 355	- 162	+ 1,359
Change 2019/2018, %	-11%	-8%	+ 32%

The developing market conditions and trends in the liabilities structure determined the main areas of CCP NCC's transactions in financial instruments.

The RUB portfolio decreased by 24% due to the decreased liabilities RUB base and to the increased mandatory reservation fund mostly related to the increased EURO liabilities.

The amount of the USD securities portfolio decreased after reduction of the liabilities.

Moreover, the part of the portfolio containing eurobonds of the longest maturity periods was implemented against the decreased spread of Russian eurobonds in regard to the US bonds that

helped to substantially decrease the market risk of the portfolio and its impact on the capital adequacy ratio. At the end of 2019 the USD amount of the portfolio was substantially recovered by due to the more short-term bonds. Thus, the duration of the portfolio of Eurobonds in US dollars decreased from 1.75 to 1.28 years.

The amount of the EUR securities portfolio did not actually change due to extremely limited proposal of issues with the investment quality acceptable for CCP NCC and the positive profitability (see Table 2).

Table 2

Eurobond Portfolio (Annual Average)	USD in RUB Equivalent, mln	EUR in RUB Equivalent, mln
2015	19,056	896
2016	71,765	10,318
2017	69,685	24,300
2018	66,496	36,575
2019	47,736	33,886
Change 2019/2018, RUB mln	- 18,760	- 2,269
Change 2019/2018, %	-28%	- 7%

Reverse REPO transactions in US dollars were still an important component of financial market transactions. The amount of transactions remained the same as in 2018 but the dynamics of rates for US dollars in 2019 allowed to increase the income from these transactions by 11%.

In 2019, the volume of precious metals transactions decreased that was obviously related to price conditions imposed by the Bank of Russia for purchase of precious metals on the domestic market.

Location SWAP transactions in precious metals decreased on 2018 from 10,163 kg to 4,495 kg, first of all due to silver transactions. The volume of transactions of acceptance/delivery of physical gold also decreased from 13,378 kg to 2,436 kg.

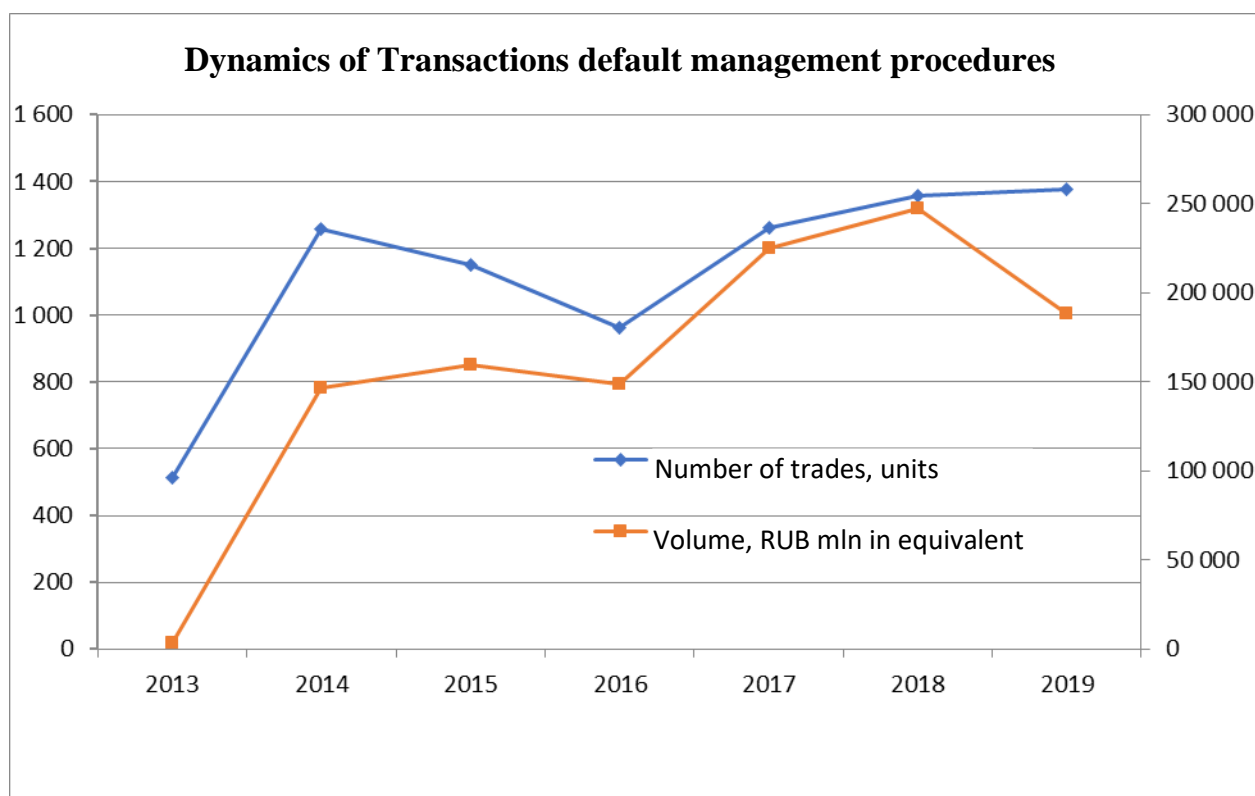
As a part of the process of managing assets denominated in precious metals, precious metal deposits were placed. The total amount of the placed deposits in gold decreased on 2018 from 27,402 kg to 16,049 kg of gold, the total amount of deposits in silver slightly decreased from 54,742 kg to 60,030 kg.

The number of financial market transactions, being a part of the default management processes remained almost the same compared to 2018 (see Table 4, Figure 1). However, the nature of transactions substantially changed: the number and the volume of transactions significantly decreased for closing positions of clearing members that is explained by the decreased number of withdrawals of bank licenses by the Bank of Russia. Thus, it can be stated that the number and the volume of default management transactions gradually approaches the natural level comparable with the CCP business scale.

Table 4

Transactions	Number of Transactions	Change on 2018, %	Volume, RUB mln	Change on 2018, %
FX market				
<i>Carry-over of positions (SWAP)</i>				
	459	-15%	138,903	27%
<i>Regulation of margin requirements</i>				
	12	50%	1,120	-47%
<i>Closing of positions</i>				
	12	-67%	4,516	-65%
Securities Market				
<i>Carry-over of positions (REPO+SWAP+S/P_</i>				
RUB	878	27%	43,471	-9%
<i>Closing of positions (Sale/Purchase+LN+T+2)</i>				
RUB	6	-91%	15	-100%
Commodity Market				
<i>Carry-over of positions (REPO+SWAP+S/P_</i>				
RUB	4	-20%	20	15%
Derivatives Market				
<i>Closing of positions (margin requirement)</i>				
RUB	4	-33%	3	-90%
* introduction of ICO in the derivatives market	0	0%	0	0%
TOTAL				
RUB	1375	1%	188,047	-24%

Figure 1



5.3. Risk Management Including Measures Aimed at Maintaining High Quality of Management in CCP NCC as CCP

5.3.1. Risk Management System Compliance with the Regulatory Requirements and International Standards

Functioning as a clearing organization, central counterparty, a credit organization and commodity delivery operator (CDO) in the markets of the Moscow Exchange Group, CCP NCC performs its activities employing the up-to-date risk management framework (RMF) meeting the applicable international standards.

Based on its functions and objectives, CCP NCC has a specific risk structure, comprising the following interrelated groups:

- risks inherent in CCP NCC as a CCP and clearing organization;
- risks inherent in CCP NCC as credit institution;
- risks inherent in CCP NCC as CSO.

CCP NCC's risk management framework covers the following range of risks:

- credit risk (including CCP risk, concentration risk and counterparty credit risk);
- market risk (including interest rate risk in the banking book);
- interest rate risk in the banking book;
- liquidity risk;
- operational risk;
- strategic risk;
- legal risk;

- regulatory (compliance) risk;
- reputational risk;
- custody risk;
- commercial risk;
- systemic risk.

CCP NCC's key objectives are to reduce risks in the financial system and deliver stability in the serviced segments of financial and commodity markets where it provides its service. The achievement of these objectives is facilitated by implementation of a risk management framework enabling the comprehensive analysis of risks arising from all types of activities.

- mitigating potential losses by limiting the risk levels assumed by NCC across all segments of the financial and commodity markets;
- ensuring funds adequacy for the Company to be able to cover potential losses out of accumulated financial resources, including equity, individual clearing collateral, collective clearing collateral and other types of collateral;
- ensuring stable performance of the exchange trading, clearing and settlement system including through timely identification of risks and prompt and adequate response measures on risk event occurrence.

To ensure its operational reliability, CCP NCC applies the risk management approaches in accordance with the requirements of the Bank of Russia, recommendations of the Basel Committee on Banking Supervision, as well as international standards of the Committee on Payments and Market Infrastructures of the Bank for International Settlements and the Technical Committee of the International Organization of Securities Commissions (CPMI-IOSCO) for systemically important infrastructural organizations.

During the reporting year, CCP NCC's activities aimed at improving its risk management framework were focused on compliance with Bank of Russia Provision dated 01.11.2018 No. 658-P "On Requirements to the Qualified Central Counterparty, the Procedure for Recognition of the Management Quality of the Central Counterparty as Satisfactory, on Grounds and the Procedure of Taking a Decision on Recognition of the Management Quality of the Central Counterparty as Unsatisfactory, the Procedure of Notification of the Central Counterparty about the Decision Taken" (hereinafter referred to as the Provision No. 658-P) that replaced the Ordonnance No. 2919-U of the Bank of Russia dated 02 December 2012 'On Assessing the Management Quality of a Credit Organization Performing Central Counterparty Functions' as well as Bank of Russia Regulation No. 575-U dated 30 December 2016 'On the Requirements for Risk Management, Rules for Risk Management Arrangement, Clearing Collateral, Placing Property, and Creating Assets of a Central Counterparty, as well as Entities with Which a Central Counterparty is Entitled to Open Trading and Clearing Accounts, and the Methodology for Determining Allocated Capital of a Central Counterparty'.

In 2019, CCP NCC made a number of amendments to the internal documents regulating CCP's risk management, generally in connection with new requirements provided by the Provision No. 658-P that came into effect in 2019, with the scheduled review of internal documents in compliance with the requirements of the Bank of Russia, and with a view to improve the risk management framework of the Company as a clearing house, central counterparty and commodity delivery operator. In particular, the following documents were amended as follows:

- Rules of the organization of risk management framework – the document has been amended in view of requirements imposed by the Bank of Russia to the qualified CCP NCC, changes into the organizational structure of CCP NCC's risk management and improvement of the risk management framework for the commodities market that have come into effect;

- Stress testing Methodology – aims of stress testing of the operational risk were specified as well as the description of stress testing scripts of the operational risk became more detailed, the description of the procedure or calculation of losses of clearing members and net liabilities of clearing members was extended and criteria for determination of significance of the excessive market volatility and decreased tool liquidity were specified;
- Model validation Methodology – the procedure for confirmation of the result areas for the assessment procedure became more detailed as well as measures of response for each of them and criteria were specified for recognition of the result of the assessment procedure of model accuracy as unsatisfactory;
- Financial Stability Recovery Plan – the document has been updated according to the requirements of Bank of Russia Regulation No. 643-P dated 02 July 2018 ‘On the Requirements for the Contents of a Financial Stability Recovery Plan of the Central Counterparty, the Procedure and Timeframes for its Submission to the Bank of Russia and Amendments Thereto, on the Procedure for the Bank of Russia to Assess the Financial Stability Recovery Plan of the Central Counterparty, on the Requirements for the Type and Nature of Events about Which the Central Counterparty Should Inform the Bank of Russia, and on the Procedure for the Central Counterparty to Inform the Bank of Russia of the Events Stipulated by its Financial Stability Recovery Plan and the Decision to Start Implementing the Plan’. In particular, factors of the early response were changed, the set of measures to regulate the events of the financial stability recovery plan (FSRP) was updated, the procedure for notification of the Bank of Russia upon recovery measures of FSRP was specified;
- The risk and capital management strategy, amended and restated, includes the updated results of risk identification and provides an updated set of quantitative and qualitative risk appetite metrics and their threshold values for 2020 in view of the further monitoring;
- The procedure of limiting the treasury transactions and trades with liquidity providers and the Guidelines on Control of Limits on Treasury Transactions and Trades with Liquidity Providers have been updated taking into account introduction of new currency pairs within implementation of the Links to Foreign Liquidity Providers Project and provisions on establishing limits on liquidity providers for individual tools and to their control have been added.

Improvement of the methodology base of the processes associated with risk and capital management remains one of the most important elements of CCP NCC’s activities.

In the reporting year, as seen above herein, CCP NCC successfully passed the validation of assessment models used for the initial and variation margin. The auditing framework included the models determining requirements to the collateral on the following markets: FX market and precious metals market, stock and cash markets, derivatives market, Standardized derivatives market and the commodities market. Within the validation, the main focus was on the analysis of models' architecture, values of risk parameters as well as principal assumptions used for building of models in part of their compliance with the international business practice. The top-level audit of models was also made in part of their compliance to Russian and EU legal requirements developed to govern and to control activities of central counterparties.

5.3.2. Risk Management of Clearing Organization and Central Counterparty

In 2019, development of CCP NCC’s risk management framework was primarily focused on ensuring its financial stability and reliability of CCP NCC as a clearing house, CCP, and commodity delivery operator and was carried out in the following main areas:

- ensuring adequacy of financial resources for settlements both in normal and extreme market conditions;
- improving the safeguard structure (default waterfall);

- improving the risk assessment methodology required for CCP NCC prior to new products' launch;
- implementing the measures to maintain compliance of Company's current activities with the requirements imposed by the Bank of Russia on qualified CCP whose management quality has been recognized "satisfactory" in accordance with Provision No. 658-P;
- providing the information transparency to enable clearing members assess risks adequately and supervisory authorities to imply more efficient regulation measures.

Margining System for Clearing Members' Trades

CCP NCC uses a variety of models to determine collateral requirements depending on the specific markets. The model for determining collateral requirements considers the specifics of instruments and, accordingly, is applied with minor differences based on the markets specifics.

The scenarios used in margining models are calibrated on the basis of historical data and consider the potential price movement scenarios for those assets that have not been reflected in by historical data yet, so as to secure at least 99% confidence probability for the required collateral amount in all markets.

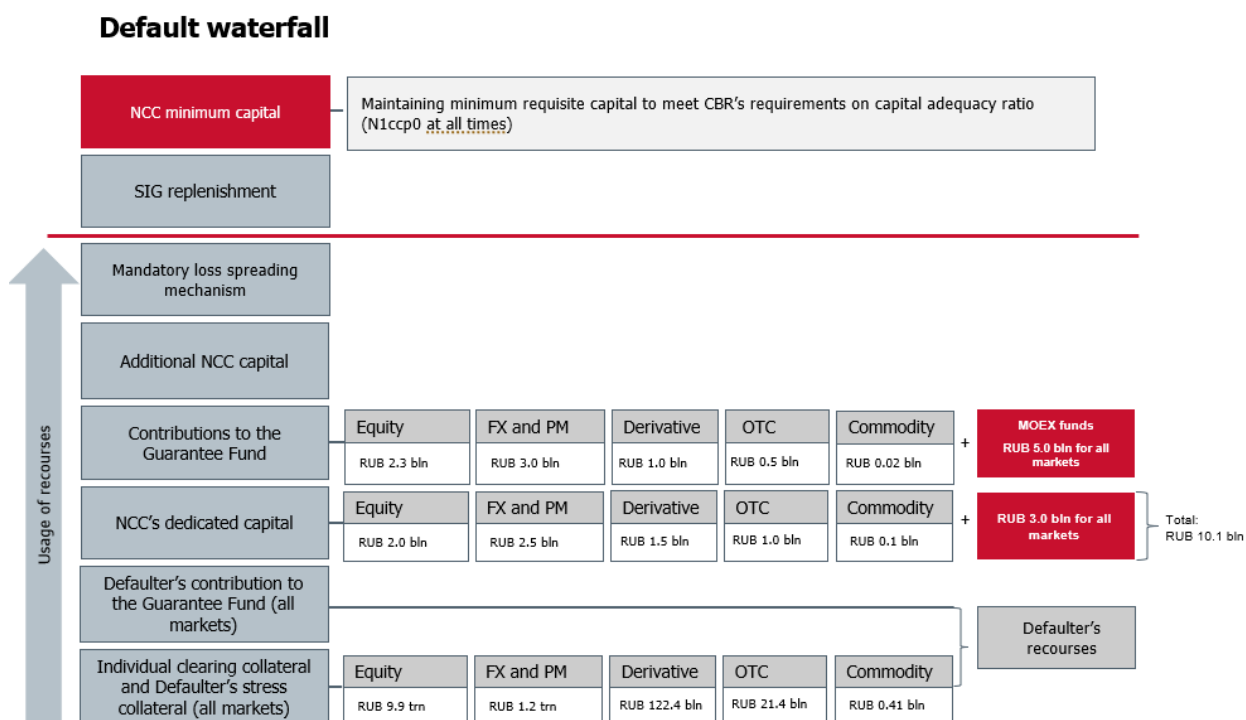
The asset types acceptable as collateral are also market-specific, as follows:

Asset types acceptable as collateral in the markets of the Moscow Exchange						
Market	RUB	Foreign Currencies	Precious Metals	Bonds	Shares	Commodities
FX Market and Precious Metals Market	+	+	+	-	-	-
Securities Market and Deposits Market	+	+	-	+	+	-
Derivatives Market	+	+	-	-	+	-
SFD market	+	+	-	-	-	-
Commodity Market	+	-	-	-	-	+

CCP Safeguard Structure

While developing the system of managing all types of risk, NCC continued to improve the structure of CCP safeguard levels aimed at ensuring the reliable and transparent interaction with clearing members and guaranteed maintenance of the Company's financial stability in connection of its performance of the functions of CCP. CCP NCC consolidated the structure of CCP safeguard levels by increasing the amount of standardized FDI up to RUB1 bln and introduction of the stress collateral on the SFD market.

The Figure below reflects the safeguard structure as of 01.01.2020:



According to the international operational standards for clearing organizations - central counterparties, the level of risk coverage by collective funds is considered to be sufficient provided that, within a short period of time, these resources can cover maximum risk for at least one or two default positions. CCP NCC aims to cover maximum risk caused top-2 CMs' defaults surpassing the requirements of the international standards.

To provide additional protection for non-defaulting clearing members, their contributions to the Default Fund are used only when the amount of total debt of the defaulting clearing members to CCP NCC exceeds the maximum acceptable value. Currently, in all serviced markets of the Moscow Exchange Group the default fund may be used to cover losses upon default of a clearing member. The size of the default funds as of 1 January 2020 is shown in the table below:

Size of Default Funds in the Moscow Exchange Markets as of 01 January 2019		
Market	Size of Guarantee Fund, RUB mln	Size of Contribution of Clearing Member, RUB mln
FX market	2,990	10
Securities Market and Deposit Market	2,285	10
Deposit Market		1
Derivatives Market	1,000	10
SFD market	460	10
Commodity Market	18	1

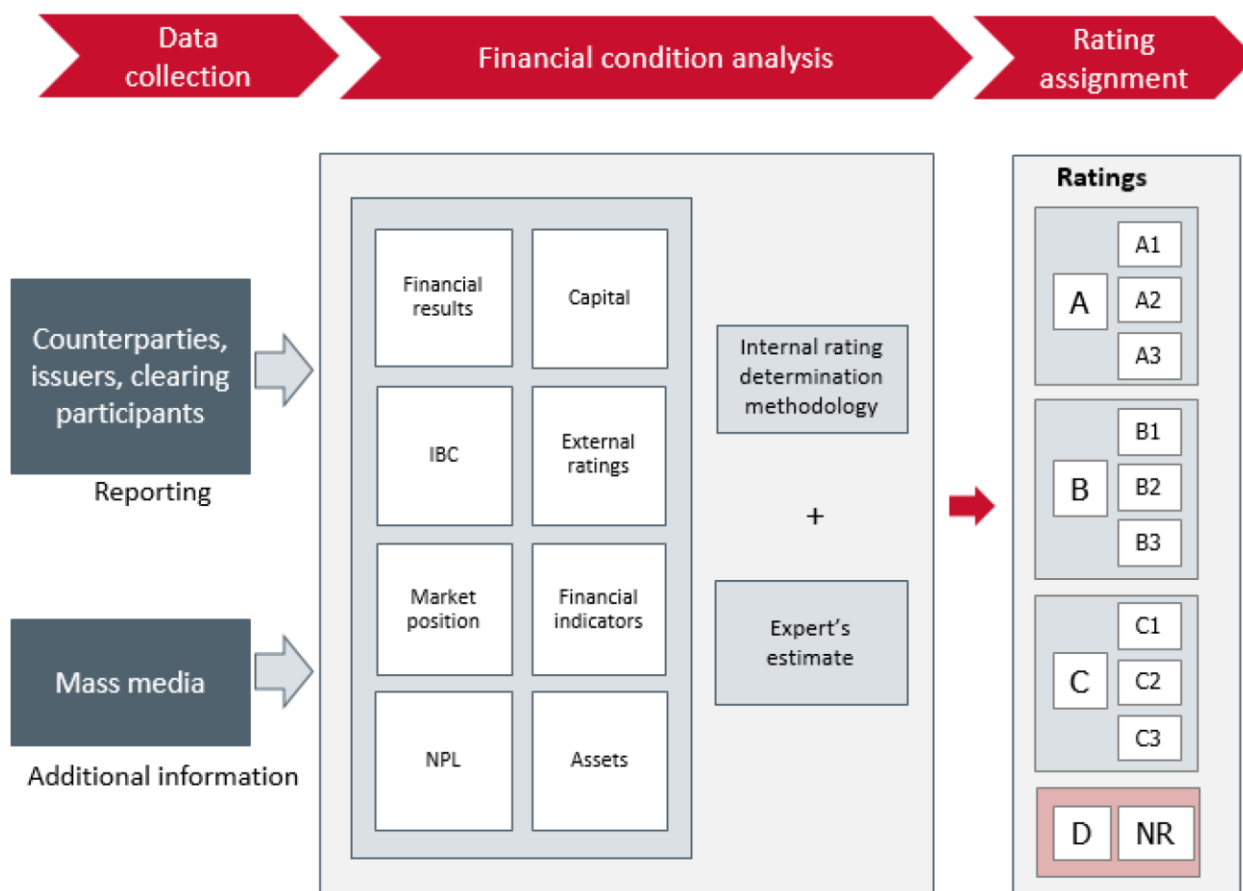
Composition of Default Funds as of 01.01.2020, RUB mln

Markets	RUB	USD	EUR	FLB
FXM, SM, DM, SFPI, CM	3,556	602	1,174	2,545

Financial Monitoring of Clearing Members

CCP NCC uses the internal rating system as an efficient tool to monitor financial position of clearing members and counterparties to its active trades. The use of formalized internal ratings enables it to promptly respond to deteriorating financial position of clearing members and counterparties, to establish limits for active transactions and set aside adequate provisions for possible losses on risk-bearing transactions.

The internal ratings are assigned in accordance with the Counterparty Internal Rating Guidelines. The internal rating process comprises the following components:



Information sources for determining of internal rating include financial statements and other information on clearing members and counterparties, which is significant for assessment of the level of risks assumed for them. The internal rating represents an outcome of the aggregate point assessment of financial and non-financial indices and may be adjusted based on the expert judgement (taking into account the information on the ownership structure, data on the development of the counterparty's business, market positions of a clearing member in separate market segments, and dynamics of the value of the stock issued by them, as well as other material information).

As of 01.01.2020, CCP NCC's internal rating system covered 964 organization. The breakdown by types of the rated clearing members and counterparties as of 01.01.2020 is shown in the table below:

Breakdown by types of participants as of 01 January 2020, %

Credit organization, NCOs, state-owned corporations, international organizations	32.2%
Issuers, corporations	29.1%
Financial Institutions	11.0%
Commodity market's warehouses/traders/elevators	9.5%
Administrations	5.5%
Nonresident credit organizations	4.9%
Nonresident issuers	4.3%
Other counterparties	3.5%

5.3.3. Managing Risks of CCP NCC as a Credit Organization

Due to its special status and types of activities, CCP NCC follows a conservative asset management policy in allocation of free cash.

The key elements of managing risks arising in course of CCP NCC as a credit organization include:

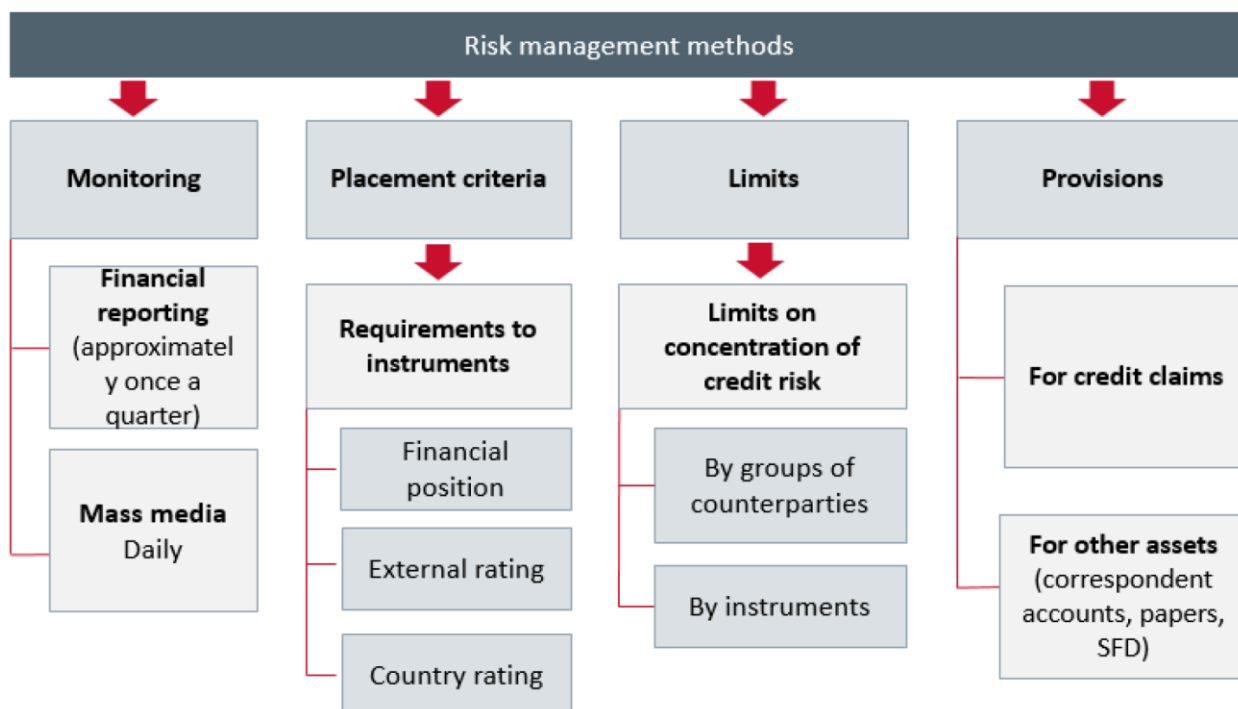
- managing the assets and liabilities portfolio;
- monitoring counterparties' financial standing;
- setting limits;
- provisioning for possible losses to cover risks; and
- refusal to bear certain types of risks.

Credit Risk Management

Credit risk with regard to CCP NCC as a credit organization arises from the Company's investment operations.

The credit risk management process is briefly outlined in the figure below:

Risk sources	<ul style="list-style-type: none"> ✓ Unsatisfactory financial condition of counterparties; ✓ Non-performance of obligations by counterparties; ✓ Assets posted as collateral under treasury trades.
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The investment activity of CCP NCC, the criteria it uses to select counterparties and instruments in allocation of free cash, as well as maturities based on market liquidity of instruments are governed by CCP NCC's Treasury Policy.

The main provisions of CCP NCC's investment policy ensure sufficient return on assets at a moderate risk level as shown in the tables below:

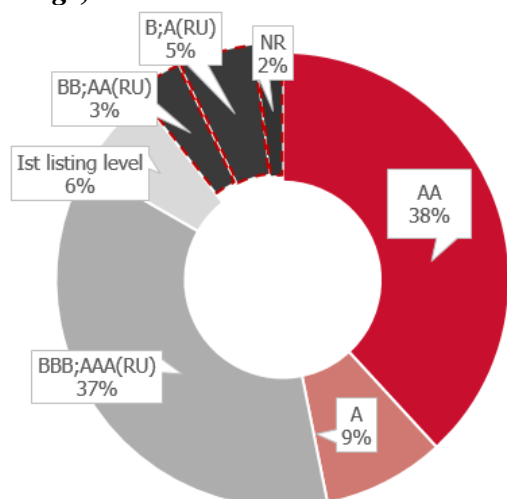
Financial instruments used	Placement period limits	
	Use of own funds	Use of clearing liabilities
Max portfolio duration	up to 18 months	
REPO with bonds	up to 180 days	
SWAP (FX)	up to 365 days	
SWAP (precious metals)	up to 365 days	
Bank of Russia Deposits	No limits apply	up to 31 days
IBCs	up to 180 days	
Government bonds (RF)	No limits apply	
Government bonds (other countrs.)	up to 3 years	
Corporate bonds	up to 3 years	

The cornerstone of control of credit risks arising in course of cash allocation is the limiting of treasury operations. The existing system of limit enables limiting of the amount of risks assumed by CCP NCC to the level corresponding to guaranteed performance of the regulatory requirements of the Bank of Russia and the Treasury Policy of CCP NCC.

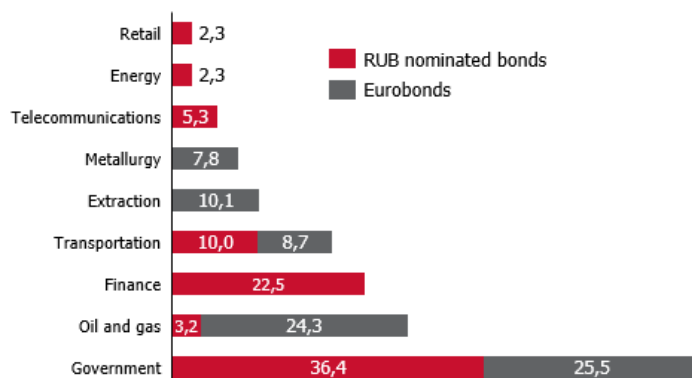
As of 01.01.2020, the structure of the credit risk exposed assets consisted prevalingly of the funds placed on correspondent accounts with credit organizations, mainly the major foreign banks and reliable Russian banks. The largest amount of funds was placed on the correspondent accounts with JP Morgan Chase Bank and its subsidiaries due to their performance of functions of settlement banks in the on-exchange FX market of the Moscow Exchange Group.

The diagrams below show the asset grouping to credit quality in accordance with Fitch, RA Expert and similar scales, as well as the distribution of CCP NCC's securities portfolio by industries:

Assets Breakdown by International Ratings, %



Industry Breakdown of Securities Portfolio, RUB bln



As of 01.01.2020, due to the high quality of assets, the capital adequacy ratio (N1ccp requirement) was 164.7% (versus the regulatory minimum of 100%), which confirms expressly CCP NCC's financial stability.

Market Risk Management

CCP's activity is exposed to market risk only in case of credit risk event. Therefore, the market risk is managed as a part of the range of credit risk management measures.

For the purpose of quantitative assessment of market risk for various markets where CCP NCC acts as CCP, the methodology was developed to be used, in particular, to determine the volume of requirements to the size of collateral posted by the clearing members. The key objective of market risk management in allocation of temporarily free cash is optimization of the risk/ return ratio and minimization possible losses in case of unfavorable events. To this end, CCP NCC:

- diversifies its securities portfolio (by maturities, issuer's industry);
- sets maximum expiration periods for investments in securities;
- sets limits for investments in securities (for the entire volume of investments, types of investments, and issuers);
- classifies the debt instruments and securities by risk groups; and
- forms provisions for possible losses from securities, unless such securities are revaluated at fair prices.

CCP NCC is exposed to interest rate risk on securities and financial derivatives sensitive to interest rate fluctuations, and on derivative trades in securities sensitive to interest rate fluctuations as shown in the table below:

CCP NCC's exposure to market risk as of 01.01.2020, RUB thousand

	01.01.2020	01.01.2019
Interest rate risk	11,580,148	10,899,121
General interest rate risk	1,817,610	2,322,638
Specific interest rate risk	9,762,538	8,576,483
Securities market risk	0	0
Currency risk	0	0
Interest rate risk, % of capital	16.43%	16.66%

As of 01.01.2020, the interest rate risk amounted to 16.43% of the capital (equity) of CCP NCC (16.66% as of 01.01.2019).

The interest rate risk is calculated as the sum of general interest rate risk associated with adverse changes in the present (fair) value of securities and financial derivatives as a result of market fluctuations of interest rates, and the specific interest rate risk driven by factors attributable to the issuer of securities, as well as the time periods to securities maturities and the currency in which the securities are denominated.

CCP NCC is not exposed to a securities market risk, as it does not hold any equity securities. FX risk may arise from adverse fluctuations of exchange rates. However, open positions in foreign currencies and precious metals were less than 2% equity of CCP NCC both as of 01.01.2020 and 01.01.2019, accordingly there were no sensitivity to FX risk. The market risk was considered by

CCP NCC during 2019 as not involving any potential losses that would impair its financial sustainability.

Managing Interest Rate Risk in the Banking Book

CCP NCC manages its interest rate risks in the banking book as part of the market risk management. The interest rate risk in the banking book is assessed on the basis of on review of amount and structure of the balance sheet and off-balance sheet claims and liabilities included in the bank's portfolio.

The source of interest rate risk is an adverse change in interest rates which may cause potential losses to CCP NCC driven by maturity gap (mismatches of interest rate revision) of assets and liabilities sensitive to the interest rate fluctuations, with parallel shift, change of slope or form of the yield curve, as well as occurrence of the basis risk due to different sensitivity of assets and liabilities with similar maturity to fluctuations of interest rates.

To assess the level of the assumed interest rate risks, CCP NCC measures its interest rate risks using the interest rate risk calculation methods – GAP-analysis and duration methods. Throughout the year 2019, the interest rate risk in the banking book remained within the admissible values approved by CCP NCC's Management Board.

Liquidity Risk Management

The conservative asset management policy contributed to maintenance of the liquidity level sufficient to perform payment obligations of CCP NCC as a CCP. The liquidity management is aimed at ensuring CCP NCC's ability to perform its obligations timely and in full, under normal market conditions or in case of unforeseeable emergencies without incurring unacceptable losses or reputational risks.

CCP NCC, as a CCP, calculates the liquidity requirement according to Bank of Russia Regulation No. 175-I dated 14.11.2016 'On Banking Operations of Non-banking Credit Institutions - central counterparties, on Statutory Ratios for Non-banking Credit Institutions - Central Counterparties and Features of the Bank of Russia's Supervision of Compliance with Them'. As of 01.01.2020, its value is many times greater than the minimum threshold.

The liquidity risk management involves the following procedures:

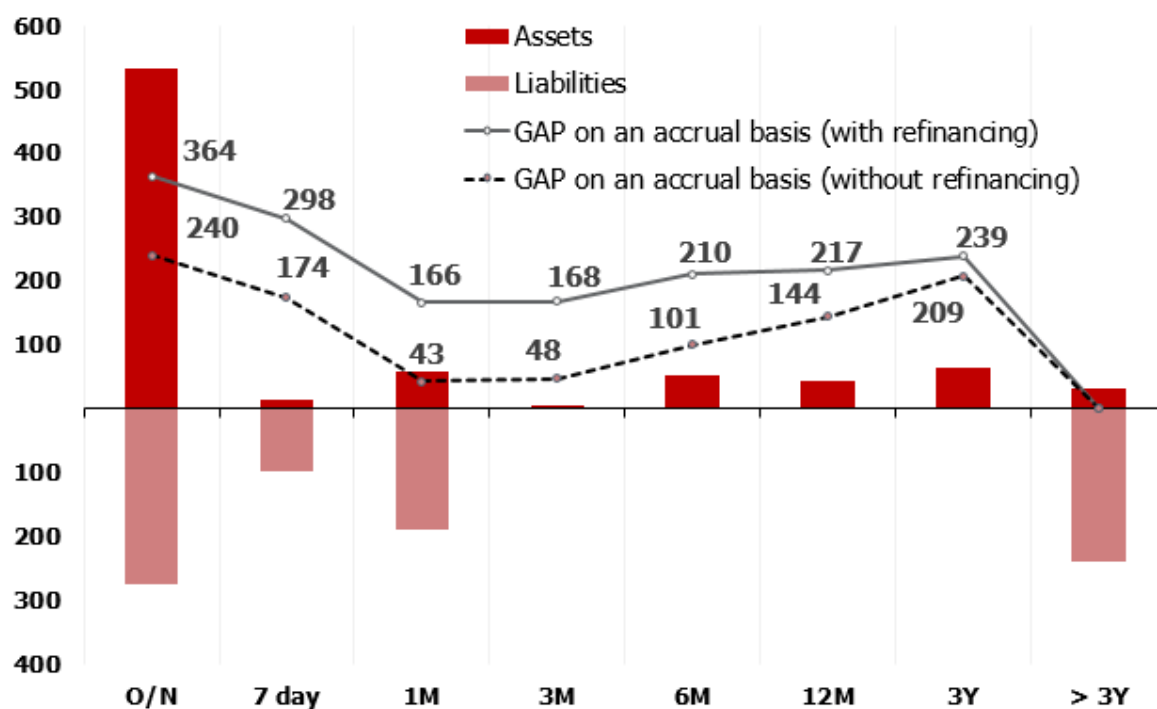
- forecasting payment flows with breakdown by major currencies and determining the required volume of liquid assets;
- monitoring and forecasting liquidity ratios;
- maintaining quick, current and long-term liquidity ratios at the prescribed regulatory levels;
- planning measures to recover the required liquidity level in unfavorable or crisis environment;
- setting limits and restrictions for transformation of cash into other types of assets: on securities transactions based on type and maturity of securities, limit of open FX position;
- composing an optimal asset structure given the available resource base;
- considering the maturities and amount of available resources when investing assets in financial instruments; and
- reviewing the negative scenarios of liquidity shortage, evaluating the risk response framework, improving the liquidity management tools and methods.

NCC manages its liquidity in a real-time mode based on the payment calendar using the measures to optimize its cash flows, improve operations regulations of active transactions, settlements and correspondent relations. Liquidity status is assessed on the monthly basis by means of liquidity gap-analysis (analysis of assets and liabilities by maturities) and calculation of liquidity shortage (excess) and accruing liquidity shortage (excess) ratio by maturities, taking

into account the refinancing instruments. The detailed liquidity analysis based on CCP NCC's internal models is conducted by means of the precise adjustments of composition, amounts, and maturities of assets and liabilities recorded in its books of accounts.

The monthly liquidity ratios monitoring shows that there was no shortage of liquidity in 2019 within all periods as shown in the Diagrams below:

Liquidity Risk Indicators as of 01.01.2020
(assessment on the basis of CCP NCC's internal models)



Operational Risk Management

CCP NCC's operational risk management system is a part of its general risk management system. Its functioning is aimed at ensuring that NCC is capable to exist on a going concern and secure smooth operation of its own systems and processes and critical services. The efficiency of functioning of the operational risk management system is supported by its multilevel structure, including distinct distribution of powers and functions among the operating subdivisions, committees, and management bodies in full compliance with the world's best management practices. The operational risk management system is compliant to the recommendations of the Bank of Russia, the Basel Committee on Banking Supervision, as well as CPMI-IOSCO.

During the reporting period, as a part of the internal control framework of the Moscow Exchange Group, CCP NCC was taking measures to enhance automation of its operational risk management processes, including those related to regulatory, legal, and compliance risks, and information security risks, through the implementation of SAS GRC automated risk management platform intended to provide automation of collection of operational risk events data, its mitigation plans and measures, as well as generation of reporting including the group-wide reports. In December 2019, CCP NCC created the Operational Risk Management Service, appointed the Operational Risk Director to improve and to develop this risk management stream.

The operational risk management process comprises the following key stages:

- collecting data concerning the operational risk events occurred in CCP NCC through accumulation of information in the operational risk events database using the approved

algorithm;

- identifying potential operational risk by means of self-assessment procedures;
- analyzing and assessing the identified operational risks;
- determining measures to remedy the consequences of a specific event of operational risk and measures to minimize occurrence thereof in the future;
- informing the management bodies of the event and level of operational risk (monthly or promptly upon occurrence any specific event of operational risk) and controlling implementation by them of the measures to mitigate the operational risk for any occurred events of operational risk on a quarterly basis;
- reporting on the operational risk events of CCP NCC as a CCP to the Bank of Russia on a periodic (monthly) basis;

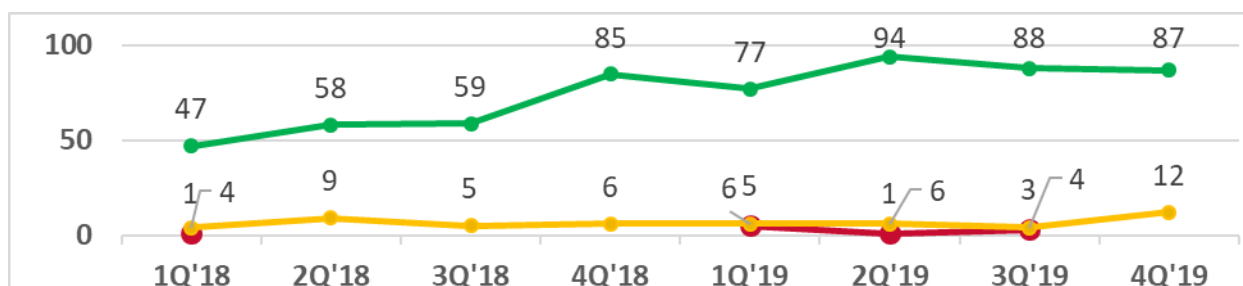
Operational risk is limited primarily due to the use of reliable hardware, information and technology systems, multilevel control of transaction procedures, and high-skilled personnel.

The comprehensive approach to mitigation of operational risks (personnel, processes and systems) implemented by CCP NCC implies, in particular, the implementation of the system for determination of process automation priorities (with risks taken into account), performance of regular risk audit of business processes, maintenance of current accounting of information assets (information systems, equipment, and communication channels), reservation of communication channels, as well as introduction of the project-based and service-based approach on operation of various subdivisions.

CCP NCC mitigates its operational risk through preventive and corrective internal and external control activities, which include in particular the implementation of new access control procedures, hardware and software, separation of rights of users and administrators of IT systems, data back-ups, performance analysis of existing control measures and development and implementation of new control measures.

In 2019, the dynamics of operational risk events with the average impact remained at the level of average values for previous years. Apart from operational risk events related to custody risk implementation, no events with the high impact were registered. Main operational processes of CCP NCC continued operating with the high operational continuity level.

The number of registered incidents (units)



CCP NCC performs regular analysis of its key processes, which results in implementation new technologies mitigating the level of its operational risk. In case of launching of new products and services, CCP NCC carries out a comprehensive multifactor analysis of the project including operational risk assessment. An independent external audit of the information security system is carried out on a regular basis.

Strong focus is made on ensuring continuity of CCP NCC activities, for which purpose the key information systems have reserve channels and capacities, and information is properly stored in electronic archives. Performing its functions as a clearing organization and a central counterparty, CCP NCC commits to being prepared to any events, which may result in suspension of its standard operational procedures. Bank of Russia Regulation No. 242-P dated 16.12.2003 'On Organization of Internal Control in Credit Institutions and Banking Groups' obliges credit organizations to develop business continuity and recovery plans to be used in case of emergencies. In compliance with the regulator's requirements, CCP NCC has developed and implemented a state-of-the-art business continuity management system taking into account Bank of Russia Ordinance No. 4258-U dated 30 December 2016 'On the Requirements for the Content, Procedure and Terms for Providing to the Bank of Russia the Plan for Ensuring Continuity of Operations of a Central Counterparty, Amendments to this Plan, the Procedure for Assessing the Plan for Ensuring Continuity of Operations of a Central Counterparty, on the Requirements for the Software and Hardware and Network Communications of a Central Counterparty, and on the Procedure for Creating, Keeping and Storing Data on the Property and Liabilities of a Central Counterparty and Their Movements', Ordinance No. 4429-U of 21 June 2015 'On the Information Disclosed by the Central Counterparty, Requirements for the Procedure and Timeframes for Such Disclosure, and Determining the Rules for Information Provision to Clearing Members'

In implementation of its business continuity processes, CCP NCC uses the methodology of the international standard ISO 22301 (Social Security - Business Continuity Management Systems - Requirements). This approach includes the following key elements:

- business continuity management policy – this is the document approved by CCP NCC's Supervisory Board and governing CCP NCC's efforts related to ensuring business continuity within CCP NCC;
- assessment of business continuity risks – this is the process of identification of risks, their analysis and assessment of their impact on CCP NCC's business;
- analysis of business effect – this is an analysis of all CCP NCC's processes for potential exposure to various types of incidents in the course of time. This analysis is performed at least annually and covers all structural units of CCP NCC;
- crisis management – this is defining of high-level business continuity management strategy of CCP NCC, including pre-developed arrangements for responding to variety of crisis

situations;

- business continuity strategy – this is a developed strategy describing the principles of building the business continuity management system in a short, medium and long runs;
- business continuity and disaster recovery plan – this is a documented procedure to be used in case of an emergency. The plan contains the list of measures to maintain critical business functions at the pre-determined and agreed level;
- recovery plan – this is a documented process of recovery and protection of the IT infrastructure and systems in case of an emergency;
- incident management plan – this is a clearly defined and documented action plan to be deployed in case of an emergency in order to minimize its effect on personnel and critical business processes;
- crisis communications – these are the documented priorities in communication in case of emergency, which contain the pre-developed templates to be used for notification in the external and internal environments; and
- testing and exercising – this is an important process developed to determine adequacy, planning quality, efficiency of organizational preparedness of the business continuity management system

In pursuance of its business continuity management strategy and based on business requirements, CCP NCC has established alternative sites (geographically remote back-up offices) which are activated in case of realization of the scenario of inaccessibility of the primary offices. To assess CCP NCC's level of maturity in the area of business continuity management, CCP NCC regularly prepares reports on the key indicators of the business continuity management system submitted to Company's management bodies.

Strategic Risk Management

Strategic goals of CCP NCC are defined in CCP NCC's Strategy for the Years 2017-2020 developed in accordance with the Strategy of the Moscow Exchange Group and approved by CCP NCC's Supervisory Board.

Strategic risk is defined by CCP NCC as exposure to adverse changes in performance results caused by wrong decisions made in course of managing CCP NCC, including any decisions made in course of development, approval and implementation of Company's development strategy, improper execution of the decisions made, and the failure of CCP NCC's management bodies to consider changes in external factors. Therefore, the efficient strategic risks management is a key to success in achieving the strategic goals while implementing the strategy.

The strategic risk management system considers CCP NCC's risk arising from the combination of its functions as a credit organization, clearing organization, central counterparty, and commodity supply operator.

For the purpose of strategic risk monitoring, the following monitoring criteria were set:

- monitoring criterion related to impossibility of achieving the set strategic goals; and
- monitoring criterion related to the change in strategic goals;

Strategic risk is monitored using the established criteria and the range of qualitative indicators such as:

- identifying cases of non-compliance with the approved development strategy;
- identifying significant deviations from schedule and/or budget for implementation of strategic projects; and
- identifying risks preventing the achievement of strategic goals.

The additional tool of strategic risk management at the strategy implementation stage is the monitoring of the progress of implementation of the strategic initiatives. The results of the strategic risk monitoring are regularly reported to CCP NCC's authorized collective bodies, including:

- data on strategic risk level and dynamics;
- statistics of key risk indicators;
- results of the programs for strategic risk identification and assessment;
- report on the statuses of implementation of risk mitigation measures; and
- other information related to the strategic risk management.

The results of strategic risk management are considered in the process of strategic planning according to CCP NCC's strategic goals and the Group's Strategy. Based on current and planned (target) values of risk appetite metrics, CCP NCC develops its strategic objectives.

Legal Risk Management

CCP NCC's legal risk management system is based on the operational specifics of the Company combining the functions of a central counterparty and a clearing organization with activity of a credit organization and a commodity delivery operator. It places especially strong focus on the legal risk mitigation measures in course of CCP NCC's performance of the central counterparty functions. In CCP NCC, the legal risk factors are common to all types of activities; therefore, for the purpose of arrangement of the legal risk management processes, the Company has built a comprehensive legal risk management framework throughout all business-lines.

CCP NCC manages its legal risk in accordance with the Regulations "On Organization of Legal Risk Management Framework in the Company approved by resolution of CCP NCC's Supervisory Board on 02.10.2019 (Minutes No.7), which takes into account the requirements of the Bank of Russia as to the legal risk management set forth in Bank of Russia Regulation No. 575-P of dated 30.12.2016 "On the Requirements for Risk Management, Rules for Risk Management Framework Design, Clearing Collateral, Asset Allotment, Central Counterparty Asset Formation and to the Group of Entities Where the Central Counterparty is Entitled to Open Trading and Clearing Accounts and the Technique for Determination of the Central Counterparty's Dedicated Capital", Ordinance No. 3624-U of 15.04.2015 "On the Requirements to the Risk and Capital Management System of Credit Institution and Banking Group" and Letter No. 92-T of 30.06.2005 "On the organization of legal risk and reputation risk management at credit institutions and banking groups".

The legal risk management process implies the distribution of powers between different levels of CCP NCC's management bodies (including the Supervisory Board, Risk Committee of CCP NCCs Supervisory Board, Management Board, Chairman of the Board), between its structural units and employees of CCP NCC. At this, the framework for distribution of powers between structural units and employees of CCP NCC during legal risk discovery, assessment and

management is implemented on the basis of the COSO concept for the internal control according to the “three lines of defense” model.

In accordance with the internal administrative document, CCP NCC has appointed the Legal Affairs Officer responsible for the legal risk management and coordination of legal risk mitigation efforts. The Legal Affairs Officer directly reports to CEO and his/her activity is independent of the Legal Department and subdivisions exercising transactions (trades) associated with legal risk assumption.

The Legal Affairs Officer organizes monitoring of the legislation of the Russian Federation on an ongoing basis, prepares overviews of any amendments made to the legislation of the Russian Federation, regulations of the Russian Federation, judicial practices and draft regulations of Russian Federation on the issues related to CCP NCC’s activities. Such overviews are sent to all concerned structural units of CCP NCC. The heads of the concerned structural units ensure that relevant amendments are promptly made to CCP NCC’s internal documents to reflect the amendments made to the legislation of the Russian Federation.

To mitigate the legal risk, CCP NCC has developed the standard forms of agreements and other internal documents and established the procedures for approval by CCP NCC’s Legal Department of any non-standard agreements, transactions and other trades entered by CCP NCC. In accordance with its internal documents, CCP NCC collects and analyzes the information about the legal risk events and monitors the legal risk. On a quarterly basis, the Legal Affairs Officer prepares legal risk reports and submits them to CCP NCC Management Board for review approval. Such legal risk reports are generated on the basis of the legal risk level assessment indicators introduced by the Regulations on the organization of legal risk management in CCP NCC” and contains the following information: the estimated level of legal risk, results of the legal risk level assessment in dynamics; and relation between the indices of the legal risk levels and limits set.

In 2019, the indices of the legal risk assessment level were remaining within the limits set by the resolution of CCP NCC’s Management Board. In 2019, the increased attention was paid to analysis of claims of clearing members and counterparties and to forming its legal position on the lawsuits against CCP NCC admitted for consideration, and participation in court proceedings arising from such claims. Measures for risk mitigation were promptly taken in relation to each legal risk event, including lawsuits of clients and counterparties against CCP NCC.

In 2019, there were 6 claims against CCP NCC from clients and counterparties and 2 lawsuits against CCP NCC admitted by courts for consideration (in 2018 - 7 claims and 8 lawsuits against CCP NCC). No payments by CCP NCC were adjudicated by judicial bodies in 2019.

Regulatory (Compliance) Risk Management

The regulatory (compliance) risk is the risk of losses arising from CCP NCC’s failure to comply with the legislation of the Russian Federation, internal documents of CCP NCC, and a result of applied sanctions and/ or other retaliation measures on the part of supervisory authorities.

The specifics of regulatory risk as applied to the NCC’s activities as a clearing organization, CCP and commodity delivery operator lies in a possibility of incurring any expenses (losses) by the Company as a result of non-compliance with Federal Law No. 7-FZ of 07.02.2011 “On clearing, clearing activities and central counterparty”, regulations issued by the Bank of Russia, and CCP NCC’s Articles of Association and internal documents related to the above types of its activities.

For the purpose of the regulatory (compliance) risk management, CCP NCC performs:

- identification, analysis, assessment and monitoring of regulatory risk arising from CCP NCC's activities and its management including development of measures aimed to warn against and to prevent consequences of the regulatory risk implementation;
- monitoring of CCP NCC structural units' activities (structural unit employees) including in view of compliance with deadlines for submission of reports to the Bank of Russia;
- analysis of new products, services and planned methodologies for their implementation introduced by CCP NCC in view of compliance risk;
- interaction with the Bank of Russia for issues related to imposing of new requirements related to regulation of CCP NCC as well as obtaining of necessary recommendations and explanations;
- proper update of CCP NCC internal documents;
- implementation of internal control rules in order to prevent legalization (laundering) of the income obtained by criminal means and funding of terrorism / prevention of funding distribution of the NBC weapons including compliance with legal requirements to identification of clients, their representatives, beneficiaries, beneficiary owners, to documenting of the data (information) and their submission to the authorized body, to storage of documents and information, to training and preparation of the staff;
 - advanced training of CCP NCC's employees;
 - distribution of competences/authorities between members of the Management Board/CCP NCC's employees;
 - analysis of claims and complaints submitted by clearing members, infrastructural organizations, development of measures for their elimination;
 - compliance with deadlines for disclosure of the information on the official internet website as well as with deadlines for submission of reports to the Bank of Russia;
 - prevention and management of conflict of interests taking into account specific features of CCP NCC's activities;
 - using the best compliance practices, professional ethical standards and norms;
 - interaction with the Bank of Russia for issues related to imposing new requirements related to regulation of CCP NCC as well as to obtaining new recommendations and explanations.

Reputational Risk Management

Reputational risk is the risk of losses made by CCP NCC due to the negative impact on the business reputation made by external and internal factors listed in the regulatory documents.

Based on the Provision of the Bank of Russia dated 16.12.2003 No. 242-P “On Design of Internal Control in Credit Organizations and Banking Groups” and the Letter of the Bank of Russia No. 92-T dated 30.06.2005 “On Design of Legal Risk Management and Reputational Risk Management in Credit Organizations and Banking Groups” as well as on other regulatory and internal documents, the Supervisory Board of the Company has developed and confirmed the Provision on Design of Reputational Risk Management for the Bank “National Clearing Centre” (Joint-Stock Company). The Management Board of CCP NCC confirmed “Methodology for Calculation of the Reputational Risk “National Clearing Centre” (Joint-Stock Company) Based on Risk Events” with the attached “Categorization of Reputational Risk Events Indicating Their Measured Characteristics) (hereinafter referred to as RR Categorization).

Provision on Design Reputational Risk Management in CCP NCC determines:

- Measures used to support the proper level of reputational risk including risk control and (or mitigation);
- Procedure for information interaction (procedure for exchange of information between units and employees of CCP NCC, procedure and schedule for submission of reporting and other information for reputational risk management issues);
- Distribution of powers and responsibility between management bodies, units and employees in part of implementation of main principles for reputational risk management;
- The procedure for control of effectiveness of reputational risk management.

Methodology for Risk Level Calculation determines:

- Principles used to form the reputational risk level;
- The procedure for calculation of the reputational risk level using the RR Categorization;
- The procedure for calculation of the reputational risk level using the Automated Management System (hereinafter referred as RR AMS).

The RR Categorization:

- determines the list of RR events, the weight of each event, their scale and sensitivity threshold and is used to discover relationships between reputational risk events and accidents arisen in any activity of CCP NCC,
- allows to urgently trace down changes of the RR level and to provide for the proper notification of CCP NCC management about the need to take administrative decisions to prevent/reduce the possible damage to the Company on the grounds of the RR AMS designed using the Heading List.

In 2019, the reputational risk management was used to solve the following main issues:

- interaction with units and employees of CCP NCC managing financial and non-financial risks, provision for monitoring of accidents, events, incidents, conflicts and adverse events directly or indirectly related to CCP NCC and happening in various activities of the Company and in the external environment;
- assessment, analysis and identification of fixed events, accidents, etc. using the RR AMS in view of their relation to RR events and their impact on dynamics of changes in controlled level of this risk type;
- proper notification of CCP NCC management about emerged reputational threats to take relevant decisions for the purpose to prevent damage to the Company and/or to reduce negative consequences for it as much as possible.

During the reporting period, within solving RR issues using the automated management system for this risk, the information about current events received by various channels was treated to determine their possible relation to RR events. This work was implemented together with the Credit Risk Department, with employees responsible to legal and regulatory risk management as well as the Operational Risk Director. At this, the cornerstone was the issue of proper discovery and response to events that affected changes into the RR dynamics for increasing the risk level.

By their categorization, the RR events registered during the reporting period were referred to the groups of internal and external factors. The events of the group of internal factors resulted mainly from erroneous actions or delay in transferring cash by CCP NCC, distribution of incorrect reports on clearing results to clearing members, incorrect identification of claims and liabilities in any assets, untimely withdrawal/crediting of funds/assets upon closed deals. These events did not influence the curve determining the current RR level (hereinafter referred to as CRRL), as they were not reaching the established thresholds of sensitivity, i.e. the values at

which, according to the Heading List, the specific risk event is implemented. At the same time, at the 4th quarter of 2019, two regulatory risk events were registered that were related to the RR events and affected the CRRL growth that reached the level of 300 points (the set risk appetite for CRRL is 300 points). The RR Management Officer urgently notified the Chairman of the Board, Management Board and the unit/officers managing various financial and non-financial risks upon this case.

During monitoring of registered RR resulted from external factors group that were referred mostly to negative information in media - mainly on Moscow Exchange, in individual cases – on CCP NCC, it was discovered that they somehow affected the RR level. However, these changes did not breach the risk appetite limits (300 points) and did not require any prompt response for preventing possible damage.

As the analysis of the data characterizing the RR management results for the reporting period shows, the quarterly dynamics of RR level peaks:

QI – 0
QII – 0
QIII – 0
QIV – 300

During the reporting period, both CRRL and forecasted level of reputational risk (hereinafter FLRR), which reflects the overall significance of all RR events calculated at the current point of time with their potential impact on the reputation level during the specified period in the future implemented, were monitored.

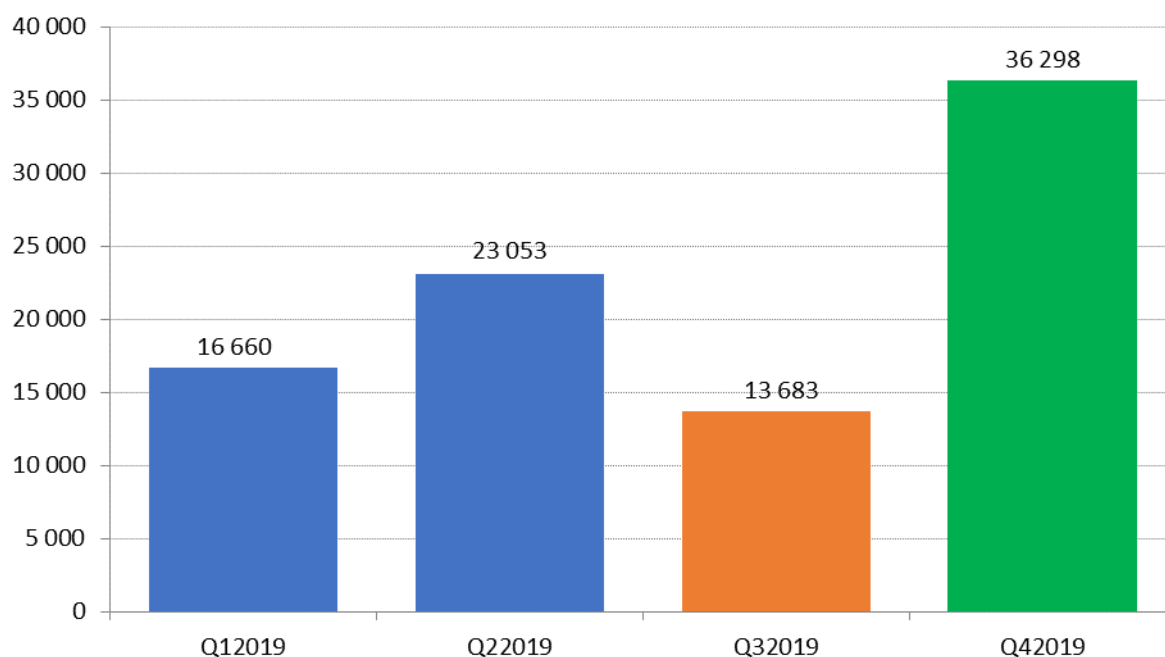
FLRR dynamics confirms the fact that high density of RR events took place during the reporting period. If the sensitivity threshold were passed, these events might have pushed the FLRR beyond acceptable level. Such accumulation of RR events, which were immediately reported to NCC management, resulted mostly from operational risk accidents that were classified as related to reputational risk events after their assessment and incidents registered previously. Taking into account indicted FLRR factors, the Reputational Risk Officer enforced monitoring of the situation in the most troublesome areas of CCP NCC's activity. Such monitoring is carried out in order to obtain the necessary information on the events related to RR events for their timely assessment and analysis.

During the reporting period for the purposes of responding timely to the reputational threats arising under impact of negative occurrences in the external environment, CCP NCC monitored continuously the information field of Russian mass media with regard to the objects of survey with using Medialogy information and analytical system.

For determining the general condition of the information space, CCP NCC used Medialogy MediaIndex, an indicator of assessment of the presence of objects in mass media, taking into account the influence capability of sources, size and place of release of messages/publications and also positive, negative or neutral nature of references to objects in them. The higher this index value is, the better characteristic of the information field for the specific period is. The green color on the diagram below marks the period when the highest MediaIndex level was registered and the “dark-amber” color marks the lowest MediaIndex level.

Quarter-by-quarter dynamics of the index is shown in the diagram below.

QUARTER-BY-QUARTER MEDIAINDEX DYNAMICS IN 2019



During 2019, CCP NCC was quarterly reporting its RR management results to the Bank of Russia Financial Stability Department. Based on recommendation of its of Internal Control Department and to improve the control of the RR management by CCP NCC's collective executive bodies, reports generated by Risk Management Officer were considered and approved at the meetings of the Company's Management Board on a monthly basis.

Custody Risk Management

For its payments and settlements CCP NCC uses services provided by counterparty banks, depositories and settlement institutions (including the National Settlement Depository - NSD). CCP NCC uses the infrastructure of commercial banks and third-party depositories in cases where there is no possibility to use the infrastructure of the Bank of Russia and NSD. The credit worthiness of such counterparties is assessed in the process of CCP NCC's credit risk management.

To mitigate its custody risks, CCP NCC assesses the quality of depositories in compliance with the Regulation on Provisioning for Possible Losses of the Company.

Moreover, in the process of custody risk management, CCP NCC:

- assesses compliance with the requirements imposed on technical equipment and regularly inspects the assets in depositories, precious metals storages, elevators, warehouses;
- provides accreditation of elevators in accordance with the Bases Accreditation Rules when performing functions of a Commodity Delivery Operator;
- performs accreditation of warehouses storing sugar in accordance with the Bases Accreditation Rules when performing functions of a Commodity Delivery Operator;
- establishes the storage limits on each elevator and warehouse storing commodity for the benefit of a commodity supply operator;
- controls the actual location of assets owned by CCP, and/or transferred by clearing members to the central counterparty as a collateral for the performance of obligations;

- performs technical and technological audit of bases, inspection of custodians, confirmation of quantitative and qualitative commodities characteristics when assets are stored and received by the depositor;
- assesses a possibility for demanding timely the assets owned by CCP and/or transferred by clearing members to the central counterparty as a collateral for the performance of obligations; and
- ensures a possibility for provisioning and (or) ensuring the assets owned by CCP and (or) transferred by clearing members to the central counterparty as a collateral for the performance of obligations for covering potential losses arising in case of custodian insolvency.

Taking into account the accidents implemented on the commodities market, the external audit of controls was performed. Recommendations of these controls enabled development of the roadmap for commodities market reconfiguration. During implementation of events by the said roadmap, changes were made into both procedures and internal documents of the Company including:

- principal documents of CCP NCC were improved;
- assessment of commodities market product risks was introduced and performed;
- methodology for determination of storage limits at elevators and warehouses was improved;
- the risk appetite of the Company's custody risk was determined;
- technical solutions for control over the actual location of assets during storage were developed.

Commercial Risk Management

Commercial risk means any potential deterioration of CCP NCC's financial standing (as a for-profit organization) due to the exceeding of expenses over earnings, provided that they cause losses not associated with occurrence of credit or custody risk.

To manage its commercial risks, CCP NCC applies the following measures:

- develops action plans to recover or orderly reduce the scope of activities in case of occurrence of business risk, reputational risk and strategic risk; and
- provides analysis of potential income and expenses in case of new instruments and products launch.

In 2019, commercial risk management tools were enriched by the post-investment monitoring of all projects launched by the Moscow Exchange Group, including CCP NCC and analysis of the risk-weighted profitability of new projects prior to their kick-off.

Systemic Risk Management

Systemic risk of CCP NCC may originate from simultaneous failure of several clearing members or counterparties of CCP NCC to perform their obligations, which prevents other counterparties from performance of their obligations to the Company properly and when due.

Since CCP NCC is systemically important as a financial market infrastructure facility, its systemic risk may be also originated from relationships between the Company and other financial market organizations.

The efficient management of its on risks (credit, market, operational, custody, liquidity and others) enables CCP NCC to maintain stability in all financial market segments where it provides its services and thus facilitating the systemic risk reduction.

For the purposes of reducing systemic risk, NCC:

- monitors the systemic risk through control of the level of other risks inherent to CCP NCC's activities;
- monitors the financial soundness of infrastructural organizations, with which the contractual relations are established and to which it has credit exposure;
- monitors the aggregate positions held by clearing members in all markets where CCP NCC acts as a CCP;
- develops the procedures for transferring positions of clients of any clearing member in case of its insolvency (bankruptcy) to another clearing member;
- limits the procyclicality of calculation of the amount of the required collateral for trades of clearing members; and
- informs the members of CCP NCC Supervisory Board of occurrence or threat of any systemic risk.

During the reporting period, the Company did not register any cases of the systemic risk and did not hold additional measures apart from all standard risk management procedures that in total should reduce the systemic risk level as a whole.

5.3.4. Stress Testing of Financial Stability

The stress testing of CCP NCC's financial stability is designed to reduce its risks to an acceptable level enabling it to maintain its stability in all financial market segments where it provides its services.

CCP NCC's risks stress-testing covers the financial risks inherent to NCC activities, including credit, market and liquidity risks, as well as the risks arising from combination by of CCP and other functions.

The risk of CCP determines the amount of losses caused by non-performance, untimely or incomplete performance of financial obligations to a CCP by the defaulting clearing members in the markets of Moscow Exchange. CCP NCC uses a model of simultaneous settlement of its counterparties' largest default net positions. To determine the number of clearing members' defaults, CCP NCC takes into account the recommendations issued by CPMI-IOSCO for central counterparties.

CCP NCC performs stress testing in accordance with Bank of Russia Regulation No. 576-P, dated 30 December 2016, 'On the Requirements for the Methodologies for Risk Stress-testing and Model Accuracy Assessment of the Central Counterparty, Risk Stress-testing and Model Accuracy Assessment of the Central Counterparty, and the Procedure and Timeframes for Providing Information on the Results of Risk Stress-testing of the Central Counterparty to Clearing Members'.

CCP NCC's stress testing of risks includes the direct and reverse stress testing of risks.

Direct stress testing of risks means an analysis of adequacy of the collective clearing collateral and dedicated capital of CCP NCC to cover potential (uncovered) losses caused by non-performance or undue performance of obligations by two major loss-generating clearing members and an analysis of sensitivity of sufficiency of CCP's funds to occurrence of certain risk factors. Reverse stress testing means identification of the hypothetical stress scenarios (risk factor

values), where the amount of central counterparty's funds or liquid funds may take critical (maximum or minimum allowed) values established in CCP's risk stress testing methodology considering a need to observe the regulatory requirements of the Bank of Russia.

NCC conducts stress testing of risks on the basis of historical and hypothetical stress scenarios.

Sensitivity to specific risk factors is analyzed by changing such (specific) risk factor value during the direct stress testing of CCP's risks, with all other risk factors remaining unchanged. CCP NCC analyzes the soundness of such targeted changes in risk factors (stress scenarios) influencing its financial stability and used for stress testing of CCP's risks.

The results of stress testing performed in 2019 evidence CCP NCC's ability of to maintain the common financial stability without any threat to its business continuity determined through sufficiency of risk coverage resources, in a range of simulated stress scenarios and their combination. CCP NCC's financial resources (safeguard levels) are sufficient to cover any possible losses (not covered by the collateral) which may arise from non-performance or undue performance of obligations by two major loss-generating clearing members.

6. INTERNAL CONTROL SYSTEM

In 2019, CCP NCC performs the internal control in accordance with Federal Law No. 395-1 of 02.12.1990 'On Banks and Banking Activity', Federal Law No. 7-FZ of 07.02.2011 'On Clearing, Clearing Activities and Central Counterparty', Bank of Russia Regulation No. 242-P dated 16.12.2003 'On Organization of Internal Control in Credit Institutions and Banking Groups', and Order No. 13-72/pz-n issued by the Federal Financial Market Service (FFMS) on 13 August 2013 "On approval of requirements to arrangement of internal control of a clearing organization and to the document establishing the internal control procedure in a clearing organization", and subject to the nature and scope of conducted operations, the levels and combination of assumed risks interacting the course of CCP NCC's activities as a clearing organization functioning as a central counterparty and commodity supply operator (CSO).

The internal control is exercised to ensure:

- the efficient financial and economic performance of CCP NCC in banking operations and other transactions, performance of the functions of a credit organization and central counterparty, efficient management of assets and liabilities including safe custody of assets, and management of banking risks/ central counterparty and CSO risks;
- reliability, completeness, objectivity and timeliness of preparation and submission of financial statements, accounts, statistical and other reports;
- information security, i.e. the protection of CCP NCC's interests in the information area which is a composition of information, information infrastructure, entities collecting, forming, disseminating and using information, as well as the systems regulating the relations arising in this respect;
- compliance with the Russian Federation, provisions of CCP NCC's Articles of Association and other CCP NCC's constituent documents;
- prevention of involvement of CCP NCC and its employees in any illegal activity including the legalization (laundering) of proceeds from crime and financing of terrorism, in exercise of suspicious transactions;
- mitigation of risk of losses which NCC may incur as a result of any sanctions and (or) other disciplinary measures taken by supervisory authorities, including by reason of its non-compliance with the legislation of the Russian Federation or CCP NCC's internal documents, as well as delayed submission to any governmental authorities or the Bank of

Russia of any information required to be so disclosed according to the legislation of the Russian Federation; maintaining CCP NCC's effective system to combat legalization (laundering) of proceeds from crime and financing of terrorism at the level sufficient to manage the risks of legalization (laundering) of proceeds from crime and financing of terrorism.

Organization of CCP NCC's internal control² also complies with requirements to organization of the internal control framework determined by the federal executive body, a taxation control and supervision officer in the view of:

- regular and effective financial-economic activity of CCP NCC including achievement of financial and operational indexes, asset safety;
- correct assessment (deduction), completeness and the timely manner of payment (remittance) of taxes, duties and insurance premiums;
- trustworthiness, completeness and the timely manner of reflection of the financial and economic results in the accounting (financial), taxation and other statements as well as accounting of such results during assessment (deduction) of taxes, duties, insurance premiums, completeness and the timely manner of their payment (remittance);
- compliance with the law of the Russian Federation including during implementation of economic life facts for the closed or scheduled deal (transaction) or the group of interconnected deals (transactions) as well as for other implemented economic life facts of the company.
- Monitoring of results from executed controls aimed to timely discovery, correction and prevention of errors (distortions) in the accounting (financial), taxation and other statements.

The efficiency of CCP NCC's internal control system is ensured by:

- control procedures implemented at all levels of management;
- periodical inspections of compliance of all activity areas with the established policies and procedures;
- ensuring integration of the control procedures in CCP NCC's daily operations;
- follow-up control of closed transactions;
- ensuring separation of functions and prevention of conflicts of interest in performance of duties by its personnel;
- ensuring compliance of its transactions with the legislation of the Russian Federation and regulations of the Bank of Russia;
- ensuring timely provision of necessary information to the relevant employees of CCP NCC;
- maintaining the required level of security of information systems;
- daily monitoring of high risk transactions;
- internal audit and different external audits;
- performing regular control of efficiency of the measures taken by its subdivisions and management bodies based on the inspection results ensuring decrease in the level of the identified risks;
- timely submission to the management and Supervisory Board of the information on material risks and deficiencies of its internal control system.

2 The Ordinance of the FTS of Russia dated 16.06.2017 No. MMB-7-15/509 "On Determination of Requirements to Organization of the Internal Control Framework"

The system of CCP NCC's internal control bodies performing internal control in accordance with their powers defined in the Articles of Association and internal documents of CCP NCC included:

- CCP NCC management bodies (General Shareholders Meeting, Supervisory Board, Management Board, and CEO);
- CCP NCC Revision Committee;
- CCP NCC Chief Accountant and his/her deputies;
- Internal Audit Service (IAS). IAS operates under the direct control of CCP NCC Supervisory Board. The main objective of IAS is to ensure independent objective assessment of efficiency of internal control system, risk management system and the corporate governance;
- Internal Control Service (ICS). ICS operates under the direct control of and reports to CEO. The main functions of ICS are mitigation of regulatory risk, control over compliance by CCP NCC with the laws on clearing, clearing activities and central counterparty, and the laws on combating unlawful use of insider information and market manipulation;
- Financial Monitoring Service (FMS) is CCP NCC's structural unit for prevention of legalization (laundering) of proceeds from crime and financing of terrorism,
- In accordance with Article 7 (§ 2) of Federal Law No. 115-FZ of 07.08.2001 'On Combating Legalization (Laundering) of Proceeds from Crime and Financing of Terrorism', by its order, CCP NCC appointed the authorized officer (head of the Financial Monitoring Service) – a special officer responsible for implementation of internal control regulations to combat legalization (laundering) of proceeds from crime and financing of terrorism (AML/CFT). FMS reports to CCP NCC's Supervisory Board on an annual basis – 2019 report was taken into consideration;
- Credit Risk Department (CRD) is a structural unit of CCP NCC responsible for organization of the risk management framework (RMF). The CRD manages credit and custodial risks, coordinates non-financial risk management officers and the activity of the Market Risk Department in part of the market risk and liquidity risk management for CCP NCC.
- Market Risk Department (MRD) is a structural unit of CCP NCC responsible for taking part in organization of the RMF and CCP NCC's risk management in part of the market risk and the liquidity risk;
- Legal Affairs Officer is a person responsible for the management of legal risk and organization of work aimed at legal risk mitigation. The Legal Affairs Officer acts in compliance with the legislation of the Russian Federation, regulations issued by the Bank of Russia, CCP NCC's Articles of Association and other constituent documents and policies;
- Authorized officer for reputational risk management is – a person responsible for the management of reputational risk and organization of work aimed at its mitigation. The authorized officer for reputational risk management acts in compliance with the legislation of the Russian Federation, regulations issued by the Bank of Russia, CCP NCC's Articles of Association and internal documents of CCP NCC;
- The authorized officer responsible for organization of operational and strategic risk management acts in compliance with the legislation of the Russian Federation, regulations issued by the Bank of Russia, CCP NCC's Articles of Association and internal documents of CCP NCC,
- Other structural units and employees of CCP NCC performing their internal control functions in accordance with their powers defined in the internal documents of NCC. For instance, the Information Security Service (ISS) acts under the direct control of and reports

to him/her. Its key responsibilities include the development of a set of CEO measures to protect confidential information (including banking secrecy, personal data), and conduct periodic audits of the objects of CCP NCC's information infrastructure as well as the existing processes for checking the compliance with the information security requirements.

During the reporting period E&Y Company made an independent audit of the general internal control framework (GICF) in the Moscow Exchange Group. As a result of assessment it was confirmed that the GICF complies with legal requirements and best global practices, the maturity level of the framework was assessed as "developed".

In addition, CCP NCC continues implementing the internal control framework to increase its effectiveness. The Company takes part in implementation of Stabilization 3.0 Project aimed for design of the compliance framework development strategy at the level of best practices and creation of the grounds to form the compliance culture unified for the Group companies as a whole.

In 2019, the Bank of Russia made the comprehensive inspection of CCP NCC's activity resulting into development and implementation of techniques aimed to increase effectiveness of the internal control framework.

Within implementation of the compliance function, internal documents continued being improved, the events were held in view to prevent the conflict of interest, to implement the anticorruption policy, to prevent legalization (laundering) of the income obtained by criminal means and funding of terrorism, to comply with legal requirements to taxation of FATCA accounts and with the standard for international financial information exchange AEOI/CRS.

In its activity, the IAS follows principles of the Ethical Code and International Professional Internal Audit Standards. The head of the IAS develops and supports the Program for Warranty and Improvement of Internal Audit Quality.

According to plans confirmed by the Supervisory Board, orders of the Chairman of CCP NCC's Board, the IAS makes regular scheduled audits for all activities, develops recommendations aimed to elimination of discovered faults and their prevention in the future activity of CCP NCC, to development of the internal control framework and to increasing effectiveness of risk management. The information about results of audit and implementation of recommendations made by the IAS and event schedules formed on their basis shall be given to the administrative bodies of CCP NCC. CCP NCC's Board controls timely compliance with recommendations of the IAS.

In 2019, CCP NCC was making some changes into internal documents governing the internal control framework, mostly due to changes into the law, the scheduled revision of internal documents according to requirements of the Bank of Russia and in order to improve the internal control framework of the Company as a clearing company – the central counterparty and the commodities supply operator. In particular, changes were made into the following documents:

- Regulation of the Internal Control Service for CCP NCC (JSC);
- Internal Control Rules of CCP NCC (JSC) for prevention, discovery and counteraction of the illegal use of the insider information and (or) market manipulation;
- Internal Control Rules of CCP NCC (JSC) for prevention of legalization (laundering) of the income obtained by criminal means and funding of terrorism;
- Provision about the procedure of audits by the Internal Audit Service of CCP NCC (JSC).

7. TECHNOLOGICAL PLATFORM

In 2019, the IT Department (ITD), being guided by the crucial requirement to the technological platform of CCP NCC – Stability&Speed – was providing for continuity and timely manner of clearing for transactions on the Moscow Exchange markets. The availability factor for the automated data treatment systems most crucial for CCP NCC's business was kept at the level of 99.98%.

During the reporting period, ITD continued to improve and enhance the information and technological infrastructure. The new technological solution within the project for attraction of non-residents was implemented that created the opportunity for the trading client to settle via the non-resident clearing member. CCP NCC also acts as a tax agent. To automatize the calculation of the taxation base and to form reports for the FTS, many systems were improved at the same time:

- systems developed by the Moscow Exchange, i.e.: the member's personal account, the unified client base, the master data management system unified for the Group (MASTER DATA MANAGEMENT – MDM), trading and clearing systems on securities, FX and derivatives markets;
- CCP NCC' systems: high-performance report retrieval system “Neoflex Reporting” (hereinafter referred to as NR) where the information from all systems was combined and tax calculation and reports to FTS were made in the automatic mode.

Works for the Unified Pool Project also continued and in May 2019, the direct interaction between new versions of the Central Counterparty's trades recording system (hereinafter CCP TRS) and the trading and clearing system for the SD market was launched that helped to unify clearing services provided at this market. Afterwards, the unified pool service support was launched at the SD market that helped members to substantially increase manageability and effectiveness of transactions at this market. Thus, the Unified Pool Service based on CCP TRS started being provided at four on-exchange markets: securities, FX, derivatives and SD markets.

Moreover, new products and modes required for business development were introduced at the SD market.

During the reporting period, the ITD also put efforts to develop the “clearing” segment of the general exchange public testing ground. The trading and clearing system of the SD market was added to systems inside the CCP TRS Clearing Terminal and WEB Clearing that helped members to test operation of Unified Pool Services together with the new market. Clearings at testing stands were automatized in the CCP TRS as well.

Apart from that, CCP TRS was improved in part of connection of this system to the Financial Messaging System (FMS) for the Bank of Russia that increased the operational reliability and independence of CCP NCC from effectiveness of international financial messaging systems, in particular, from the SWIFT network.

The Clearing Terminal system was developed, such terminal being used to render the new exchange service to transfer cash collateral and asset profiles. The clearing terminal accepted and processed over 18,400 requests from clearing members during 2019.

During the reporting period, CCP NCC continued providing the clearing members with access to the WEB-clearing system, an advanced development stage of the electronic document flow based using WEB-technologies. As of 31 December 2019, the system access was available to 575 members of whom 76 were provided with access in 2019; and the number of daily incoming documents from the clearing members reached 1265 per day. The average daily document flow during a year was 8700 documents per day. The WEB clearing system underwent considerable changes in part of the infrastructure. In 2019, all WEB clearing servers were transferred to the

virtual platform thus increasing reliability of the system and the effective use of the server equipment.

The following implemented projects were the most complicated ones, as for development of automatized data treatment systems:

1. Automatization of the rental contracts accounting according to Regulation 659-P. Design and implementation of the new functional module ABC- Property Rent.
2. Integration of the online interaction between ABC and MDM using Web API.
3. Integration of ABC with the Moscow Exchange Process Management System in part of determining the fair value of securities.
4. Coupling of ABC with the integrated informational environment based on the account data bade for the Active Directory (AD) service that allowed users to have the single login within automated data treatment systems.
5. Modernization of Thomas Reuters system to comply with MIFID2 requirements (according to the EU Directive), migration of the system to new service operated by OS MS2016.
6. Compliance with the requirement imposed by the Bank of Russia in order to transfer to the new technological channel KBR Transport Lock via mainline communications providers TransTelecom and RosTeleCom while sending payments and financial messages via electronic services KBR-N and KBR-SDFI.
7. Transfer to the new format used for interaction with the State Information System of Governmental and Municipal Payments using the unified electronic service of interdepartmental electronic interaction (SIS GMP).

In 2019, a new version of CCP NCC's website was launched. It has the modern design and is adopted for display on mobile devices. In the new website version, its management system is improved that facilities administration. The transfer to the new website version involved the complete replacement of the website infrastructure. It was designed with embedded website backup procedures to reduce operational risks when the clearing information is disclosed. The website was also transferred to the SSL cryptographic protocol that increased protection of the website during interaction with clearing members.

Apart from the project for creation of the tax agent reports described above, works for development of the NR System in other areas were continued in the reporting year. The total number of NR modules introduced in 2019 was: 8 mandatory Central Bank reporting forms, 4 tax registers, 3 reports for Russian Financial Monitoring, 3 specialized reports for the clearing department. In part of technological development, the implementation of DEVELOPS industrial process automatization practices during interaction with an external counterparty was completed. In particular, CCP NCC has introduced the conveyor of continuous integration with a vendor in the acceptance test environment in order to automate testing of software deliveries for a sample of the environment. The console of the Neoflex Reporting admin was introduced to monitor and to manage processes in the unified service provision environment that allows to improve SLA indicators in regard to treatment of the 2nd support line orders.

Within reengineering of technological processes for document, processing the new software “Universal File Processor CHECKER” was introduced that helped to enhance reliability, scalability, speed.

In 2019, the project and issue tracing system JIRA was further developed. It became available for all ITD units and is used by CCP NCC's employees to solve business issues. This system passed several significant updates, was added by new SLA tracing modules; representatives of three major third-party vendors got access to projects. This system is effectively added by the system for creation and distribution of the knowledge base for projects – Confluence. The knowledge base for the IT infrastructure of CCP NCC is moved from other sources to

Confluence, and nowadays 80% of the relevant information about the PTK of CCP NCC is concentrated in Confluence of CCP NCC. Works from the vendor of the CCP TRS were also tested and accepted in the Confluence software in order to determine the quality of SLA release and preparation with the vendor.

In 2019, new monitoring means were introduced on the basis of Zabbix system where monitoring of the server equipment and business processes automated in NR is set up.

Within the innovative sandbox, the new version of DBMS ORACLE 19 and new functional opportunities and options of this DBMS ORACLE version – ORACLE logical standby – were completely tested. Upon the results, the decision was made to transfer most of the systems to ORACLE 19 and to introduce the said options.

The ambitious Hadoop Data Lake project of CCP NCC that was started in 2018 passed the introductory stage – two systems were introduced that allows to further develop the project within the current activity.

8. MAJOR FINANCIAL PERFORMANCE RESULTS

*Major financial performance
results as of 01.01.2020*

(RUB'000)

Equity (capital)	70,580,566
Net income, total	21,783,279
Operating expenses	1,589,180
Profit before tax	20,194,099
Accrued (paid) taxes	3,891,483
Profit after tax	16,302,616

Dynamics of Changes in Financial Performance Results

(RUB'000)

Indicators	Change 2019/2018	2019	2018
Interest income, total	4%	195,533,800	188,140,548
Interest expenses, total	9%	188,395,395,	173,202,935
Net interest income from transactions with financial assets assessed using the fair value via profits or losses	2237%	8,137,840	348,186
Fee and commission income	28%	11,489,736	8,962,904
Fee and commission expenses	7%	249,301	233,941
Net income (expenses)	7%	21,783,279	20,301,027
Operating expenses	15%	1,589,180	1,380,958
Profit (loss) before tax	7%	20,194,099	18,920,069
Tax refund (expense)	0%	3,891,483	3,898,953
Profit (loss) for reporting period	9%	16,302,616	15,021,116

Dynamics of Changes in Equity (Capital) of CCP NCC and Its Major Indicators Included in the Capital Calculation (RUB'000)

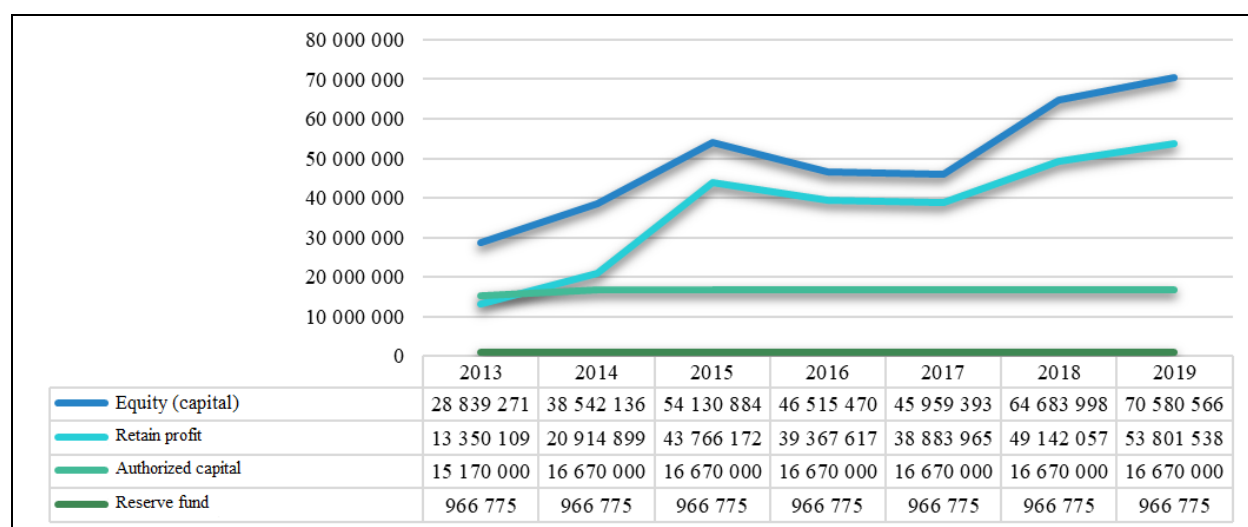
CCP NCC manages its capital on the going concern assumption, with the view to the need to maintain the necessary balance between ensuring financial sustainability in any economic conditions of its business functioning, reduction of market participants' costs and the high level of return on investment for shareholders.

During the reporting period CCP NCC managed its capital being guided by the objectives set by the Moscow Exchange Group's Strategy for 2016-2020 with regard to development of the centralized clearing and improvement of the reliability of CCP. Considering the need to comply with the regulatory requirements to the capital of credit organizations,, the Company forecasted its capital amount based on the estimated volume of transactions in on-exchange markets of the Group and the amount of funds deposited by clearing members to secure performance of obligations under trades and also subject to the size of risks assumed by it in connection with implementation of the top-priority projects of Moscow Exchange involving performance of centralized clearing via CCP. When forecasting the amount and adequacy of its capital, CCP NCC was also taking account of the scheduled dividend payments in accordance with the Group's dividend policy.

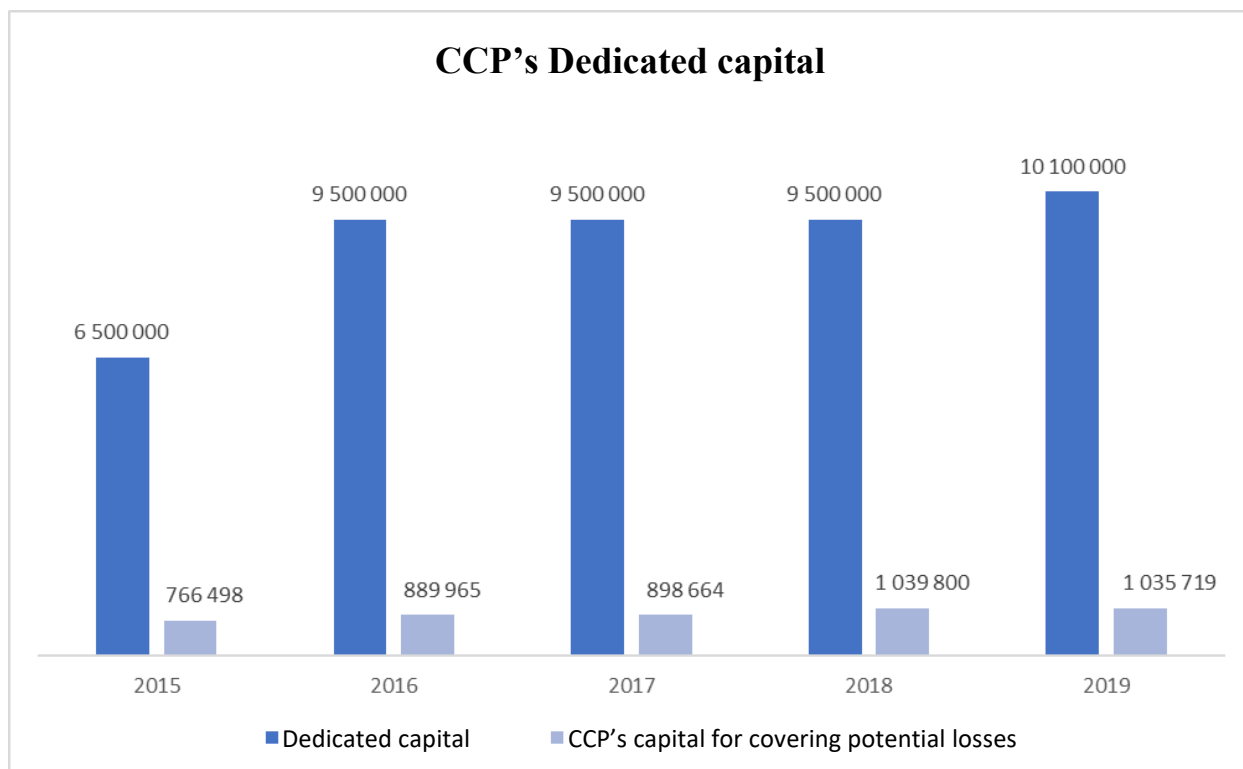
(RUB'000)

Item	01.01.2020	01.01.2019
Equity (capital), total	70,580,566	64,683,998
Including:		
Core capital	54,321,547	51,564,032
Basic assets	54,321,547	51,564,032
Supplementary capital	16,259,019	13,119,966

All capital adequacy requirements were met by CCP NCC in full during the reporting period.



(RUB'000)



On 1 November 2015, the Bank of Russia put into effect the amendments to its regulations governing the central counterparty activity, which require CCP to set aside a part of its equity (capital) for coverage of possible losses, whether or not caused by clearing members' non-performance of their obligations.

The resources for coverage of losses formed by CCP in compliance with the applicable laws or regulations of the Bank of Russia are recorded separately on separate personal accounts for recording retained profit and reduce the equity (capital) of CCP NCC. The above funds are included in the central counterparty's equity (capital).

(RUB'000)

Part of Retained Profit Intended:	2019	2018
for covering possible losses caused by failure of clearing members to perform their obligations (funds used by central counterparty before using the funds contributed by non-defaulting clearing members to the collective clearing collateral) – the central counterparty's dedicated capital	10,100,000	9,500,000
for providing termination and restructuring of activities of central counterparty	690,479	693,200
for covering possible losses as a result of deterioration of the financial standing of the central counterparty due to reduction of its income or increase of expenses, other than resulting from failure of clearing members to perform their obligations	345,240	346,600

9. SUPERVISORY BOARD. INFORMATION ON ITS MEMBERS AND MEETINGS

On 14 November 2018, Moscow Exchange, as the sole shareholder, when considering the matters within the competency of the General Shareholder Meeting, adopted its resolution on early termination of powers of the Supervisory Board members and election of the Supervisory Board of the Company until the Annual General Shareholders Meeting to be held in 2019 of the following persons:

1. Alexander Afanasiev
2. Andrey Golikov
3. Igor Golutvin
4. Yuri Denisov
5. Vadim Kulik
6. Sergey Lykov
7. Sergey Monin
8. Sergey Smirnov
9. Alexey Khavin

On May 20, 2019, the Moscow Exchange, as the sole shareholder, when considering the matters within the competency of the General Shareholder Meeting, adopted its resolution on election of the Supervisory Board of the Company until the Annual General Shareholders Meeting to be held in 2020 of the following persons:

1. Andrey Golikov
2. Igor Golutvin
3. Yury Denisov
4. Vadim Kulik
5. Sergey Lykov
6. Sergey Monin
7. Alexander Udod
8. Alexey Khavin
9. Andrey Shemetov

Thus, A. Afanasiev, S. Smirnov retired from the Supervisory Board and A. Udod and A. Shemetov joined it.

Background Information on the Supervisory Board Members in 2019¹:

1. **Alexander Afanasiev**, born in 1962, higher education, in 1984 graduated from the Moscow Financial Institute, Qualification – Economist, Moscow Financial Institute, Specialty - International Economic Relations, in 1987 completed the Postgraduate training program of the Moscow Financial Institute with the Science degree: Ph.D. in Economics.

¹ Data on membership in the management bodies is specified as of 31 December 2018. Information about A. Afanasiev was given as for 31.03.2019. Information about S. Smirnov was given as for 31.03.2019

Information on professional experience and duties for five years before election to the Supervisory Board:

19.09.2008 – 26.12.2011, Deputy CEO of Bank WestLB Vostok (Closed Joint-Stock Company), participating in company's governance and the activity of the sole executive body.

28.12.2011 – 20.06.2012, Deputy CEO of Open Joint-Stock Company "MICEX-RTS", participating in company's governance and the activity of the sole executive body, supervising clearing and treasury activity, risk analysis and control.

21.06.2012 – 02.07.2012, President of Open Joint-Stock Company "MICEX-RTS" Company's governance, performing functions of the sole executive body.

03.07.2012 – up to now, CEO of Public Joint-Stock Company "Moscow Exchange MICEX-RTS", Company's governance, performing functions of the sole executive body.

Information on membership in management bodies of other legal entities:

25.06.2013 – 26.04.2018, Member of the Supervisory Board of Public Joint-Stock Company "Moscow Exchange MICEX-RTS".

20.09.2013 – up to now, Member of the Council of International Association of Exchanges of the Commonwealth of Independent States countries (IAEx of CIS).

21.03.2013 – up to now, Member of the Management Board of Russian Public Organization "Russian Union of Industrialists and Entrepreneurs".

21.03.2013 – up to now, Member of the Management Board of all-Russia association of employers "Russian Union of Industrialists and Entrepreneurs".

26.05.2015 – up to now, Member of the Supervisory Board of National Settlement Depository.

2. **Andrey Golikov**, born in 1969, higher education, in 1991 graduated from the Lomonosov Moscow State University, Qualification: Mechanic, Specialty: Mechanical science. In 2016, he received IOD Diploma in Company Direction of the Institute of Directors (IoD) of the United Kingdom.

Information on professional experience and duties for five years before election to the Supervisory Board:

Information on membership in management bodies of other legal entities:

24.04.2003 – up to now, Deputy Chairman of the Supervisory Board of Public Joint-Stock Company "Moscow Exchange MICEX-RTS".

20.04.2011 – 22.04.2015, Co-Chairman of the Board of Directors of National Securities Market Association (self-regulated non-profit institution).

13.04.2017 – up to now, Co-Chairman of the Board of Directors of National Financial Association (self-regulated non-profit partnership)

19.12.2016 – up to now, Member of the Supervisory Board of JSC Russian National Reinsurance Company (RNRC).

30.06.2017 - up to now, Member of the Board of Directors of the Joint-Stock Commercial Bank "Absolut Bank" (Public Joint Stock Company).

21.12.2017 – up to now, Member of the Supervisory Board of Otkritie FC Bank.

31.05.2018 – up to know, Member of the Supervisory Board of NSD.

29.05.2008 – 28.06.2013, 30.06.2014 – up to know, member of the Supervisory Board of CCP NCC .

3. **Igor Golutvin**, born in 1979, higher education, in 2002 graduated from the Lomonosov Moscow State University, Qualification: physicist, Specialty: physics. In 2004, graduated from Institute of Theoretical and Experimental Physics Science degree: Ph.D. in Physics and Mathematics. In 2010 completed Training, Counselling and Professional Centre of MFTs (International Financial Center), Qualification: Specialist in financial markets in the area of brokerage and dealer activity, securities management.

Information on professional experience and duties for five years before election to the Supervisory Board:

04.04.2008 – 11.04.2013, Head of the Derivatives Sub-Division within the Open Market Trading Transactions Division of the Fixed-Income Instrument Transactions Department of CJSC VTB Capital, was responsible for developing currency and interest rate derivatives, launching new products, configuring and developing risk management systems.

11.04.2013 – 31.08.2017, Co-Head of the Complex Transactions Sub-Division within the Open Market Trading Transactions Division of the Fixed-Income Instrument Transactions Department of CJSC VTB Capital, was in charge of CVA portfolio management in relation to transactions with derivatives; hedging market and credit risks, portfolio yield optimization.

01.09.2017-19.04.2018, Head of the Structural Solutions Sub-Division within the Debt & Currency Markets Trading Transactions Division of JSC VTB Capital, was responsible for developing and supporting the derivative solutions business.

19.04.2018 – 07.10.2019, Deputy Head of the Division for Global Commodity and Raw Market Transactions of the Fixed-Income Instrument Transactions Department of JSC VTB Capital, is responsible for developing companies' business related to global commodity and raw market transactions.

21.04.2008 – 05.04.2013, Head of the Derivatives Sub-Division within the Debt & Currency Markets Trading Transactions Division of PJSC Bank VTB (spare-time work).

05.04.2013-19.04.2018, Managing Director – Vice-President of the Debt & Currency Markets Trading Transactions Division of PJSC Bank VTB (spare-time work).

19.04.2018 – 07.10.2019, Managing Director of the Department for Global Commodity and Raw Market Transactions of the Investment Products Department - Vice-President of PJSC Bank VTB (spare-time work).

16.07.2018 – 07.10.2019, Head for Commodity and Raw Markets Division of the Department for counselling on transactions in the financial income instrument market of VTB Capital IB Holding, Limited (spare-time work).

Information about membership in management bodies of other legal entities:

28.06.2012 – up to know – Member of the Supervisory Board of CCP NCC.

4. **Yuri Denisov**, born in 1970, higher education, in 1993 graduated from the Moscow State Institute of International Relations under the Ministry of Foreign Affairs, Qualification: Economist on International Economic Relations with a knowledge of a foreign language, Specialty: International Economic Relations.

Information on professional experience and duties for five years before election to the Supervisory Board:

10.08.2009 – 01.03.2010, Senior Vice President of the Financial Department of OJSC VTB Bank Management of assets and liabilities, supervising treasury activity of VTB Group, trading on money, FX, precious metals and derivatives markets.

22.09.2010 – 31.05.2011, Deputy Chairman of the Management Board of Closed Joint-Stock Company “Moscow Interbank Currency Exchange”, supervising risk management, clearing and treasury activity, management of assets and liabilities.

16.05.2019 – up to now, The Chairman of the Management Board of the PJSC Moscow Exchange. Management of the company, performing functions of the sole executive body.

Information on membership in management bodies of other legal entities:

25.06.2013 – up to now, Member of the Supervisory Board Of Public Joint-Stock Company “Moscow Exchange MICEX-RTS”.

14.10.2003 – 08.04.2015, Co-Chairman of the Council of National Foreign Exchange Association.

31.05.2018 – up to now, member of the Supervisory Board of NSD.

09.10.2019 – up to now, member of the Board of the “Russian Union of Industrialists and Entrepreneurs”.

29.05.2008 – up to now, member of the Supervisory Board of CCP NCC.

5. **Vadim Kulik**, born in 1972, higher education, in 1995 graduated from D. Mendeleev University of Chemical Technology of Russia. Specialty: Chemical Technology of Modern Energetics Materials.

Information on professional experience and duties for five years before election to the Supervisory Board:

03.06.2011 – 14.01.2013, Vice-President - Director of the Risk Department of PAO Sberbank, participating in management of market and operational risks, as well as retail and non-retail credit risks. Implementing risk management processes in subsidiary banks in the CIS countries.

15.01.2013 – 23.05.2013, Senior Vice-President, member of the Management Board of PAO Sberbank, responsible for bank risk management and information- technological support of the Bank.

24.05.2013 – 15.02.2017, Deputy Chairman of the Management Board, member of the Management Board of PAO Sberbank, supervising risk management, information technological support, operating activities of the Bank.

16.05.2017 – 02.10.2017, First Deputy Chairman of the Management Board, member of the Management Board of Otkritie Holding JSC, supervising the information technological support of the financial subdivisions of subsidiary companies.

30.10.2017 – 21.12.2017, Adviser to CEO of Gazprombank (Joint Stock Company).

22.12.2017 – 14.06.2019, Deputy Chairman of the Management Board, member of the Management Board of Gazprombank (Joint Stock Company), participated in implementation of the policy for information technology development in head office and branches, coordinated development of standards and regulation of the processes of operational support of bank products, was engaged in works aimed at centralizing and coordinating all risk management systems, policies and procedures in this area.

02.09.2019 – 28.10.2019, Adviser to the President, Chairman of the Management Board of VTB Bank (Public Joint-Stock Company). Official duties: providing preparation of current and prospective operational plan drafts in the manner and in the cases stated in regulations and administrative documents of the Bank, execution of orders issued by the management of the Bank and the direct manager within the established deadline.

29.10.2019 – up to now, Deputy of the President, Chairman of the Management Board of VTB Bank (Public Joint-Stock Company). Official duties: taking part in implementation of the IT development policy in the headquarters and branches, coordination of matters for development of standards and regulation of processes used for the operational support of banking products.

01.12.2017 – up to now, the CEO of the Digital Competence Center for the Russian Presidential Academy of National Economy and Public Administration (as a secondary job). Official duties: organization of the comprehensive support of educational and scientific projects to form digital competences of the Academy's students and tutors.

Information on membership in management bodies of other legal entities:

28.09.2012 - 29.03.2017, Member of the Board of Directors DenizBank A.S.

25.04.2013 - 25.01.2017, Member of the Board of Directors of Sberbank-Technology JSC

22.01.2014 - 14.03.2017, Member of the Board of Directors of Sberbank leasing JSC

29.06.2017 - up to now, Member of the Supervisory Board of Russian National Reinsurance Company, Joint-Stock Company

22.12.2017-14.06.2019, Member of the Board of Gazprombank (Joint Stock Company).

10.01.2018-26.06.2019, Member of the Board of Directors of LLC “Speech Technologies Center”

29.10.2019 – up to now, Member of the Board of VTB Bank (Public Joint-Stock Company).

24.11.2017 – up to now, Member of the Supervisory Board of CCP NCC

- 6. Sergey Lykov**, born in 1952, higher education, in 1975 he graduated from the Moscow Financial Institute. Qualification: economist, Specialty: international economic relations, in 1988 completed the Postgraduate training program of the All-Union Distance-Learning Institute of Finance and Economics with the Science degree: Ph.D. in Economics

Information on professional experience and duties for five years before election to the Supervisory Board:

29.10.2012 – 10.07.2017 – Deputy Chairman of Vnesheconombank, Member of the Management Board of State Corporation “Bank for Development and Foreign Economic Affairs (Vnesheconombank)”. Participating in corporation’s governance and the activity of the sole executive body.

11.07.2017 – 26.07.2017, Deputy Chairman of Bank for Development and Foreign Economic Affairs (Vnesheconombank). Participating in corporation’s governance and the activity of the sole executive body.

27.07.2017 – 10.12.2018 Deputy Chairman of Bank for Development and Foreign Economic Affairs (Vnesheconombank) – member of the Board. Participating in corporation’s governance and the activity of the collective executive body.

09.12.2018 – up to now. Deputy Chairman of VEB.RF – member of the Board. Participating in corporation’s governance and the activity of the collective executive body.

Information on membership in management bodies of other legal entities:

20.05.2004 – 27.04.2015, Member of the Supervisory Board of Open Joint-Stock Company “Moscow Exchange MICEX-RTS”

28.04.2015 – 27.04.2016, Member of the Supervisory Board of Public Joint-Stock Company «Moscow Exchange MICEX-RTS”.

29.06.2011 – 13.05.2016 Chairman of the Supervisory Board of the NCC Bank (JSC).

28.03.2008 – 25.08.2016, Member of the Supervisory Board of Belvnesheconombank Open Joint-Stock Company.

22.01.2009 – 06.02.2017, Member of the Board of Directors of Interregional Commercial Bank for Development of Communications and Informatics (Public Joint-Stock Company).

08.06.2006 – 09.06.2015, Member of the Board of Directors of State Specialized Russian Export-Import Bank Closed Joint-Stock Company.

06.12.2013 – 05.08.2015, Member of the Board of Directors of VEB Asia Limited.

29.06.2015 – 30.06.2016, Member of the Board of Directors of VEB-Leasing Open Joint-Stock Company

13.05.2016 - up to now, Deputy Chairman of the Supervisory Board of CCP NCC (JSC).

30.05.2017 – up to now, Member of the Supervisory Board of NCC Clearing Bank.

7. **Sergey Monin**, born in 1973, higher education, in 1995 he graduated from the Financial Academy at the RF Government Qualification: economist Specialty: global economy.

Information on professional experience and duties for five years before election to the Supervisory Board:

07.11.2011 – up to now, CEO of Raiffeisen Bank Joint-Stock Company Elaborating and implementing bank’s development structure, governance of day-to-day operations.

Information on membership in management bodies of other legal entities:

27.03.2006 – 08.04.2015, Co-Chairman of the Council of National Foreign Exchange Association.

22.04.2014 – 22.04.2015, Co-Chairman of the Board of Directors of National Securities Market Association (self-regulated non-profit institution).

12.08.2014 – 20.10.2015, Chairman of the Supervisory Board of Non-State Pension Fund Raiffeisen.

30.09.2011 – up to now, Chairman of the Supervisory Board of Raiffeisen Capital Asset Management Company.

20.05.2019 – up to now, Chairman of the Supervisory Board of CCP NCC (JSC).

8. **Sergey Smirnov**, born in 1955, higher education, in 1978 he graduated from the Lomonosov Moscow State University, Qualification: mathematics Specialty: applied mathematics. In 1991, he graduated from Université Paris VII – Denis Diderot, France, Qualification: DEA en Mathématiques Financières Specialty: Économétrie Financière.

Information on professional experience and duties for five years before election to the Supervisory Board:

15.03.2007 – up to now, Financial Engineering and Risk Management Laboratory Director of the Higher School of Economics National Research University, teaching and scientific activity.

Information on membership in management bodies of other legal entities:

10.12.2013 – up to now⁵, Deputy Chairman of the Supervisory Board of the Guild of Financial Analysts and Risk-Managers.

30.06.2015 – up to now⁶, Independent member of the Management Board of the Guild of Actuaries Association.

- 9. Alexey Khavin**, born in 1975, higher education, in 1997 he graduated from the Finance Academy under the Government of the Russian Federation, Qualification: Economist, Specialty: Global Economy.

Information on professional experience and duties for five years before election to the Supervisory Board:

03.09.2007 – 06.03.2009, First Vice President - Head of the Treasury of Gazprombank (Open Joint Stock Company), supervising proprietary and client's trading of the Bank in the financial markets.

21.12.2010 – 11.04.2011, Deputy CEO of Bank "National Clearing Centre" Closed joint-stock company, supervising operations of the Treasury and subdivisions of the back office.

12.04.2011 – up to now, CEO of CCP NCC, performing general management of the Company's activity.

Information on membership in management bodies of legal entities:

25.04.2006 – 08.04.2015, Co-Chairman of the Council of the National Foreign Exchange Association.

28.06.2016-24.05.2017, Member of the Supervisory Board of the NTB JSC.

24.02.2011 – up to now, Member of the Board of Directors of Sea Launch AG.

20.04.2011 – up to now, Member of the Council of the National Securities Market Association (self-regulating non-profit organization).

31.01.2019 – up to now. Member of the Council of the Russian Banking Association (Association "Russia").

28.06.2011– up to now, Member of the Supervisory Board of CCP NCC (JSC).

20.05.2019 – up to now. Member of the Supervisory Board of CCP NCC (JSC).

- 10. Alexander Udod**, born in 1971, higher education, graduated in 1994 from the Institute of Asian and African Countries at the Lomonosov Moscow State University, qualification: Orientalist Historian; Researcher Translator of Swahili with the knowledge of English, specialized in History of Asian and African Countries, in 2000 graduated from the Academy of Diplomacy for the MFA of Russia, qualification: International Relationship Expert, specialized in International Relationships. Specialized in Subjects and Courses for the Chair of Global Economics and International Economic Relationships.

⁵ As for the date of termination of the member of the Supervisory Board CCP NCC (JSC) powers

⁶ As for the date of termination of the member of the Supervisory Board CCP NCC (JSC) powers

Information on professional experience and duties for five years before election to the Supervisory Board:

06.04.2010 – 07.08.2015, First Deputy of CEO, LLC “Investment Company of Vnesheconombank” (“VEB Capital”). Participance in general management and control over the current economic and financial activities of the company and its affiliates including the professional activity at the securities market and work with toxic assets of the Vnesheconombank Group.

06.04.2010 – 06.04.2015, Member of the Board of LLC “VEB Capital. Performing functions of the Member of the Board while taking decisions for current business matters.

26.11.2015 – 28.04.2017, Senior Vice President of JSC “GLOBEXBANK”. Investment banking; organization and attraction of loaned funds at Russian and international financial markets; trade and structural funding; organization of merger and acquisition deals; organization of work with rating agencies; Treasury.

15.05.2017 – 11.03.2019. Independent Expert. Consulting corporate and private customers in the field of structuring and attraction and loaned funding at Russian and foreign financial markets.

12.03.2019 – up to now. CEO of LLC “AVR Consult”. General management and control of the current activity.

Information on membership in management bodies of other legal entities:

28.04.2011 – 27.01.2016, Member of the Board of Directors of LLC “GLOBEX CAPITAL”.

11.07.2013 – 30.06.2015, Member of the Board of Directors of CJSC “Mediaholding “Expert”.

25.06.2014 – 25.06.2015, Member of the Board of Directors of OJSC “Ilyushin Finance Co.”

30.06.2014 – 29.06.2015, Member of the Board of Directors of OJSC “VEB Leasing”.

15.07.2014 – 26.10.2015, Member of the Board of Directors of LLC “Investment Company of Vnesheconombank” (“VEB Capital”).

11. **Andrey Shemetov**, born in 1974, higher education, graduated in 1996 from the Ordzhonikidze State Academy of Management (nowadays State University of Management), Qualification: Economist Specialized in the economics and industrial management.

Information on professional experience and duties for five years before election to the Supervisory Board:

22.07.2008 – 09.11.2012, CEO of LLC “ATON”. Operative management of financial and professional activities of the Company to provide for optimal business growth and increased competitiveness of the Company.

12.11.2012 – 09.03.2016, Deputy Chairman of the Board, PJSC Moscow Exchange. Management of commercial departments of the exchange: stock, derivatives, commodities, primary markets. He also managed customer service, exchange information and indexes departments, foreign and regional branches and representative offices of the exchange. Mentoring the international presence department, the innovation and investment market.

09.06.2016 – 10.04.2018, Head of the Global Market Department, Managing Director of CJSC “Sberbank CIB”. Management of the Bank's commercial department: trading, sales,

analytical management, investment and banking management, e-markets. Management of foreign offices in London, New York, on Cyprus.

10.04.2018 – up to now. Vice President – Director of Global Market Department in PJSC Sberbank. Management of the Bank's commercial department: trading, sales, analytical management, investment and banking management, e-markets. Management of foreign offices in London, New York, on Cyprus.

Information on membership in management bodies of other legal entities:

28.06.2013 – 12.05.2015. Chairman of the Board of Directors, CJSC “Stock Exchange MCSE”.

27.06.2013 – 19.05.2015. Member of the Supervisory Board, CJSC “National Commodities Exchange”

22.04.2014 – 08.04.2016. Member of the Board of Directors, “National Stock Association (Self-regulating Non-profit Company)”

02.06.2014 – 02.06.2016. Member of the Board of Directors, QIWI PLC.

18.06.2012 – up to now, Member of the Board of Directors, Self-regulating (non-profit) “National Association of Stock Market Members” (NASMM).

29.06.2016 – up to now, Member of the Board of Directors, JSC “Sberbank CIB”.

20.05.2019 – up to now, Member of the Supervisory Board, CCP NCC (JSC).

10.10.2019 – up to now, Member of the Supervisory Board, SIB (Cyprus) Limited.

Information about meetings of the Supervisory Board and its committees:

In 2019, 18 meetings of the Supervisory Board were held (5 of them were held by personal attendance) and more than 90 matters were discussed on them.

In 2019, 10 meetings of the Risk Committee (9 of them were held by personal attendance) and 6 meetings of the Appointments and Awards Committee (5 of them were held by personal attendance) were held. In total, Committees discussed around 100 matters, and recommendations of the Supervisory Board were formed for some of them.

10. INFORMATION ON CEO AND MANAGEMENT BOARD MEMBERS

On 12 April 2011, Alexey Khavin was elected CEO by unanimous resolution of the sole shareholder of the Company. In March 2018, Alexey Khavin's term of office as CEO was extended by resolution of the sole shareholder of the Company.

Alexey Khavin, born in 1975, higher education, in 1997 he graduated from the Finance Academy under the Government of the Russian Federation, Qualification: Economist, Specialty: Global Economy. He holds the certificates of the specialist in financial markets (from 18.05.2006 in the area of brokerage and dealer activity, securities management, from 08.10.2012 - organization of trading in the securities market (securities exchange operation) and clearing business).

Information on professional experience and duties for five years:

12.04.2011 – up to now, CEO of CCP NCC, performing general management of the Company's activity.

Information on membership in management bodies of other legal entities:

25.04.2006 – 08.04.2015, Co-Chairman of the Council of the National Foreign Exchange Association.

24.02.2011 – up to now, Member of the Board of Directors of Sea Launch AG.

20.04.2011 – up to now, Member of the Council of the National Securities Market Association (self-regulating non-profit organization).

31.01.2019 – up to now, Member of the Board of the Russian Banking Association (Association "Russia").

During the reporting year 2019, the list of members of the Company's Board was changed and the Supervisory Board of the Company made the following decisions:

- *On 12.03.2019 (Protocol No. 12) powers of the Member of the Board Ye. Demushkina were terminated early (the last day of powers was March 18, 2019); the number of the Board members was fixed as 3 persons.*
- *On 20.06.2019 (Protocol No. 3) M. Alekhina was elected the Member of the Board of CCP NCC (JSC) (the first day of powers was June 24, 2019), the number of the Board members was fixed as 4 persons.*
- *On 01.10.2019 (Protocol No. 6) the Member of the Board S. Gorbachenko was elected again for the period since December 24, 2019 to December 23, 2020 (inclusive).*
- *On 26.12.2019 (Protocol No.12) powers of the member of the Board M. Alekhina were terminated early (the last day of powers was December 31, 2019); the number of the Board members was fixed as 3 persons.*

Therefore, in 2019 the Company's Board performed its functions comprising as follows (apart from the Chairman of the Board):

1. Yekaterina Demushkina⁷, born in 1969, in 1992 she graduated from the Lomonosov Moscow State University, Qualification: Law, Specialty: Lawyer; in 2006 completed the program 'Master of Business Administration — International Business' of the Russian Academy

⁷ As for the date when powers of the Member of the Board of CCP NCC (JSC) are terminated

for Foreign Trade of the Ministry of Economic Development with the diploma of the financial market specialist (from 23.03.2007 – organization of trade in the securities market (stock exchange operation) and clearing business); from 27.02.2008 –depository activity).

Professional experience for the last five years:

02.08.2011 – 18.03.2019, Deputy CEO of CCP NCC, member of the Management Board. She coordinated and controlled the Information Technologies Department, Legal Department, Financial Monitoring Service, quality manager.

Yekaterina Demushkina did not hold any position in the management bodies of other legal entities for the period of her powers as the member of the Board of CCP NCC (JSC).

2. **Marianna Gorina**, born in 1963, higher education. In 1988, she graduated from the All-Union Correspondence Accountancy College of the USSR State Bank, Specialty: accounting and operational equipment in the State Bank, Qualification: accountant. In 2001, she graduated from the All-Union Correspondence Financial-Economic Institute, Specialty: accounting and audit, Qualification: economist. In 2004, she completed the postgraduate training program on the International Financial Reporting Standards of the International Finance and Banking School, Moscow (Supplementary Vocational Training Institute).

Professional experience for the last five years:

17.05.2011 – up to now, she is the Chief Accountant, member of the Management Board of CCP NCC, supervises Accounting, Tax Bookkeeping and Reporting Division, Treasury Operations Record Division and Settlement Division.

Marianna Gorina does not hold any position in the management bodies of other legal entities.

3. **Sergey Gorbachenko**, born in 1966, higher education, in 1989 he graduated from the Moscow Engineering Physics Institute, specialty: solid state physics, qualification: engineer-physician. On 24.12.2003, he was issued the diploma confirming the qualification for a position of executive officer or comptroller, or specialist of organizations who organize trading activities on (activity of stock exchanges), clearing business.

Professional experience for the last five years:

02.07.2012 – up to now, he is the Director of the Clearing Department of CCP NCC, is performing general management of the business unit and responsible for clearing on all the markets of Moscow Exchange Group (from 23 December 2013 up to now, this position is his primary employment).

24.12.2013 – up to now, he is the member of the Management Board of CCP NCC, has been supervising the Clearing Department, Commodity Supply Operator Division.

Information on membership in management bodies of other legal entities:

17.05.2018 – 26.06.2019, member of the Board of Directors, Non-banking credit organization Joint-Stock Company “Petersburg Calculation Center”.

4. **Marina Alekhina**, born in 1974, higher education, graduated in 1996 from the Finance Academy under the RF Government, specialized in Finance and Credit, qualification: Economist.

Professional experience for the last five years:

02.11.2009 – 04.06.2016, worked in the Central Bank of the Russian Federation (Bank of Russia), since November 2, 2009 as the Director of the Department for Collateral and Control over Transactions on Financial Markets, since September 7, 2015 as the Director of the Operational Department. Her duties on the said positions included support and control over transactions of the Bank of Russia on domestic and foreign financial markets.

24.06.2019 – 31.12.2019, member of the Board, CCP NCC (JSC), mentored the Clearing Department, the Department of Commodities Supply Operator.

Marina Alekhina did not hold any position in the management bodies of other legal entities during the period of her powers as the member of the Board of CCP NCC (JSC).

CEO and members of the Management Board of CCP NCC did not hold any shares of CCP NCC during the reporting period.

11. HUMAN RESOURCES POLICY. INFORMATION ON THE LABOR REMUNERATION SYSTEM

HR Policy and Organizational Structure

The HR policy of CCP NCC addresses three main objectives:

- attraction, motivation and retaining of highly skilled professionals and managers;
- continuing professional development of employees;
- forming an environment for personal fulfillment of its employees, high result achievement, and implementation of the Company's strategic goals.

CCP NCC has been regularly and consistently building an efficient organization through introduction of advanced practices and management techniques, including the ongoing improvement of its processes for human resources management and training of employees of all levels.

In the reporting period, the effective headcount of CCP NCC, comparing to 2018, increased on 14 employees (+8.6%) and was 177 employees by late 2019. The number of members of CCP NCC Management Board was considerably changed: since 01.01.2019 to 18.03.2019 – 4 employees; since 19.03.2019 to 23.06.2019 – 3 employees; from 24.06.2019 to 31.12.2019 – 4 employees.

Labor Remuneration Policy

The labor remuneration policy is consistent with CCP NCC's strategy and nature, scope of NCC's operations, results of its activities, level and combination of assumed risks. At least once a year, CCP NCC Supervisory Board adopts resolutions on its preservation or revision of all documents governing the labor remuneration system subject to changes in the conditions of its activities, including in connection with changes in its strategy, the nature, scope of performed operations, results of its activities, level and combination of the risks assumed.

In 2019, the structure of CCP NCC's labor remuneration system developed in accordance with Instruction No. 154-I², remained unchanged and consisted of the fixed portion (i.e. base remuneration and compensatory/social payments not related to performance results) and variable portion (i.e. stimulating bonus driven by performance results, such as annual bonus). The size of

² Bank of Russia Instruction No. 154-I issued on 17.06.2014 'On the procedure for assessing remuneration systems of credit institutions and the procedure for submitting to credit institutions orders to eliminate violations identified in their remuneration systems' ('Instruction 154-I').

a position salary is established in Bank in accordance with the Procedures of administration of the system of grades and base remuneration of employees. The variable portion of remuneration depends both on performance results of CCP NCC and individual results of employee estimated as a part of the performance management process

The Labor Remuneration Policy approved by the Supervisory Board of CCP NCC divides CCP NCC employees into four categories:

- risk-taking employees (members of executive bodies and other risk-taking employees);
- employees of subdivisions in charge of risk management;
- employees of subdivisions in charge of internal control; and
- other employees.

CCP NCC has applied a time-rate-bonus salary system which provides that the salary size of employees depends not only on hours worked, and also provides for payment of bonuses to employees subject to results of performance (work) in the reporting period in accordance with the procedure and terms established by the Regulations of payment of bonuses to CCP NCC employees. With that, risk-taking employees are paid a 40% annual bonus on the terms of deferment (or payment in instalments) and its subsequent adjustment on the terms and under the rules set forth in the Methodology for adjustment of the variable portion of labor remuneration of CCP NCC employees, and deferment (or payment in instalments) and subsequent adjustments of the variable portion of labor remuneration of CCP NCC employees subject to the performance results of the Company and the level of risks assumed by the Company, its subdivisions and risk-taking employees (the “Methodology”). In March 2019, CCP NCC Supervisory Board approved the amount of shares of deferred (paid in instalments) portion of the annual bonus for the reporting period (2018) by payment (accrual) dates upon expiry of the periods sufficient for evaluation of performance results, based on the proportion between the shares of risk-bearing assets maturing in the respective years after such reporting period and the total risk-bearing assets as of the first day following the end of the reporting period.

Based upon performance results of CCP NCC for 2018 and the calculation of the to-be-adjusted percentage of deferred (paid in instalments) annual bonus portions attributable to previous periods and evaluated in the current period taking into account operational risks implemented in 2018, in March 2019 CCP NCC Supervisory Board approved the resolution on adjustment of the payment of such deferred (paid in instalments) annual bonus portions attributable to previous periods (the third share for 2015 and the second share for 2016 and the first share for 2017) of the CEO and Members of the Board.

During 2019, CCP NCC continued to improve its personnel labor remuneration principles and approaches and updated certain documents regulating the labor remuneration system. In particular, the Methodology prescribes the following approaches:

- it specifies the principle that operational risk events implemented after the reporting date do not affect the amount of the annual bonus for the reporting period except the cases when implementation of the risk was the direct result of resolutions taken during the relevant period.
- the list of grounds for adjustment of deferred portions of the annual bonus.

In late 2019, the Internal Audit Department assessed the labor remuneration system of CCP NCC and found the organization and functioning of the labor remuneration system consistent with the nature and scope of operations performed by CCP NCC, results of its activity, level and combination of assumed risks.

Social Support to Employees

Provision of corporate social support to employees is one of the elements of CCP NCC's social policy designed to provide social protection to employees, contributing to growth of the efficiency and quality of their work. The corporate social support to employees is implemented in accordance with the Regulation of corporate social support of employees of CCP NCC (hereinafter the 'Social Support Regulation'), which is revised and approved by CCP NCC Supervisory Board on an annual basis.

The Company maintains voluntary medical insurance, international medical insurance as well as health and accident insurance of its employees and provides financial assistance in the appropriate cases. As of 01.01.2020, 94% of employees were covered by the voluntary medical insurance plan, and 100% were covered by the international medical insurance and health and accident insurance plans. The Company provides financial aid to employees, including maternity benefits (on birth, adoption, custody or guardianship of a child), survivorship benefits and other allowances in such cases as contemplated by the Social Support Regulation.

The benefits and allowances paid to employees or their family members according to the Social Support Regulation are not attributable to the labor remuneration system and their amounts are not subject to adjustments for the risks assumed by CCP NCC.

The Company also promotes healthy living, prevention and avoidance of epidemic surges of acute respiratory viral infections (ARVI) and flue. Employees may exercise in athletic clubs arranged by the bank holding company, which parent company is Moscow Exchange (running, triathlon, soccer, hockey, etc.).

Training and Developing Employees

At the end of 2019, 97.74% of employees had higher education, 16.3% - second higher education. In addition, 4 employees have the Science degree of Ph.D., 40% - diplomas.

The approach to training CCP NCC's employees provides for the following three priority areas:

- management culture development,
- development of culture of knowledge and experience continuity, and
- support of business for innovative objective implementation in accordance with the global trends.

The employee training and development system includes educational courses and self-study facilities (including on-the-job trainings). The training system is up-to-date and technological, provides employees with additional self-education opportunities to employees. At the same time, the increasing focus is placed on transfer of responsibility for their development to employees themselves and provision of them with modern technologies, resources and additional opportunities for this purpose. In 2019, CCP NCC maintained the training concept 70-20-10, which displaces the training focus towards the self-education and on-the-job development (70% of all developing efforts) together with learning by peers' experience (20% of all developing efforts) and actual involvement in training courses (10% of all developing efforts).

In the reporting period, 389 employees completed training courses (some employees were even trained under several programs). Each employee had 2 training days during the year on average. The Company places a strong emphasis on the business continuity, inter alia, training of employees in this activity. In 2019, on average, each CCP NCC employee took 4 electronic training courses.

The Company pays attention to introduction of programs for competences development, leader skills and project management skills required for implementing the Company's strategic projects. In 2019, the new corporate department "Personal Performance Faculty" was launched and 44

employees graduated from it. At the department, employees studied methods on influence and persuasion, basics of systemic thinking, new approaches and tools for non-standard and innovative idea generation in order to develop key business projects and strategic objectives of the Company. Members of the Personal Performance Department also took part in such training programs as “Conflicts: from Competition to Collaboration”, “Negotiations, Professional Rhetoric at the Table” and “Mastery of Presentation”.

The project “Internal Trainers” is still successfully implemented at the professional faculty where employees of the Group hold short master classes, training sessions and seminars to pass on unique knowledge inside the company. In 2019, internal trainers held 40 training sessions and taught 63 employees of CCP NCC.

In 2019, in order to support the annual staff assessment procedure, the series of master classes “Workshop of the Dialogue” was arranged for all directors of the group in order to train the skill of providing subordinates with feedback. 67 persons from CCP NCC took part in master classes.

In 2019, 17 employees graduated from the mandatory three-module program designed to develop management skills, master new approaches and methods of management, and form the management culture. The Professional Department programs are designed to provide employees with in-depth and a high quality knowledge in the key business areas of CCP NCC. In 2019, 118 employees got professional and technical knowledge, of which 22 employees improved their skills, 21 employees took part in relevant conferences, and 67 employees attended professional workshops and training courses.

The training and development system is also focused on strengthening the workforce capacity of employees. The classical instruments for of employee competency are used to fulfil such objective. Long-term individual plans of professional and career development are generated according to the results of such assessment.

Health Protection of Employees and Provision of Labor Safety

CCP NCC is responsible for life and health safety of its employees and supports high standards in the area of labor safety and professional health.

The Company took the policy in the area of labor safety embracing all employees. While complying with the policy, CCP NCC management undertakes responsibility for implementation of labor safety measures via setup of relevant goals and objectives, scheduling and funding of events to achieve them, is obliged to respect the said values and encourages all employees to do so.

Provision of optimal labor and rest schedules for employees is controlled via timely special assessment of the labor conditions at workplaces, assessment of the professional risk level, industrial control over compliance with hygienic rules and compliance with the sanitary and epidemiological (preventive) measures. It creates conditions to support the high productivity of employees.

In 2019, the special labor condition assessment at 103 workplaces in CCP NCC was held. As a result, no harmful or hazardous industrial factors were found and labor conditions was deemed to be acceptable.

In addition, during the reporting period, professional risk assessment was held on all workplaces of the Company to determine threats for an employee during his/her work process, their values and severity of potential consequences were determined.

To improve the microclimate in CCP NCC's offices and to support healthy lifestyle of the staff (in addition to effective corporate programs):

- presence of disinfectants in special dispensers is sustained all year round, during peak periods of influenza and ARVI epidemics offices are supplied with additional epidemiological means (masks, disinfecting tissues, antiseptic gels): offices are equipped with DESAR germicide recirculators and air humidifiers-purifiers;
- preliminary (at admission to work) and regular medical check-ups of employees are held;
- the set of measures in view to support healthy lifestyle is organized: fruits for employees in kitchen areas, healthy menu in the canteen and snack machines, recommendations on the portal to prevent hypodynamia and for exercising in the office, thematic posters and meetings;
- the office at Spartakovskaya street is equipped by the healthy nutrition station and the coffee point;
- the office at Kislovskiy lane is equipped by additional exercise machines and the gym with cardio machines and the tennis table is open in the office at Spartakovskaya street;
- bicycle parking lots are organized.

In order to notify employees about labor conditions on their workplaces and about professional risk levels, CCP NCC established the following forms of notification:

- inclusion of relevant provisions into the labor contract of the employee;
- making the employee aware of results from the special labor conditions assessment on his or her workplace;
- placing the accumulated data about results of the special labor conditions assessment on workplaces;
- using online information sources;
- placing the relevant information at spots available for all employees.

CCP NCC organizes all types of instructions in labor safety, electrical safety, fire safety, civil defense and emergency situation. In 2019, 50 new employees were briefed in labor safety. Instructions and labor safety provisions, health articles and online training courses in labor safety are available to employees on the internal corporate portal.

In order to provide and to support safe labor conditions, to prevent industrial injuries and professional diseases, CCP NCC discovers potential accidents, establishes the procedure in case of accidents taking into account existing and developing plans of response to accidents and removal of their consequences, establishes the procedure for investigation of accidents, disasters and professional diseases and for execution of reporting documents.

12. Remuneration of CEO, Management Board Members and Supervisory Board Members (criteria for calculation and size of remuneration)

Remuneration of CEO and Management Board Members

The remuneration paid in 2019 reporting year to the Chairman and Members of the Management Board of CCP NCC was determined in accordance with the Federal Law ‘On Joint Stock Companies’, the Russian Labor Code, Bank of Russia requirements, including Bank of Russia Instruction No. 154-I dated 17.06.2014 ‘On the Procedure for Assessing Remuneration Systems of Credit Institutions and the Procedure for Submitting to Credit Institutions Orders to Eliminate Violations Identified in Their Remuneration Systems’, CCP NCC’s Articles of Association, other internal documents of the Company, and terms of the labor contracts made with them.

Approval of the fixed and variable parts of labor remuneration in the total amount of remuneration, approval of remuneration sizes and other benefits to the members of CCP NCC's executive bodies, assessment of their activities fall within competency of CCP NCC's Supervisory Board and are based on recommendations from its Nomination and Remuneration Committee.

The system of remuneration of the members of the executive bodies is designed to achieve the optimal balance between the dependence of remuneration on the performance results and personal contribution of each member of the executive body to the achievement of this result. The structure of remuneration elements and their relationship are established by the Supervisory Board as percent in the total amount of remuneration and differentiated subject to the degree of the contribution of the executive body member to the financial performance figures and to occurrence of risk events attributable to the risks assumed when performing functions of an executive body member.

One of the key remuneration elements, also covering members of executive bodies, is a variable part (hereinafter the "annual bonus"). The amount of the annual bonus payable to CEO and members of CCP NCC's Management Board is driven, inter alia, by assessment of the achievement (fulfillment results) of the common corporate key performance indicators (targets), assessment of the achievement (fulfillment results) of the individual key performance indicators (targets) of CEO and of Management Board members for the reporting year, results of assessment of risks (operational risk of CCP, liquidity risk, credit risk of CCP), and assessment of the work quality based on the data of financial statements and accounts, the operational records, results of inspections performed by internal/external auditors and regulators, risk assessment results, performance of instructions of CCP NCC's Supervisory Board and its committees, and other factors. To maintain the balance between common corporate (financial, strategic) and individual targets, the aggregate weight of common corporate targets in 2018 accounted for 40% in the total weight (100%) of all targets pursued by the members of executive bodies.

Based on the results of the reporting year, taking into account the financial result of CCP NCC, level of CC operational risk, credit, market and custodial risk of the commodities supply operator, 60% of the approved annual bonus for the year performance results will be paid to CEO and Management Board Members in 2019. The remaining 40% of the approved amount of the annual bonus for the results of performance of CEO and Management Board Members in 2019 will be deferred (paid in instalments) for three years, including a possibility of reduction or cancellation in case of negative financial result for the Company as a whole, according to the procedure and on the terms approved by the Supervisory Board.

The deferred (paid-in-instalments) portion of the annual bonuses (hereinafter the "deferred portion") will be paid in accordance with the approved-by-Supervisory Board sizes of shares of deferred (paid-in-instalments) portion of the annual bonuses attributable to each reporting year (and subject to further adjustments) by payment (accrual) date upon expiry of the periods sufficient for determining the performance results. If any risk event occurs, the adjustment will apply to all deferred (paid-in-instalments) portions of the annual bonus to attributable to previous periods, which are evaluated in the current period. The deferred (paid-in-instalments) portions of the annual bonus to be paid in 2020 will be adjusted for evaluation of the following risk events occurred in 2019: operational risk of CCP, credit, market risk, and custody risks of commodities supply operator. When CCP NCC Supervisory Board decides on payment of the part of the delayed bonuses for previous periods, all types of risks implemented in 2019 were taken into account according to the established methodology.

The amount of all payments (salary, bonus, compensation for and other payments) made to CEO and members of CCP NCC Management Board in 2019 totaled RUB72,151,100 (2018: RUB85,175,400; 2017: RUB93,794,500).

Remuneration of Supervisory Board Members

On 20 May 2019, the Moscow Exchange, the sole shareholder of CCP NCC, passed Resolution No. 44 on the issues falling within competence of the General Shareholders Meeting, to remunerate the members of CCP NCC's Supervisory Board elected by resolutions of the sole shareholder on 14 May 2018 (Resolution No. 41), remuneration for performance of their functions in the amount calculated in accordance with the Regulation on remuneration and compensation of expenses of the members of National Clearing Centre Bank's (Joint-Stock Company) Supervisory Board approved by Resolution No. 30 of the sole shareholder on 13 May 2016 (Resolution No. 30) taking into account individual input of members of the Supervisory Board into management of the Company was RUB31,125,000 in total.

The Regulation on remuneration and compensation of expenses ensures a systemic approach to calculation of the size of individual remunerations, determines the specific remuneration levels for each role of the Supervisory Board Members, sets a fixed amount of remuneration for independent members and contemplates the terms ensuring proper engagement of the Members in the activity of the Supervisory Board (the remuneration may be reduced in case of repeated non-attendance of meetings).

The remuneration of the members of CCP NCC's Supervisory Board elected by resolution No. 44 of the sole shareholder on 20 May 2019 will be paid upon holding the Annual General Shareholders Meeting of CCP NCC in 2020.

13. Dividends on Shares

When considering the issues of the Annual General Shareholders Meeting held on 19 April 2019, the Moscow Exchange, the sole shareholder of CCP NCC, passed Resolution on the distribution of CCP NCC's net profit and payment (declaration) of dividends, as follows:

1. to distribute part of the retained profit gained by CCP NCC (JSC) for previous years in the amount of RUB5,399,913,100.00 for the payment of dividends;
2. to pay dividends for allocated CCP NCC's shares in the amount of RUB5,399,913,100.00 amounting to RUB323.93 for one ordinary share (before the tax on the income received as dividends) out the retained profit gained by CCP NCC (JSC) for previous years;
3. to set April 29, 2019 as the date, on which the persons entitled to the dividends are identified;
4. to pay dividends on CCP NCC's shares in cash by funds transfer.

The dividends were paid on May 24, 2019.

When considering the issues of the Annual General Shareholders Meeting held on August 2, 2019 the sole shareholder of CCP NCC passed Resolution on the distribution of CCP NCC's net profit and payment (declaration) of dividends, as follows:

1. To distribute the part of the retained profits gained by CCP NCC (JSC) for previous years in the amount of RUB1,999,899,900.00 for payment of dividends.
2. To pay dividends for allotted shares of CCP NCC (JSC) in the amount of RUB1,999,899,900.00 amounting to RUB119.97 for one ordinary share (before the tax to the income received as dividends) out the retained profits gained by CCP NCC (JSC) for previous years.
3. To set August 12, 2019 as the date, on which the persons entitled to the dividends are identified.

4. To pay dividends on CCP NCC's shares in cash by funds transfer.

The dividends were paid on August 22, 2019.

When considering the issues of the Annual General Shareholders Meeting held on 18 October 2019 the sole shareholder of CCP NCC passed Resolution on the distribution of CCP NCC's net profit and payment (declaration) of dividends, as follows:

1. To distribute the part of the retained profits gained by CCP NCC (JSC) for previous years in the amount of RUB3,999,996,500.00 for payment of dividends.
2. To pay dividends for allotted shares of CCP NCC (JSC) in the amount of RUB3,999,996,500.00 amounting to RUB239.95 for one ordinary share (before the tax to the income received as dividends) out the retained profits gained by CCP NCC (JSC) for previous years.
3. To set October 29, 2019 as the date, on which the persons entitled to the dividends are identified.
4. To pay dividends on CCP NCC's shares in cash by funds transfer.

The dividends were paid on December 2, 2019.

14. Observance of the Corporate Governance Code Principles

CCP NCC places strong focus on the improvement of its corporate governance and endeavors to observe the best practices and corporate governance standards, inter alia, the most significant principles and guidelines set forth in the Corporate Governance Code approved by the Bank of Russia on 21.03.2014, the recommendations of the Bank of Russia and the Basel Committee on Banking Supervision, the principles of corporate governance recognized in international practice as well as recommendations of the Bank of Russia⁹.

The Corporate Governance is aimed at providing CCP NCC Supervisory Board and all employees of the Company with relevant stimuli to achieve goals. They also should help to implement the effective control while encouraging CCP NCC to use its sources in a more effective manner.

During the reporting period, the Company approved the new version of the Corporate Governance Principles (hereinafter the 'Principles'), which main purpose is to describe the Company's existing corporate governance rules and system to improve business efficiency, increase transparency, maintain financial stability and attractiveness for a shareholder, clients (users of services), employees, creditors etc. The new version of the document sets up corporate governance principles of CCP NCC and added with provisions determining methods for implementation of such principles.

The application of the Corporate Governance Principles by CCP NCC results from its aspiration for improvement of the Company's attractiveness for potential clients (and service users), provision of CCP NCC's stability as a systemic element of the financial market, and is based on the following principles:

- provision of CCP NCC's management framework relevant to its strategic objectives, corporate values, specifics of activities and needs and interests of its clients;

⁹ Ordinance of the Bank of Russia dated 17.01.2019 N 5062-Y "On Requirements to the Internal Corporate Management Document of the Trading Organiser, the Clearing Company, the Central Counterparty, the Central Depository as well as Procedure and Period for Disclosure of the Information Contained in the Internal Document for Corporate Management and Information about its Observance".

- provision of activities of CCP NCC Supervisory Board based on:
- strategic management;
- control over activities of executive bodies and making decisions to remove faults in the activity of executive bodies if they are found as a result of such control;
- assessment of Supervisory Board's performance and assessment of operational quality of Supervisory Board Committees and disclosure of results of such assessment;
- segregation of control functions and administrative duties, determination of individual and collective responsibilities undertaken by members of the Supervisory Board.

The Principles establish the requirement that at least 1/3 of members of CCP NCC' Supervisory Board should be independent directors, define the independent director criteria, affiliation criteria and materiality criteria, which are based on separate provisions of the Corporate Governance Code of the Bank of Russia.

In 2019, independence of Supervisory Board's members was assessed in part of their compliance with independence and coherence criteria, as a result of which four members of CCP NCC Supervisory Boards were recognized as independent directors.

The work experience of the Supervisory Board demonstrates strong engagement of its members in the management of CCP NCC's activities and efficient control over the efforts taken by the Management Board and CEO of the Company.

All members of the Supervisory Board have higher education and necessary knowledge, skills and competencies to address the long-term strategic development goals of CCP NCC as well as significant experience of engagement in collective management bodies. Also, all members of the Supervisory Board meet the necessary skill and reputational requirements imposed by the effective legislation of the Russian Federation. In their activity, the Supervisory Board members are accountable to the sole shareholder of CCP NCC.

To ensure sound and timely decision-making in the field of appointments and remunerations, the Nomination and Remuneration Committee is functioning as part of the Supervisory Board. The major goal of such committee is to ensure an efficient operation of the Supervisory Board of CCP NCC in resolution of the issues required for conformity of the labor remuneration system to the nature and scale of CCP NCC's operations, its performance results, level and combination of assumed risks. The Committee prepares proposals on appointments and remunerations of the members of the Supervisory Board and executive bodies of CCP NCC. The Nomination and Remuneration Committee Members do not hold membership in CCP NCC's executive bodies, and the majority of Committee Members possess sufficient experience or a qualification enabling them to make well-grounded decisions.

In compliance with the Federal Law on Clearing, Clearing Activities and Central Counterparty and to tighten control over the risk management framework, the Risk Committee is operating as part of CCP NCC's Supervisory Board. The main objective of the committee is to contribute to improvement of CCP NCC's risk management system as a clearing organization and a central counterparty, in order to increase CCP NCC's financial stability and ensure continuity of its clearing activities. The members of the Supervisory Board's Risk Committee of CCP NCC as a central counterparty, complies with the aforementioned Federal Law, and two thirds of its members are representatives of clearing member, other members are independent members of CCP NCC's Supervisory Board and representatives of the clearing members' clients.

The corporate governance practices existing in CCP NCC enables the Management Board and CEO to perform reasonably, in good faith, solely for the benefit of the Company, effective management of the daily operations, and guarantee accountability of these bodies to the Supervisory Board and the General Shareholders Meeting (sole shareholder). The Management

Board and CEO promote the implementation of resolutions adopted by the General Shareholders Meetings (sole shareholder) and the Supervisory Board.

The Principles and changes made into them are published on the official website of CCP NCC. CCP NCC also discloses the information about observance and results of implementation of the Principles every year, not more than two months after the date of the annual general meeting of CCP NCC.

One of the key principles of corporate governance of CCP NCC is the timely disclosure of reliable information about CCP NCC in compliance with the Laws of the Russian Federation and internal documents of CCP NCC. The information is disclosed pursuant to the new version of CCP NCC's Information Policy Regulation approved by the Supervisory Board in 2019 and consistent with principles of regularity and promptness, accessibility for stakeholders, reliability and completeness of the disclosed information.

As required by the applicable laws, CCP NCC discloses information as a credit organization, a clearing company and a central counterparty as well as in course of its performance of functions of the commodities supply operator. CCP NCC discloses its financial statements and accounts according to the Russian and international standards and discloses additional information of its operations, which may be material for the sole shareholder and other stakeholders while maintaining a reasonable balance between transparency of CCP NCC and protection of its business interests. CCP NCC discloses information using tools and methods most convenient for its stakeholders. CCP NCC's official website is a main channel for disclosure of the Company's information. Therefore, the website contains the information sufficient for forming an objective understanding of material aspects of CCP NCC's activities. As a rule, material events or actions of CCP NCC are normally disclosed by publication of press releases.

To protect the rights and legitimate interests of the sole shareholder and to provide efficient control of its financial and business operations, CCP NCC has the Revision Committee, whose members are elected by the General Shareholders Meeting. The Revision Committee reports to the General Shareholders Meeting and operates independently of other management bodies of the Company.

CCP NCC annually on a contractual basis engages a professional audit firm, which has no property interests in the Company or its sole shareholder, to audit and confirm the reliability of its financial statements.

CCP NCC maintains the corporate Code of Business Ethics, which sets forth the principles governing the relations between the Company employees, including members of its executive bodies, and clients, partners, mass media, public and political organizations, as well as other rules for external communications.

CCP NCC has approved the Procedure for avoidance of conflicts of interest, which describes the reasons for, measures to prevent, and procedure to settle, a conflict of interest. The Company has also approved an Anticorruption Policy, which provides guidelines for CCP NCC's activities in ensuring compliance with the anticorruption laws and situations containing the signs of corruption risk, and the measures aimed at their preventing and combating corruption in the Company's activities.