

Major Performance Results
of
Central Counterparty National Clearing Centre
for the Year 2017

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1. Executive Summary

Central Counterparty National Clearing Centre (“CCP NCC” or the “Company”) was established in 2005 as the Bank “National Clearing Centre” Closed Joint Stock Company, briefly the CJSC JSCB National Clearing Centre, by resolution of the Annual General Shareholders Meeting 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 but (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 being a legal successor to the above legal entities.

By resolution of its sole shareholder, in 2015 the trade names of CCP NCC were made consistent with the applicable laws and changed accordingly to the “Bank National Clearing Centre (Joint Stock Company)” and “NCC Clearing Bank”. 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 earlier issued license for raising and placing deposits in precious metals.

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, CCP NCC was assigned the central counterparty status by the Bank of Russia. Due to the status change on 28 November 2017, CCP NCC obtained banking license No. 3466-IJK for non-banking credit organizations acting as central counterparties.

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.

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

In 2015 CCP NCC was accredited by the Bank of Russia to perform functions of a commodity supply operator.

Principal Place of Business

Moscow

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; and
- 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 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 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;
- Chairman of the Management Board (hereinafter "CEO") (sole executive body) provides daily management of CCP NCC 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 No. 36 of 23.06.2017 of the sole member, Deloitte & Touche CIS was appointed an independent auditor of CCP NCC for the year 2017.

2. Authorized Capital and Shareholding Structure

When establishing the Company, the Annual General Shareholders Meeting approved the Authorized Capital of the Company totaling RUB 235,000,000.00 and divided into 235,000 registered ordinary shares with par value of RUB 1,000.00 each.

Between 2006 and 2013, CCP NCC's authorized capital was increased from RUB 235,000,000.00 to RUB 15,170,000,000.00 via placement of additional registered uncertified ordinary shares in CCP NCC. Further increase of the authorized capital was related to the 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 Centre.

As of the end of the reporting period, the authorized capital of the Company was RUB 16,670,000,000.00 and divided into 16,670,000 registered uncertified ordinary shares with par value of RUB 1,000.00 each.

Shareholding structure

As of 31 December 2017, 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 2017 CCP NCC in accordance with its approved Development Strategy and priorities, was focusing its main efforts on implementation of its projects and targets related to developing its clearing services, carrying out activities aimed at improving the risk management processes and enhancing the CCP governance quality in compliance with the legislation of the Russian Federation and international standards.

In 2017 CCP NCC was carrying out its business amid foreign sanction regime still affecting the majority of Russia's leading financial market players, under the threats of even more severe sanctions and related risk factors. Under the circumstances, CCP NCC kept its main focus on the communication with its counterparty banks as they were applying the compliance procedures to their transactions; tested some alternative channels of communication and made provision for the management of these risks under a specific stress scenario within Recovery & Resolution Plan. At the same time, CCP NCC was exposed to a persistent decrease in the number of its client credit organizations both due to revocation of their licenses by the Bank of Russia and consolidation of the Russian banking sector. As a result of winding-up of several credit organizations (clearing members), CCP NCC had to use the liquidation netting procedures to ensure absolute fulfillment of its obligations of the central counterparty.

The most prominent trends of 2017 also included the stronger reliance on government and corporate bonds and Euro as a collateral posted by the market participants. The resulting decrease in Dollar and Ruble portion of liabilities required on the part of NCC to modify its asset structure as regards financial instruments and currencies.

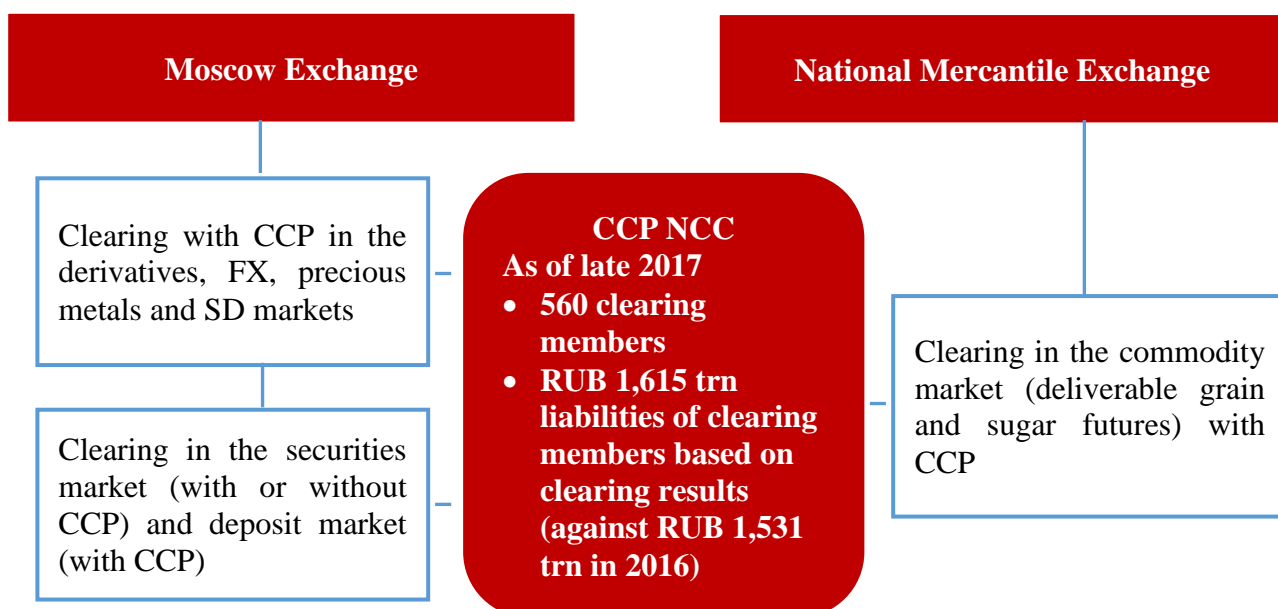
The status of non-banking credit organization – central counterparty, assigned to CCP NCC in 2017 represented a milestone event for its operations. The status assignment was a practical step towards implementing the legislative reform of the central counterparty activity regulation in compliance with Federal Law No. 403-FZ of 29.12.2015 “On Amendments to Certain Legislative Acts of the Russian Federation” intended to harmonize the status and functions of central counterparties.

During the reporting year, CCP NCC managed to maintain the positive trends in the growing earning capacity of the business both due to commission and interest income from transactions with idle funds and funds of the Group, thus enabling it meet a required level budget revenue of the Moscow Exchange Group.

CCP NCC is ranked well among TOP-10 credit organizations of Russia in terms of asset value which reached RUB 2.78 trn as of 31.12.2017. In terms of capital, CCP NCC still remains one of the world's most capitalized central counterparties. During the reporting period, CCP NCC took part in the development of international rules and standards for central counterparties as a member of the Global Association of Central Counterparties–CCP12 and the European Association of Central Counterparty Clearing Houses – EACH.

In 2017 CCP NCC continued provision of clearing services in all markets of the Moscow Exchange Group (FX_market and precious metals market, securities market, money market, deposits market, derivatives market, and standardised derivatives market (hereinafter - SD market)) and commodities market of the National Mercantile Exchange JSC.

The general overview of CCP NCC clearing operations in the on-exchange markets in late 2017 is shown in the figure below:



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

I. In connection with the changed status of CCP NCC from bank to a non-banking credit organization – central counterparty, CCP NCC has:

- developed and approved new versions of and amendments to its fundamental in-house documents including the Clearing Rules, the Regulation on Risk Management System Arrangement, the Guidelines on Stress Testing by CCP NCC, the Guidelines on Model Accuracy Evaluation by CCP NCC, Dedicated Own Resources Calculation Methodology Resources of the Central Counterparty of CCP NCC; also approved the revised Articles of Association, the change in its name and increase in the number of independent directors in its Supervisory Board;
- amended the agreements with the Bank of Russia governing the settlement and cash services of CCP NCC, rules for lending of CCP NCC by the Bank of Russia, and participation of CCP NCC in deposit transactions of the Bank of Russia; and
- obtained a license on banking operations for non-banking credit organizations – central counterparties and had its clearing business license renewed.

II. In implementing the Moscow Exchange Group's strategic projects aimed at clearing activity development, the following steps were taken:

- 1. The Unified Collateral Pool Project. Phase I.** This Project was launched to reduce transaction costs of clearing members in the Group's markets due to provision of the unique (even in global terms) clearing functions by the clearing house, including:
 - unified account (unified pool account);
 - unified collateral, together with the unified pool collateral management service;
 - possibility of cross-margining between the FX market and precious metals market, as well as between the securities and money markets;
 - possibility of cross-margining between the derivatives market and securities and money markets (to be implemented at Project Phase II during the first half year 2018); and
 - netting when settling trades, executed in the FX market and precious metals market, the securities and money markets, and the derivatives market.

Advantages of the Unified Pool

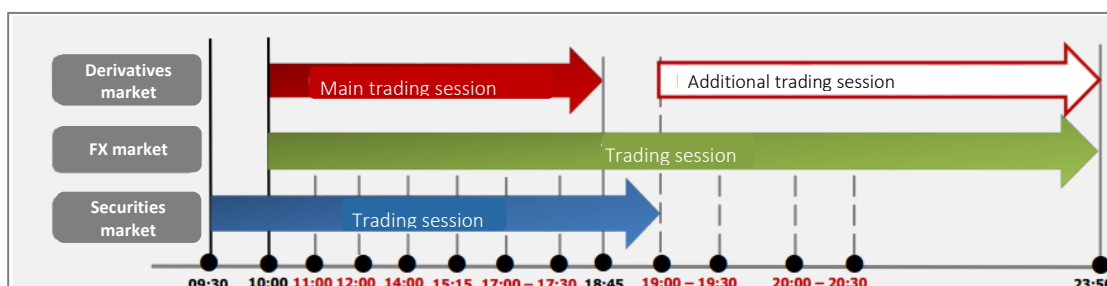
- As regards the clearing collateral:
 - unification of the list of assets acceptable as collective clearing collateral (guarantee funds contributions) in the FX market and precious metals market, securities and money markets, derivatives market and standardised derivatives markets (including acceptance of sovereign bonds and Eurobonds in all markets) (implemented in 2015 for the FX market and precious metals market, securities and money markets, derivatives market and standardised derivatives market);
 - unification of the list of assets acceptable as individual clearing collateral for the fulfillment of obligations under trades executed in the FX market and precious metals market, securities and money markets, and derivatives market, through the collateral under the unified account;
 - provision of the unified approach to acceptance of assets as collateral for the fulfillment of obligations under trades executed in the FX market and precious metals market, securities and money markets, and derivatives market, through the collateral under separate accounts for each of these markets.
- As regards settlement:
 - obligations and claims arising from trades executed in the FX market and precious metals market, securities and money markets, and derivatives market are net-settled from the assets held in the unified pool account.
- As regards calculation of the collateral:
 - certain elements of cross-margining were introduced to allow cross-margining of obligations and claims arising from trades executed in different markets: between the FX market and precious metals market, the securities and money markets (completed), and between the derivatives market and the securities and money markets (to be finalized in 2018).

Key features of net-based settlement

- obligations and claims, recorded under the unified pool account and arising from trades executed in different markets, including the variation margin payment obligations, are terminated on the settlement date by netting (for each asset);
- the total net obligation calculated through the netting of obligations and claims arising from trades executed in different markets is settled from the assets recorded under the unified pool account;
- all non-fulfilled obligations, recorded under the unified pool account are settled through settling trades (REPO trades, swaps or closing buy-sale trades) from the unified collateral;
- unification of the Time Specifications for settlement of obligations in all markets:
 - obligations in securities are settled during clearing sessions at 05:00 p.m. and 07:00 p.m.,
 - cash obligations of clearing members towards the CCP NCC are settled during the period with account of cut-off time for the relevant currency but no later than 08:00 p.m. Moscow time;
 - for the settlement of cash obligations with the breach of time, set by the Time Specifications, the fine is levied upon the clearing member.

The following steps were accomplished in December 2017 under the Unified Collateral Pool project:

- facility to switch to a unified pool account;
- managing the collateral on a unified pool basis:
 - transferring asset between accounts, including the unified pool accounts;
 - transfer of the Russian ruble profile between the clearing system of the securities market and the clearing system of the FX and precious metals market, and between the clearing system of the securities market and the clearing system of the derivatives market;
 - transfer of the foreign currency profile and of the precious metals profile between the clearing system of the securities market and the FX and the clearing system of the precious metals market;
 - collateral return, from the unified pool accounts inclusively, upon request of the clearing member.
- net-based settlements of trades executed in the FX market and precious metals market, securities and money markets, and derivatives market from the assets posted to the unified pool account;
- unified Time Specifications for settlement of obligations in the FX market and precious metals market, securities and money markets, and derivatives market.



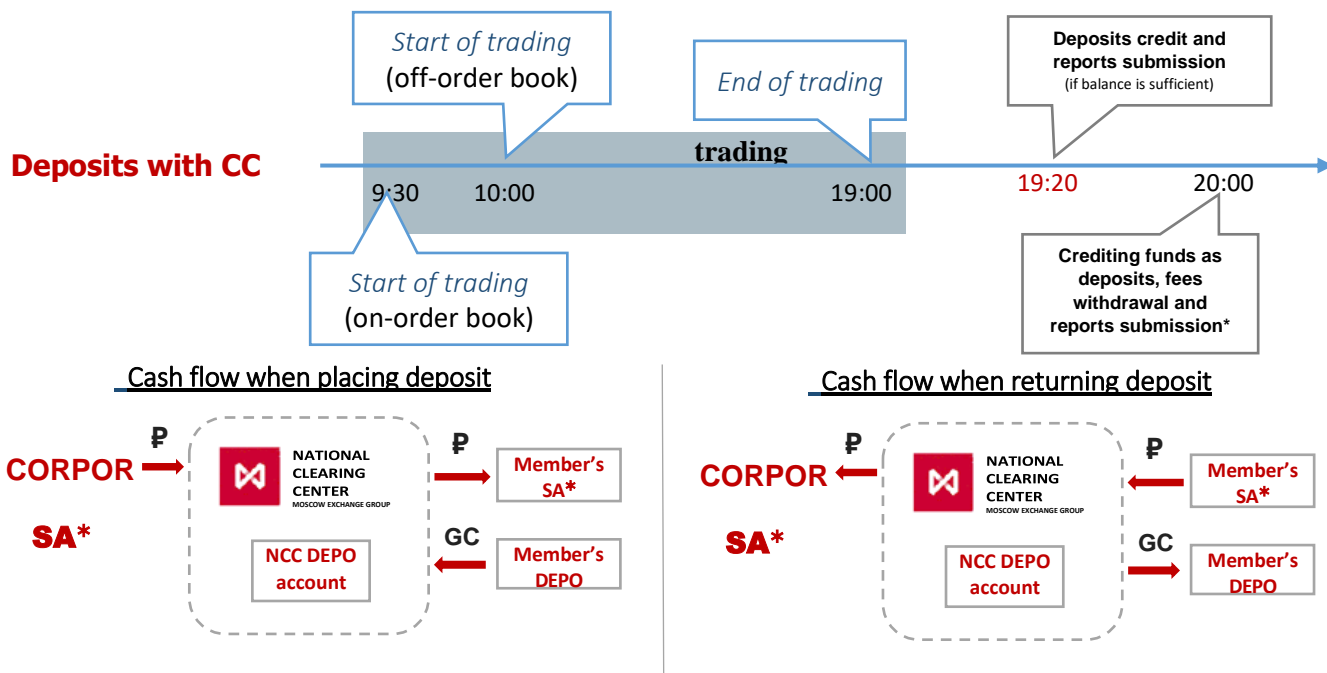
- 11:00 settlement by clearing members of obligations in Tenge
- 12:00 settlement by clearing members of obligations in Yuan, Belarusian Ruble, Russian Ruble, Hong Kong Dollar, Swiss Franc
- 02:00 p.m. settlement by clearing members of obligations in Turkish Lira
- 05:00 p.m. settlement by clearing members of obligations in Euro and GBP; settlement of obligations in securities under trades, executed before 04:00 p.m.
- 05:00-05:30 p.m. execution of REPO trades with clearing members in case of shortage of securities
- 07:00 p.m. settlement of obligations in securities under trades, executed between 04:00 p.m. and 07:00 p.m.
- 07:00-07:30 p.m. execution of REPO trades with clearing members in case of shortage of securities
- 08:00 p.m. settlement by clearing members of obligations in USD, Russian Ruble and precious metals, including payments of fees, fines, penalties, and default interest
- 08:00-08:30 p.m. execution of REPO / swap trades where there are outstanding obligations in cash / precious metals in case of shortage of cash funds / precious metals.

2. Launching the Placing Deposits with Central Counterparty project

In 2017 CCP NCC started exercising its functions as CCP for trades entered by pairing deposit orders of corporate customers with orders for REPO in GCC to raise funds. During the reporting year, the legal entities, other than credit organizations or professional securities market participants, were provided with direct access to the money market. As a result, they were able to place deposits with central counterparty at market rates of on-exchange REPO, the settlement of obligations under such trades being guaranteed by CCP NCC acting as a central counterparty. The Project was accompanied with enhancement of the risk management system, especially its criteria for the clearing service admittance of such participants.

The main characteristics of the deposit market are as follows:

- deposit currency: Rubles;
- minimum admissible order: RUB 1,000.00;
- deposit term: from 1 day to 1 year:
 - in the off-order book mode, any term up to 1 year;
 - in the order book mode: 1 day, 1 week, 2 weeks, 1 month, 2 months, 3 months, 6 months, and 1 year;
- deposit orders from corporate clients are paired with REPO orders with GCC to raise funds;
- corporations are entitled to place both on-order book and off-order book modes deposit orders;
- within the order book mode, deposit orders from corporations will be normally considered in a common order / quotation book for REPO with GCC;
- early repayment of deposits is not allowed.



SA means a settlement account under the NCC clearing account for the cash funds recording

3. Additional opportunities for clearing members:

- ***the newly implemented TRAN technology*** allows to obtain and automatically process information on any changes in cash and securities positions within the trading and clearing system, regarding:
 - income transfer obligations under REPO trades;
 - cash and securities transfers between accounts;
 - debits and credits of cash and securities;
 - fee / fine / break-up fee payment obligations;
 - variable margin payment obligations/ claims in the FX market;
 - discharging obligations and transferring asset with the arrived settlement date; and
 - obligations / claims under unified pool settlement account from the FX & derivatives markets to the securities market;
- ***withdrawing the cash collateral in the securities and money markets up to the net claim amount***, as calculated based on obligations and claims under trades T+ with the arrived settlement date. Collateral withdrawal ***up to*** the net claim ***amount*** is available at any time during the settlement date subject to observance of the return conditions (and subject to the sufficiency of the remained collateral);
- ***returning cash funds from the securities market pursuant to a standing instruction to return cash collateral*** to the amount of the total net claim (in the same manner as this procedure applies in the FX market). Execution of such standing instruction to return cash collateral is subject to prior calculation of such final net obligations/ final net claims and is effected in the relevant currency;
- ***transfer of the individual clearing collateral into the other collateral*** in the securities and derivatives markets upon application of the clearing member. Following such change of collateral status, the clearing member may credit foreign currency as collateral directly to CCP NCC's correspondent accounts with the foreign banks in the same manner as this procedure applies in the FX market and thus speed up the relevant transaction.

4. Extended list of assets acceptable as collateral in the securities market

Since 2017, to unify the list of assets acceptable as collateral in various markets within the Unified Collateral Pool project, CCP NCC started accepting foreign currencies and precious metals as collateral in the securities market (based on the settlement accounts in the unified pool at the first stage) according to the following list of foreign currencies and precious metals acceptable as collateral by CCP NCC:

- USD (United States Dollar)
- EUR (Euro)
- CNY (Yuan)
- GBP (British Pound)
- CHF (Swiss Franc)
- HKD (Hong Kong Dollar)
- BYN (Belorussian Ruble)
- GLD (Gold)
- SLV (Silver)

III. For the development of its risk management framework, CCP NCC carried out the following:

- 1. Implemented the updated stress testing and back testing methodology**, and thus bringing CCP NCC activities in line with the requirements imposed by the Bank of Russia on NCO-CCPs. The updated methodology includes daily initial margin backtesting and stress testing.
- 2. Strengthened the structure of CCP safeguard levels by:**
 - modifying CCP's recovery tools, in particular, due to implementation of central counterparty's liabilities haircutting procedure;
 - increasing the size of clearing members' contributions into the guarantee funds to RUB10 mn in the FX market and precious metals market, securities market and derivatives market.
- 3. Introduced the interasset spreads in the securities market for federal loan bonds and corporate bonds** to achieve more effective margining of open bond positions and enable the clearing members to manage their collateral efficiently.
- 4. Implemented automated business reputation risk management framework** which allows a real-time monitoring, evaluation, and review of events affecting various business areas of NCC and to correlate them with business reputation risks to track changes in this type of risk.

IV. International rating agency Fitch Ratings confirmed the long-term issuer default rating (IDR) of CCP NCC in foreign currencies at "BBB-" with positive outlook and in domestic currency at "BBB" with stable outlook, being one notch higher than the sovereign rating of the Russian Federation.

V. The Analytical Credit Rating Agency (hereinafter 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.

VI. The Quality Management System introduced in CCP NCC was confirmed ISO 9001:2015 compliant, which is an important additional element of the risk management framework aimed at improving the perfection and quality of the management of the central counterparty.

VII. Maintaining stability of CCP NCC capital, which was increasing over the reporting year due to growing net income of the Organization. A slight decrease in CCP NCC owned capital as of the reporting date (from RUB46.52 bn as of 01.01.2017 to RUB 45.96 bn as of 01.01.2018) was driven by a need to fulfill its dividend payment obligations to the shareholders. In 2017, CCP NCC paid RUB17.7 bn dividends from the past years retained profit, without any impact on its stability or being at risk of not meeting the regulatory requirements of the Bank of Russia.

VIII. The 1-st Stage of CCP NCC Reporting Project, aimed at reducing operational risks and automatization of the regulatory and tax reporting processes as well as reporting for financial monitoring purposes, was implemented. During the reporting period, CCP NCC deployed the hardware and software system, which makes it possible to start generating some reporting forms for the Bank of Russia immediately.

IX. The amended and restated Guidelines for the opening and closing of bank accounts, deposit accounts with CCP NCC and the amended and restated Guidelines for the opening,

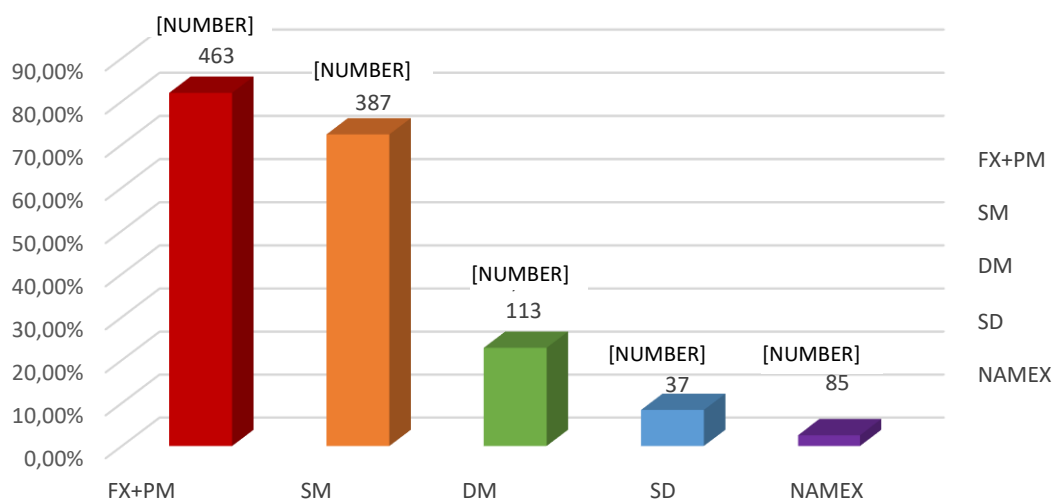
maintenance and closing of impersonal metal accounts with CCP NCC, which incorporate the amendments to Bank of Russia Instruction No. 153-I, dated 30 May 2014, ‘On Opening and Closing Bank Accounts and Deposit Accounts’”.

Reliable settlement of its obligations to the clearing members and successful implementation of business projects aimed at the development of client-centered clearing services made it possible to considerably expand the volume of services rendered to the clearing members.

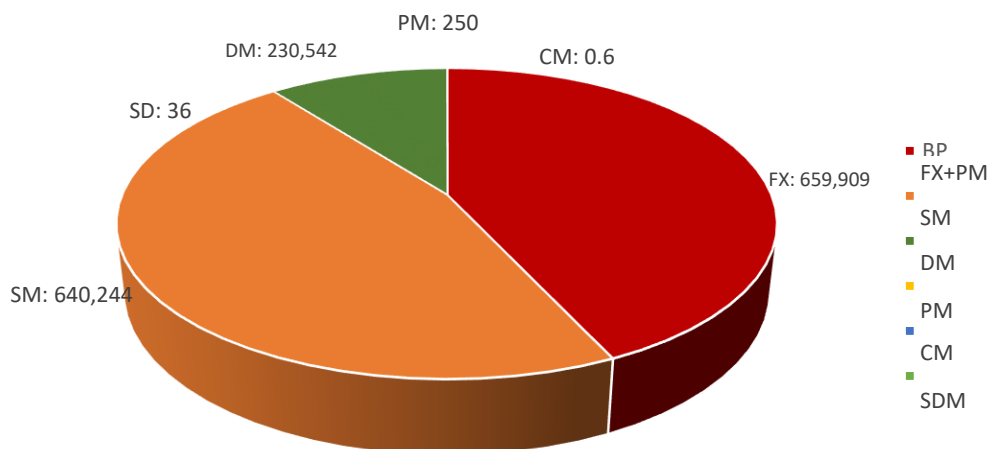
As of 31 December 2017:

- the total number of clearing members was 560 organizations;
- the volume of the obligations of the clearing members determined on the basis of the clearing results for 2017 exceeded RUB 1,615 trn; that is 1.05 times higher than the similar figure for 2016 (RUB 1,531 trn);
- the amount of the received fees was RUB 6,952 mn, that is 1.08 times higher than the similar figure for 2016 (RUB 6,435 mn).

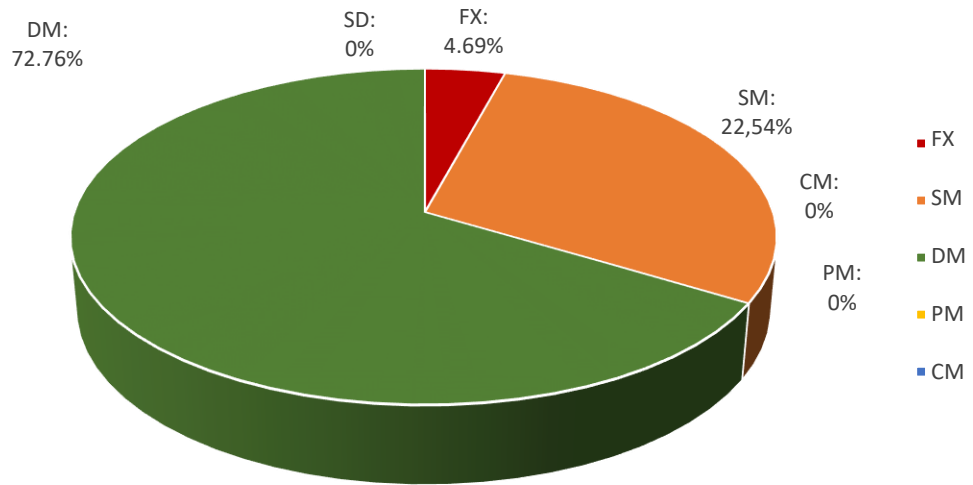
Number of clearing members in markets against total number of all clearing members



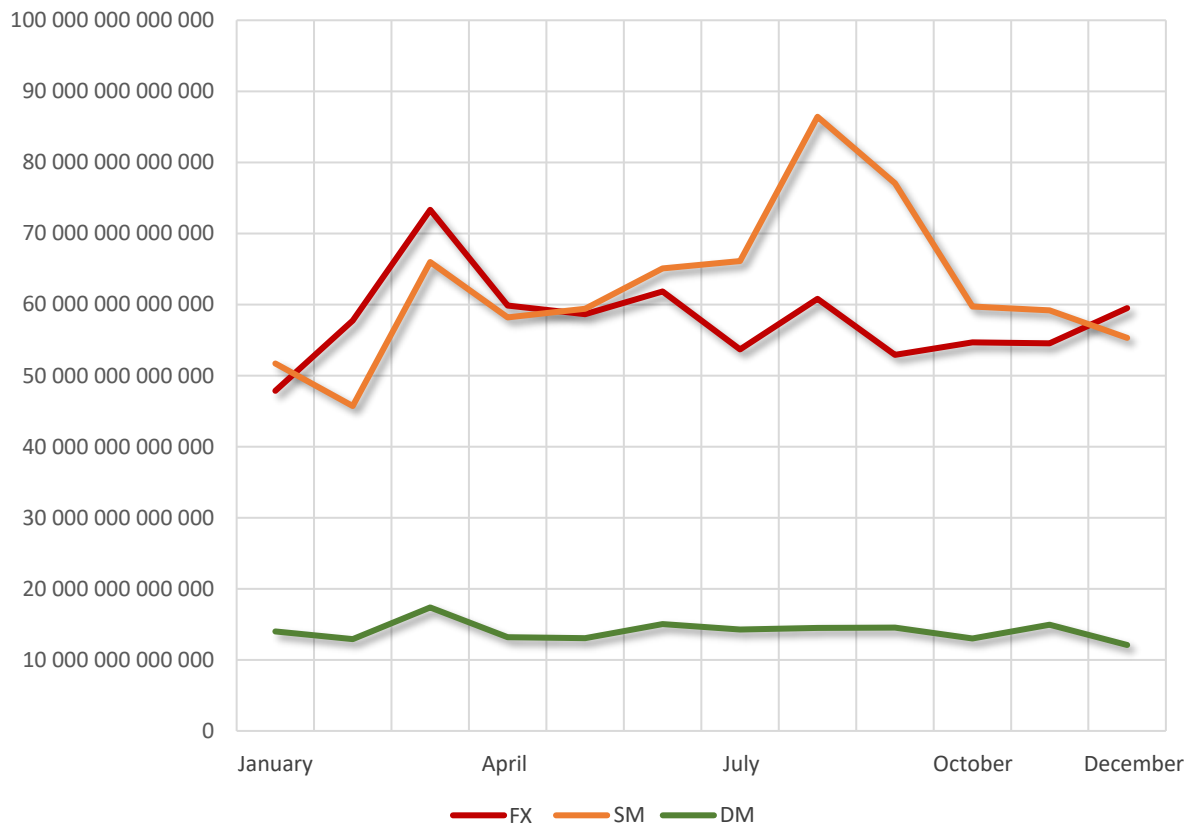
Volume of obligations based on clearing results, RUB bn



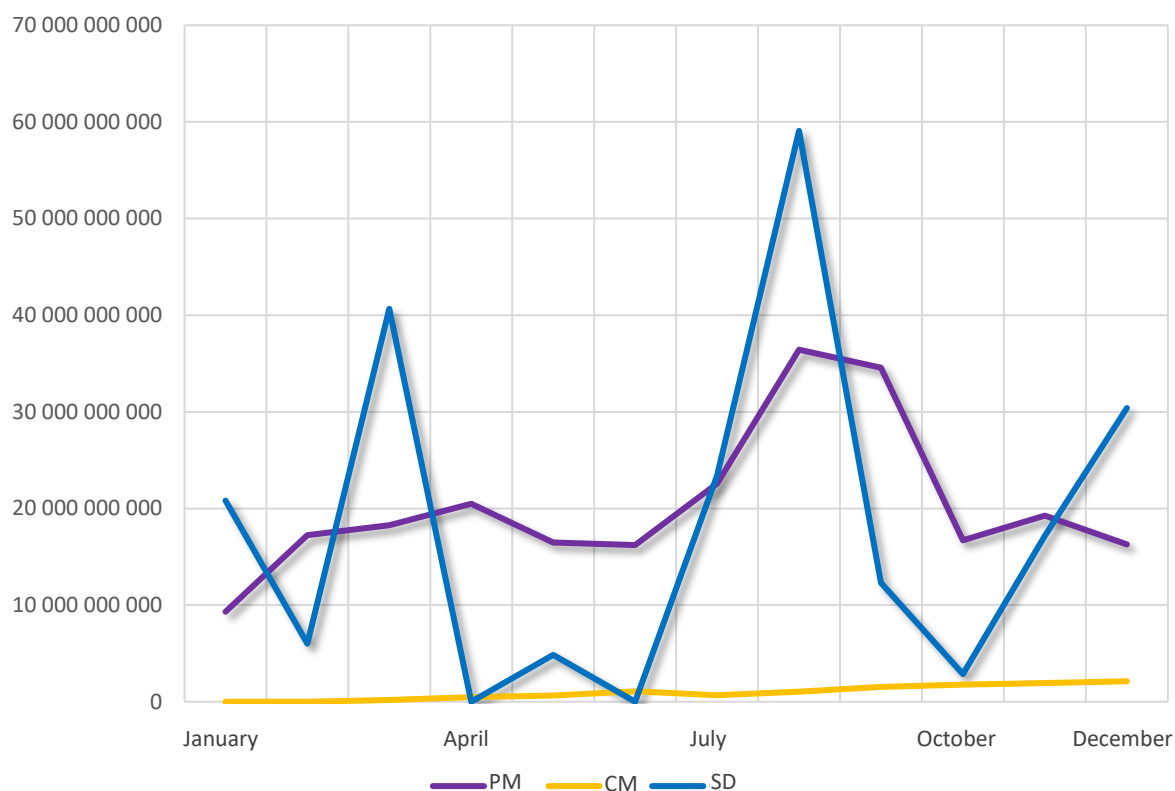
Volume of cleared trades



Dynamics of volumes of obligations cleared in 2017 in FX, securities and derivatives markets (RUB)



Dynamics of volumes of obligations cleared in 2017 in precious metals and SD markets (RUB)



4. Development Prospects

In 2018 CCP NCC will carry out its activities adhering to the same business coordinates that it has been to as long as the organization exists, and follow the development vectors set by the legislation of the Russian Federation and regulatory requirements, its own Development Strategy, new and existing projects, international standards and the best practices of central counterparty clearing organizations.

As a systemically important infrastructure organization, CCP NCC will be further playing the role of CCP as a guarantor of completion of settlements and a counterparty under trades to all market participants.

Based on its forecast of increasingly negative external background in 2018, continuance of the banking sector rehabilitation trend by the regulator, as well as the impact of other important domestic and international factors on its activity, CCP NCC will be paying utmost attention to monitoring the situation in the global and Russian financial markets, directly tracking the activities of the clearing members, partners and counterparties for the timely response to challenges, thus ensuring continuity of the critical services provided by the organization in the field of clearing and in performance of the central counterparty function.

CCP NCC's growth prospects in 2018 will be linked primarily to the implementation of its important business projects and performance of the top priority tasks, as follows:

A. Unified Collateral Pool Project. Stage II

In 2018, the clearing, risk management, on-exchange markets and IT subdivisions of CCP NCC will continue focusing their joint efforts on the objectives targeted by the second stage of the project, as follows:

- providing possibilities for transfers of securities profiles between the clearing system of the securities market and the clearing system of the derivatives market;
- implementing the cross-margining function;
 - in 2018, the subdivisions involved in the risk management process will continue the joint work on introducing the cross-margining for the main on-exchange markets, including introduction of inter asset spreads on related instruments. The changes being introduced will enable participants to manage their collateral in a more efficient manner via the common margining of the instruments, which prices depend on the same risk factors;
 - in addition, in 2018 the changes will be introduced in the risk management framework in the derivatives market for providing more facilities in risk netting between instruments within the same underlying asset, risk netting between positions held by different clients of the clearing member; new concentration risk management mechanisms (concentration limits in the a manner similar to the FX and securities markets) will be introduced. The framework for determining settlement prices of futures contracts will be enhanced to improve the accuracy of pricing.
- unifying the Time Specifications for cash funds return (the “early settlement” service) in the securities and FX markets;
- implementing the loss allocation mechanism by discounting the clearing house's obligations in order to limit the clearing house's liability for the clearing house's obligations to clearing members.

The Unified Collateral Pool Project. Stage II is scheduled to be launched in the first half of 2018.

B. Creating a unified clearing infrastructure required for building a unified clearing platform

The project for segregation of the statuses of market participants and clearing members was successfully implemented in the FX and precious metals markets and SD market and allowed to enroll three international clearing members (Bank of America, ICBC, OCIL) as well as five SMA clients, including non-residents. The implementation of this project in other markets will facilitate unification of available services for all on-exchange markets and attract more non-resident clearing members as well as entitles who are not licensed as professional securities market participants. Also, this will boost the creation of the unified clearing platform for all on-exchange markets of the Moscow Exchange Group.

The project provides for the implementation of the following objectives:

- unifying the structure of accounts of the 1st, 2nd, and 3rd level of clearing members and their clients in the securities, FX and derivatives markets + creating the account

- management services for clearing members (for automated download of limits and risk parameter settings, etc.);
- unifying the structure of clearing membership in the securities, FX and derivatives markets; and
 - unifying the timeframes for mark-to-market clearing sessions in the securities, FX and derivatives markets.

C. Links to Foreign Liquidity Providers Project

Together with the Moscow Exchange, CCP NCC develops a project to provide the clearing members with an OTC service to enter trades in the currency pair EUR/USD (with the possibility to extend the list of currency pairs in future) with world's leading banks. Thus, the implementation of this project will provide participants of the Russian financial market with an access to foreign liquidity at minimum risk and best prices. Domestic Russian banks will be able to access previously inaccessible for them liquidity sources with more profitable spreads, which in turn will provide additional driver for further growth of domestic liquidity in the Russia's interbank market.

In 2018 NCC proposes to launch a pilot OTC service allowing clearing members to enter spot sale and purchase trades in the currency pair EUR/USD. In the long run between 2019 and 2020, this opportunity will be extended to swaps, G10 currencies / USD Dollar pairs, as well as connection to the asset model from other markets (precious metals, foreign securities, bonds, indices).

D. Increased transparency of CCP NCC for clearing members and disclosure of quantitative data of its business as a central counterparty, in view of the requirements imposed by the Bank of Russia on CCPs and the world's best practices

Due to the change of CCP NCC status from the bank to CCP NCO, from 2018 the new requirements of the Bank of Russia to disclose detailed information of CCP's activity will apply to NCC similarly to the disclosure already applying to CCP NCC in accordance with the international CPMI-IOSCO standards. The requirements of the Bank of Russia are largely identical to the international standards, except for the extended range of disclosure information fields and the requirement to make disclosure in Russian. The quantitative disclosure would also include specific CCP statutory ratios and their components.

E. Proprietary operations in the financial markets

In 2018 CCP NCC's activities in the financial markets will be carried out with the aim of managing the liquidity with taking into account the clearing activities of the central counterparty and proprietary operations in the markets; performance of the procedures of default-management; management of the portfolio of assets for obtaining income according to the planned target of the shareholder.

The main changes in treasury transactions are expected to affect the liquidity management area in 2018. They will be partially related to the changes in product line of the Moscow Exchange, such as the beginning of trading in Turkish liras and Japanese yens as well as the introduction of a unified limit for clearing members. The adoption by the Russian banking sector of a prospective payment system, which changes the timeslots for payments and, therefore, the clearing settlement terms will render even stronger impact on the proprietary operations. The changed cut-off times of the central counterparty may also impact the timeframes of interbank transactions thus affecting the efficiency of cash placements and, ultimately, the interest income earned. Therefore, CCP NCC will have to change its asset management strategy to ensure the optimal correlation of the fund flows under its treasury and clearing operations.

As regards the securities portfolio structure, the key changes may be driven by significant decrease of the key rate for Russian Rubles and simultaneous increase of discount rate for US Dollars. Such changes may cause the market participants to alter their baselines, in particular, for carry trade transactions. As a result, the treasury transaction focus may be displaced from securities to money market.

5. Development results in major (priority) operational areas

5.1 Clearing in the FX market and precious metals market

The FX market of the Moscow Exchange is the Russia's oldest organized on-exchange market, where foreign currency has been traded since 1992, and since 2013 there has been developing trading and clearing of operations in precious metals. 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 the Moscow Exchange also serves as the basis for the calculation of the settlement price of futures contracts on foreign currency exchange rate.

Today the FX market and precious metals market of the 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 organized trading in main global currencies and the major volume of FX transactions. The convenience and unique nature of the on-exchange FX market are ensured 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 the organized trading of PJSC Moscow Exchange in the FX market and Precious metals market in the double counter-auction mode. Trades are executed 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 the 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 executed in this market are cleared and settled with the participation of CCP NCC acting as a central counterparty. CCP NCC performs CCP functions for all executed 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 list of currencies traded in the FX market comprises US dollars (USD), euro (EUR), British Pounds (GBP), Hong Kong Dollars (HKD), Chinese Yuan (CNY), Kazakh Tenge (KZT), Belarusian Ruble (BYR), Swiss Franc (CHF), and Turkish Lira (TRY), also swap trades with various maturities are executed. For currency pairs USD/RUB, EUR/RUB, CNY/RUB, members may execute "long swap" trades with the following maturities: 1W, 2W, 1M, 2M, 3M, 6M, and 9M (for USD/RUB and EUR/RUB only), 1Y and FIX (for USD/RUB and EUR/RUB only), and 1W, 1M, 6M (for GLD/RUB and SLV/RUB). USD/RUB and EUR/RUB are the main currency pairs. The trading time is from 10:00 a.m. to 11:50 p.m. Moscow time.

In the FX market and precious metals market, CCP NCC clears spot and swap trades, and since 2014 it has been also clearing derivatives (swaps and futures) executed with or without full 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. On the basis of on-order book orders only partially secured trades of trades with full prefunding can be executed.

Since 2013 CCP NCC has been clearing trades in precious metals for Russian Rubles.

In this segment of the on-exchange market, CCP NCC clears trades which can be settled in the following ways:

- at the expense of clearing members;
- at the expense of clearing members clients; or
- 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 execute trades, while clearing members become a party to such trades and make settlements under the obligations arising from the trade.

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

For managing the client risks there was implemented the possibility to register clients’ trade accounts of the 2nd and of the 3rd level that 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.

In 2017 20 corporations were granted a direct access to trades, including Gazprom, Gazpromneft, ALROSA, Rosneft, Transneft, NLMK, Ingosstrakh, etc. The facility for margining trades settled at the fixing price and orders for USD/RUB trades settled at the fixing price was also implemented.

The introduction of reliable and effective clearing service technologies as well as the qualitative expansion of the range of instruments that would be of interest for investors contributed to the increasing appeal of the FX market and precious metals market of the Moscow Exchange Group and influenced positively the result of CC NCC performance in the said market. In 2017, the clearing service fees received by NCC in the FX market amounted to RUB 1,583,746,000 and those in the precious metals market were RUB 1,055,000.

5.2. Clearing in the Securities and deposit markets

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

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 the trades executed in different trading modes,

either with or without performance of the central counterparty 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 the CJSC MICEX Stock Exchange, and since December 19, 2016 - PJSC Moscow Exchange. Clearing settlement in the securities market are performed by the National Settlement Depository (hereinafter referred to as the “NSD”).

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

- ***clearing of partially secured trades:***
 - for buy-sell trades with the central counterparty executed on the basis of on-order book orders with the settlement T+2 (shares, depositary receipts, investment units, mortgage participation certificates ISU, ETF) and with the settlement T+1 (OFZ), as well as for the trades in the above securities executed on the basis of off-order book orders with the settlement from T+0 to T+2;
 - for REPO trades with the central counterparty, including REPO trades in general collateral certificates, executed on the basis of off-order book order and on-order book orders; and
 - for deposit agreements;
- ***clearing of secured trades:***
 - for buy-sell trades with the central counterparty 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 executed on the basis of off-order book orders with T+0 execution;
- ***clearing of non-secured trades:***
 - for REPO trades and buy-sell trades without the central counterparty executed 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 trades).

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 or in securities, and also the collective clearing collateral (default fund) for the clearing of partially secured trades is used.

CCP NCC provides clearing as a central counterparty for the following trades executed with or without full prefunding:

- buy-sell trades in securities 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 central counterparty functions for the following trades:

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

In the securities market, trades may be executed on the basis of on-order book (in “blotter”) or off-order book orders. On the basis of on-order book orders executed only partially secured or secured trades can be executed.

Settlement 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 their clients; or
- using cash funds in trust management of clearing members.

The implementation of reliable and efficient clearing service techniques appealing for investors had a positive impact on CCP NCC business results in this market segment. In particular, the clearing fees received by NCC in the securities and deposit markets in 2017 were RUB 5,272,378,000 which is 1.14 times higher than in 2016 (RUB 4,629,909,000).

5.3. Clearing in the Derivatives market

Since 2012 CCP NCC has been providing clearing services in the derivatives market of the Moscow Exchange Group for a broad range of derivatives, such as futures with their underlying assets being indices, shares, currency pairs, interest rates, commodities, as well as options on such futures. The Moscow Exchange is a leading platform for trades in derivatives over the CIS and Eastern European countries and is ranked among TOP 8 world derivative trading exchanges¹.

Today the range of derivatives traded in the derivatives market includes 90 derivative contracts of which 57 are futures and 33 are futures options.

The underlying assets of financial derivatives traded in the derivatives market sections of the Moscow Exchange are indexes, currency pairs, shares of Russian and foreign issuers, interest rates, and commodities:

Securities section	Cash section	Commodities section
<p>Futures: RTS and MICEX indices, blue chip indices (Russian* and foreign issuers) Russian market volatility index (RVI)</p> <p>Futures options on: Shares of Russian issuer RTS and MICEX indices</p>	<p>Futures: Currency pairs USD/RUB, EUR/RUB, CNY/RUB, EUR/USD, AUD/USD, GBP/USD, USD/CHF, USD/JPY, USD/UAH, USD/CAD, USD/TRY Interest rates MosPrime, RUONIA Federal Loan Bonds *</p> <p>Futures options: Currency pairs USD/RUB, EUR/RUB, EUR/USD, GBP/USD, USD/JPY</p>	<p>Futures: Oil: BRENT Precious metals: gold, silver, platinum, palladium, copper Raw sugar</p> <p>Futures options: Precious metals: gold, silver, platinum Oil: BRENT</p>

Note: The contracts marked with "" are deliverable, while all other contracts are settlement ones.*

Trading in the derivatives market is conducted on anonymous or address (negotiable) basis.

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

In the derivatives market, CCP NCC clears trades entered:

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

¹ Source: Futures Industry Association (FIA) Annual Report 2017 published on 24.01.2018 at fia.org

The functions of settlement depository and settlement organization are performed by NSD, which is responsible for the following:

- recording clearing collateral in cash funds under the CCP NCC's clearing accounts maintained with NSD;
- recording clearing collateral in a form of securities under DEPO trading accounts of clearing members with NSD.

The range of acceptable collateral assets 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 CCP NCC-approved Methodology for selecting currency and securities acceptable as collateral.

In 2017 CCP NCC took measures to further develop its clearing services provided to clearing members in the derivatives markets, in particular:

- (1) CCP NCC continued enhancing the risk management framework in the derivatives market of the Moscow Exchange and related services. Among other things, it implemented the floating margin requirement calculation method for such instruments as ROUNIA rate futures contract and launched the service advising on the expected amount of collateral based on modification of risk parameters.
- (2) Within the scope of the strategic project “Unified Collateral Pool”, CCP NCC has implemented the facility to receive and transfer Russian ruble profiles from the derivatives market to FX and securities markets.
- (3) CCP NCC launched the project and provided a legal opportunity to separate the statuses of market participants and clearing members in the derivatives market. The differentiation of market participants from clearing members of the derivatives market will make the derivatives market directly accessible by clearing members for those entities, who are not interested, due to the specific features of their business model, to act as market participants or which may not legally act as market participants due to legal restrictions. As regards the resident clearing members, such separation of statuses will provide them with additional benefits through margining of several market participants they render services to and the settlement of net obligations.

For market participants, who perform the functions of clearing members at the same time, the existing procedures of rendering clearing services and trade organization services will remain unchanged.

The project is intended to unify the service in all on-exchange markets and provide additional opportunities to non-residents (including with use of SMA-access to the trading) and major local brokers, as well as enables small local brokers to cut their costs due to cancelation of contributions to the guarantee fund and non-application of clearing fees.

Stage I of this project is scheduled for the second quarter of 2018 and Stage II is scheduled for 2019.

In 2017 weekly options on the most liquid assets (futures for USD/RUB exchange rates and RTS index) became available for trading in the derivatives market of the Moscow Exchange. The new instruments are supplementary to the monthly and quarterly option range. Also, futures options on GBP/USD and USD/JPY exchange rates are now admitted to the trading, and the existing range of deliverable derivatives contracts on shares of Russian issuers was extended to include futures and futures options for shares in Aeroflot PJSC.

The clearing fees received by CCP NCC in the derivatives market in 2017 amounted to RUB 24,990,000.

5.4. Clearing in the Commodities market.

Performing functions of a commodity delivery operator

Agricultural products (grain and sugar) are traded through the trading-clearing platform UROZHAY which allows to adapt the trade functions and specifications to the industry's accepted standards of trading and logistics and to promptly launch trading in a broad range of underlying assets. This technology provides direct access to trading not only to brokers but also to partners and end customers.

Trading in grain was launched in December 2015. Initially on-exchange trading in wheat derivatives contracts was held. In 2016, corn and barley contracts were added.

In March 2017 trading in sugar was launched enabling both consumers and manufacturers to hedge their price risks and schedule their activities more efficiently, and contributing to increased transparency of pricing at the Russian sugar market. The commodity market also implemented the full functionality: 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.

The grain swap sales in 2017 reached RUB 5.2 bn, grain derivatives sales reached 8,500 tonnes (RUB 55 mn), and sugar futures reached 8,500 tonnes (RUB 227 mn).

As of the end of 2017 market participants comprised nine brokers, five agricultural groups and over 130 clients.

The Moscow Exchange Group partners with the Russia's largest agricultural groups, processors, grain traders, and exporters. By late 2017, delivery bases, i.e. warehouses accredited by CCP NCC, comprised 43 elevators (for wheat, corn, and barley) with over 3 mn tonnes total storage capacity, and nine sugar warehouses (in Central, Privolzhskiy and South Federal Districts).

In the fourth quarter of 2017, there was established an Agricultural Subcommittee of the Exchange Committee of the Federal Antimonopoly Service (FAS) to address development of the on-exchange commodity markets in agricultural sector.

Title to underlying goods for all traded instruments is transferred through commodity accounts of clearing members / bailors. The implementation of such mechanism was facilitated by accreditation of CCP NCC to perform the functions of commodity delivery operator (by resolution issued by the Bank of Russia on 28.10.2015 to accredit CCP NCC to perform the functions of commodity supply operator).

The clearing fees received by NCC in the commodity market in 2017 amounted to RUB 1,144,000.

At the time of such accreditation in October 2015, there was nothing similar in Russia or globally to the business of commodity delivery operator. Therefore, all CDO documentation was elaborated from scratch with reliance to the best practices regarding clearing, exchange and depository laws and with consideration of the specific features of OTC commodity turnover.

In 2017 CCP NCC continued to actively amend the CDO documentation based on the available experience of execution, control and recording of commodity supplies and the specifics of the SD market. During this process, CCP NCC:

- considered the experience of railway wheat shipments and allocation of the risks of ensuring consistency of the quality and quantity of the commodity ordered under the trade and commodity received at the destination station between the involved parties (elevator, survey agent, consignee, and freight forwarder);

- developed the functionality for short-term and long-term storage of sugar; thus allowing to adapt the exchange infrastructure to business processes of sugar companies (market participants / clearing members) more flexibly;
- developed the mechanism to establish/remove limits (for maximum limits, agreed limits) and so forth.

In 2017 in its status as CDO, CCP NCC effected more than 850 title transfers and 622 credits/withdrawals of goods to/ from commodity accounts of clearing members / bailors.

The real-time cooperation with elevators/ warehouses in execution, control and recording of commodity supplies would be unfeasible without exchanging electronic documents. CCP NCC takes active efforts to introduce the practice where electronic workflow is used by elevators/ warehouses in their day-to-day activity. More than 60% accredited elevators/ warehouses already use electronic workflow actively when liaising and exchanging documents with CCP NCC.

As of late December 2017, about 220,000 tonnes of the commodity were stored in the accounts of clearing members /bailors allowing to reach and exceed the breakeven point of this business (the net CSO income reached approx. RUB7 mn by the yearend).

5.5. Clearing in the Standardised OTC Derivatives market (SD)

Standardised OTC Derivatives market of the Moscow Exchange was established in 2013 in furtherance of G20 resolutions to strengthen the central counterparty's role in the financial markets and transfer SD trading to exchange venues. In 2017, in the context of the Russian banking sector consolidation and decreased key rates of the Bank of Russia, members started showing the growing demand for the interest and currency risk management instruments, which in turn drove the further growth of liquidity of the SD market.

The volume of sales in the SD market of at the Moscow Exchange showed a six-time growth in 2017 and reached RUB108 bn. The highest activity was recorded for trades in currency, interest swaps and currency flex-options. During 2017, CCP NCC continued developing the technologies in the SD market, in particular, the system capacity increased and the algorithm for accruing interest on collateral was changed. As a result, the members were able to reduce costs and improve their experience of exchange dealings.

While implementing the assigned functions, of the SD market representatives intensely cooperate with the Bank of Russia and market participants.

Cooperation with the Bank of Russia concerning the risk management on the OTC derivatives market included discussions of:

- the necessity of clearing with a central counterparty for OTC derivatives, including a draft statutory document developed by the Bank of Russia to govern the mandatory clearing with a central counterparty for OTC derivatives;
- advisory report of the Bank of Russia on mandatory margining of OTC derivatives.

The market employees take efforts to improve the quality of their client relations with participants.

These efforts are primarily focused on:

- adopting experience of interest rate management in private banks;
- hedging of treasury interest rate risks; and
- discussion with financial market participants of approaches to fulfillment of Russia's commitment as G20 member to gradually introduce the mandatory clearing of interest rate derivatives.

The clearing fees received by CCP NCC in the derivatives market in 2017 amounted to RUB 1,913,000 which is 3 times higher on the previous year (2016: RUB 632,000).

6. Proprietary operations in financial markets

In 2017 CCP NCC's transactions in the financial markets were still influenced by continuing reduction in the cash collateral volume of clearing members and the market anticipation of a key rate decrease by the Bank of Russia for Russian Rubles.

The continuing reduction in 2017 of collateral provided by clearing members in Russian Rubles and US Dollars (see Table 1 below) is likely to result from the optimization by clearing members of parameters of their collateral available for trading in the Moscow Exchange markets. This is particularly evidenced by the fact that the amount of Euro-denominated collateral of clearing members with negative rates in the money market remained almost unchanged, while the amount of Ruble and US Dollar denominated collateral with positive rates in the money market considerably decreased.

Table 1.

Clearing members' collateral – average annual	RUB mn	USD mn	EUR mn
2015	80,689	6,090	4,891
2016	74,258	4,139	5,128
2017	54,365	3,003	5,349
Change 2017/2016, mn	- 19,893	-1,136	+221
Change 2017/2016, %	-27%	-27%	+4%

Therefore, the factors driving the expectations of reduction in CCP NCC's income from transactions in the financial markets were already formed in 2016. In this context, the main efforts, when executing financial market transactions in 2017, were focused on the change in the asset structure in favor of more profitable financial instruments.

The percentage of securities in the Russian Ruble-denominated assets increased from 74% to 77% on an annual average basis as compared to the year 2016.

The foreign currencies' assets (see Table 2 below) also show the increased portion of securities: from 12.5% to 17.5%:

Table 2.

Eurobond portfolio (annual average)	USD in RUB equivalent, mn	EUR in RUB equivalent, mn
2015	19,056	896
2016	71,765	10,318
2017	69,685	24,300
Change 2017/2016, RUB mn	- 2,080	+ 13,982
Change 2017/2016, %	-3%	+ 136%

It is worth noting that, despite the almost one-third reduction in liabilities, there was only a slight change in the Ruble and USD denominated securities portfolios, while the duration of such portfolios increased. The result was the reduction in the low-income on-call assets or the assets of the Russian Ruble money market lacking strong potential in case of a key rate reduction by the Bank of Russia. At the same time, there was a significant growth in the Euro-denominated securities portfolio which, given the persistently high level of Euro denominated collateral of the clearing members, represents one of the least risk-bearing investments in terms of liquidity.

In 2017 the profitability growth of foreign currencies' assets was also driven by reverse REPO trades (Table 3 below). The growth of USD denominated REPO transactions was driven, inter alia, by increased market rates. At the same time, the Euro denominated REPO trades dropped almost to zero due to the lack of market demand for this instrument.

Table 3.

Reverse REPO portfolio (annual average)	USD in RUB equivalent, mn	EUR in RUB equivalent, mn
2015	14,895	10,940
2016	34,424	9,662
2017	42,988	501
Change 2017/2016, RUB mn	+ 8,564	- 9,161
Change 2017/2016, %	+ 25%	- 95%

In 2017 there were significant changes in the credit quality of assets. They were mostly driven by the amendments made to Bank of Russia Ordinance No. 2919-U, dated 3 December 2012 "On Assessing the Management Quality of a Credit Organization Performing Central Counterparty Functions", which amendments affect the rating limits for issuers and counterparties, with whom the central counterparty may execute proprietary operations in the financial markets. The key amendment is that the requirement that Russian counterparties/ issues have to have ratings from international rating agencies was changed to the requirement to have such ratings from Russian rating agencies. In fact, in 2017 Russian companies just started to obtain ratings from Russian rating agencies and therefore faced difficulties in handling their securities portfolio as regards subscription to new issues. This fact will have an adverse impact during the next year as well, until all high-grade Russian issuers become rated by Russian rating agencies.

The amount of precious metals transactions accompanying the clearing activities increased in 2017. Volume of Location SWAPs with gold grew by 157% (to 514 kg), and the volume of acceptances / deliveries of physical gold increased by 195% (and reached 1,725 kg). Furthermore, to improve the utilization of precious metals balances of impersonal metal accounts, CCP NCC launched the placing of gold deposits. The total amount of the deposits placed in 2017 was 11,259 kg of gold.

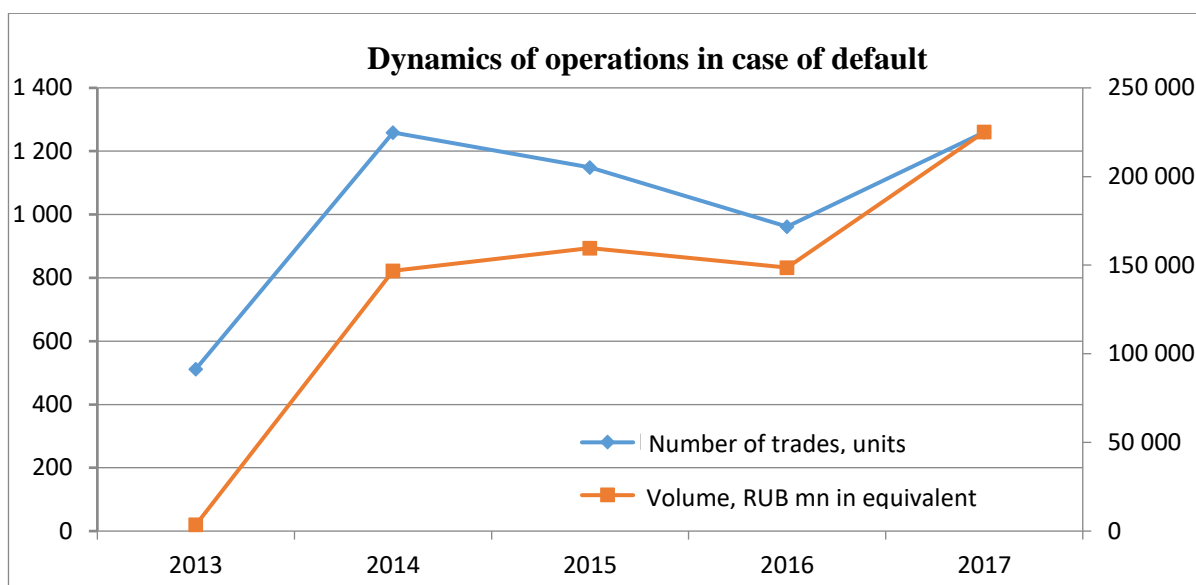
In 2017 as a part of extension of the default management function to all markets of the Moscow Exchange, the default-management was tested in the commodity market. The number and amount of financial market transactions covered by the default-management procedures increased in comparison with 2016 (see Table 4 and Figure 1 below), which largely reflects the growth of those on-exchange markets where CCP NCC performs the central counterparty functions. At the same time, the position closing operations partially result from continuing reduction in the number of clearing members due to the revocation of licenses from several credit organizations by the Bank of Russia. It should be noted that the number and amount of default-management transaction are insignificant both in relation to the trading volume in on-exchange markets and to CCP NCC's assets and render no material impact on the central counterparty's reliability.

Table 4.

Transactions	Number of transactions	Change versus 2016, %	Volume, RUB mn	Change versus 2016, %
FX market				
<i>Carry-over of positions (SWAP)</i>				
USD	256	25%	84 645	13%
EUR	71	-39%	12 100	42%
CNY	16	-24%	273	-82%

GBP	10		158	
HKD	2		7	
BYR	2		2	
CHF	13		123	
GLD	1		69	
EURUSD_TOD	73		26 454	
<i>Regulation of margin requirements</i>				
RUB	14	-59%	2 409	164%
<i>Closing of positions</i>				
USD	17	89%	5 888	640%
EUR	12	100%	2 281	72%
CHF	1		0	
GBP	1		0	
CNY	5		0	
Securities market				
<i>Carry-over of positions (REPO +SWAP+S/P)</i>				
RUB	757	41%	90 103	142%
<i>Closing of positions (Sale/Purchase +LN+T+2)</i>				
RUB	6	-54%	559	-97%
Derivatives market				
<i>Closing of positions (margin requirement)</i>				
RUB	1	-50%	22	-75%
*introduction of ICO in the derivatives market	2	0%	11	0%
TOTAL				
USD	273	28%	90 533	20%
EUR	156	27%	40 835	315%
CNY	21	0%	273	-82%
GBP	11	0%	158	19%
HKD	2	-33%	7	-100%
BYR	2	0%	2	0%
CHF	14	600%	123	
GLD	1	-50%	69	
RUB	780	33%	93 104	64%

Figure 1



Strong focus is still placed on the CCP NCC liquidity and measures to secure unconditional performance of central counterparty's obligations. To improve reliability of clearing-based settlements, the amount of potential refinancing was increased in 2017. The credit limit under the Master Loan Agreement with the Bank of Russia for the lending against pledge (blocking) of securities was raised up to RUB50 bn. Also, to provide access to additional refinancing sources, the Master Agreement for Securities Purchase (Sale) under REPO Agreements was entered with the Federal Treasury.

CCP NCC expands its correspondent network to ensure efficient clearing settlements. For example, in 2017 it opened a correspondent account in TRY with DENIZBANK A.S. (Turkey).

In 2017 CCP NCC's asset portfolio was formed taking account of the continuing key rate reduction trend adopted by the Bank of Russia. By late 2018, the Bank of Russia is expected to largely finalize the key rate reduction cycle and shift to the moderate monetary policy. This will require a different asset formation strategy in terms of risk and profitability given the low key rates. Furthermore, this strategy may be influenced by actions of the European Central Bank and the US FRS changing the key rates. Other drivers potentially influencing CCP NCC's strategy are changes in the amount and profile of liabilities connected both with launches of new exchange traded products in the Moscow Exchange and the improvement of Clearing Rules, for instance, the introduction of an all-market unified limit.

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

7.1 Risk Management Compliance with Regulatory Requirements and International Standards

Functioning as a clearing organization, central counterparty 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 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 to CCP NCC as a central counterparty and clearing organization;
- risks inherent to CCP NCC as a credit institution and commodity delivery operator.

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

- central counterparty risk;
- credit risk (including counterparty's concentration risk);
- market risk;
- interest rate risk of the banking book;
- liquidity risk;
- operational risk;
- strategic risk;
- legal risk;
- regulatory risk;
- reputational risk;
- custody risk;
- commercial risk; and
- 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.

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 Ordinance No. 2919-U dated 02 December 2012 "On Assessing the Management Quality of a Credit Organization Performing Central Counterparty Functions" (hereinafter "Ordinance 2919-U"), as well as Federal Law No. 403-FZ of 29.12.2015 "On Amendments to Certain Legislative Acts of the Russian Federation" to the extent they concern the requirements imposed on the risk management frameworks of non-banking credit organizations functioning as central counterparties.

In 2017 CCP NCC made several amendments to its internal documents regulating the risk management of CCP. These amendments were primarily necessitated by the change of CCP NCC status from a bank to a non-banking credit organization – central counterparty and a scheduled revision of the documents. In particular, the following documents were so amended:

- The Regulation on Risk Management System Arrangement, which structure and substance were updated pursuant to the requirements imposed by the Bank of Russia on NCC's risk management framework;
- The Stress Testing Guidelines and the Back Testing Methodology, which were amended to incorporate an updated stress testing and back testing methods so that to make CCP NCC's activities consistent with the requirements imposed by the Bank of Russia on a credit organization functioning as a central counterparty. The application of updated methods entails back-testing of the collateral adequacy and stress-testing of the risks of NCC functioning as CCP on a daily basis;
- The Recovery and Resolution Plan, which was updated in accordance with the changed status of CCP NCC and based on the new guidelines of the Bank of Russia with regard to Recovery and Resolution plans for credit institutions.

- The Risk and Capital Management Strategy, which was revised to include updated results of the most significant risk identification exercise, targeted structure of risks and capital, and provide an updated set of risk appetite benchmarks for 2018;
- the Bank's risk appetite benchmarks for 2018, which set the thresholds for qualitative and quantitative indicators of the level of significant risks to be applied in the year to come and subsequently monitored on a quarterly basis;
- The Bank's Economic Capital Evaluation Guidelines describing the approaches NCC uses to assess the capital requirements to cover its most significant risks both at individual and aggregated levels. The revised Economic Capital Evaluation Guidelines contains an updated capital adequacy calculation method for market risk and description the procedure for calculation of the capital buffer to cover possible losses under stress conditions for credit, market and operational risks.

The improvement of methodology base of the processes associated with risk and capital management remains among the most important elements of CCP NCC's activities.

7.2 Managing Risk of a Clearing Organization and a Central Counterparty

In 2017 development of CCP NCC's risk management framework was primarily focused on ensuring its financial stability and reliability as a clearing organization and central counterparty and was carried out in the following main directions:

- ensuring adequacy of financial resources for settlements both in normal and extreme market conditions;
- setting up arrangements protecting against potential losses in case of a clearing member's default;
- improving the risk assessment methodology required for CCP NCC to offer new clearing products and expand the range of cleared instruments;
- implementing the measures to maintain compliance of CCP NCC's current activities with the requirements imposed by the Bank of Russia on central counterparties whose management quality is confirmed every second year; and
- providing information transparency to enable clearing members to assess risks adequately and supervisory authorities to supervise their activities efficiently.

Margining system for clearing members' trades

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	Rubles	Foreign currencies	Precious metals	Bonds	Shares	Commodities
FX market	+	+	+	-	-	-
Securities market	+	+	-	+	+	-
Derivatives market	+	+	-	-	+	-

SD market	+	+	-	-	-	-
Commodity market	+	-	-	-	-	+

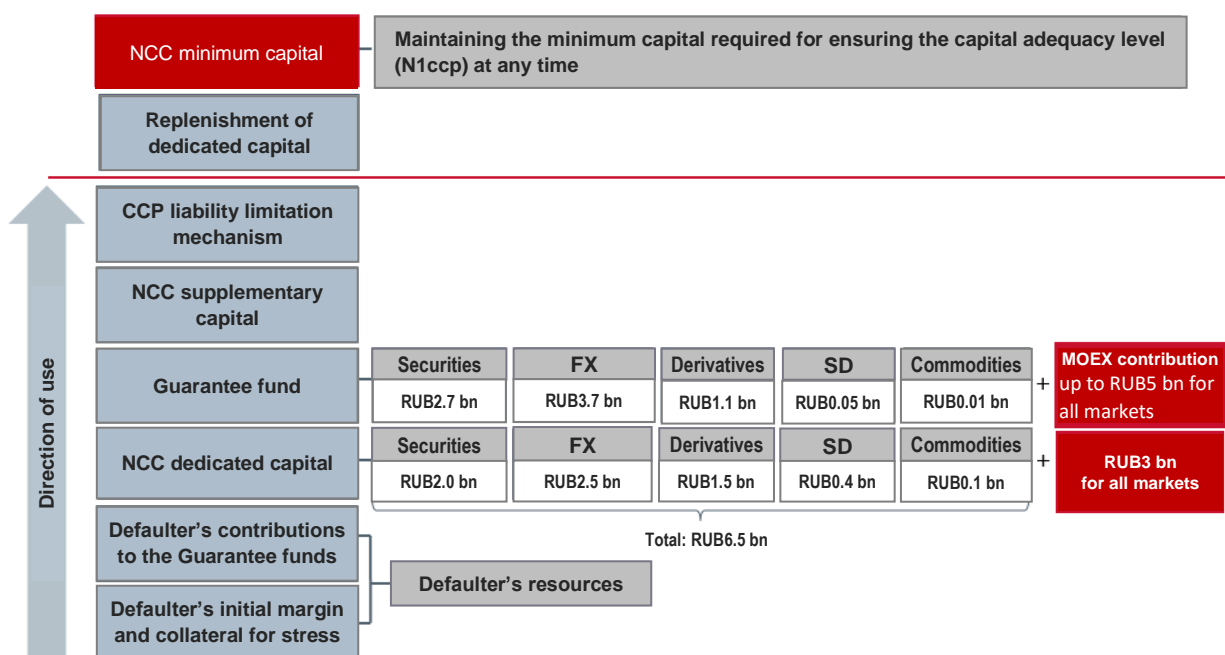
The launch of the Unified Collateral Pool project, the first stage of which was implemented in 2017 and the remaining stages are to be implemented in 2018, enables the participants to provide assets as collateral by posting them to their unique settlement accounts of the unified pool for the FX, securities and derivatives markets. This innovation means that participants, who have joined the unified pool, will be able to place their collateral on a single account for simultaneous use in three markets with the unified requirements for assets accepted as collateral.

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 CCP NCC financial stability in connection of its performance of the functions of central counterparty. CCP NCC consolidated the structure of CCP safeguard levels using the following measures:

- changing the central counterparty’s recovery tools as regards the introduction of the procedure for haircutting central counterparty’s liabilities;
- increasing the size of clearing members’ contribution to guarantee funds to RUB 10 mn in the FX market and precious metals market, securities market and derivatives market.

The Figure below reflects the safeguard structure as of 01.01.2018:



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 by default of 2 largest clearing members, which exceeds the requirements of the international standards.

To provide additional protection for non-defaulting clearing members, their contributions to the Guarantee 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 guarantee fund may be used to cover losses upon default of a clearing member. The size of the guarantee funds as of 1 January 2018 is shown in the table below:

Size of Guarantee Funds in the markets of the Moscow Exchange as of 01 January 2018

Market	Size of guarantee fund, RUB mn	Size of contribution of clearing member, RUB mn
FX market	3,690	10
Securities market	2,679	10
Derivatives market	1,110	10
SD market	45	1
Commodity market	14	1

Composition of guarantee funds as of 01.01.2018, RUB mn

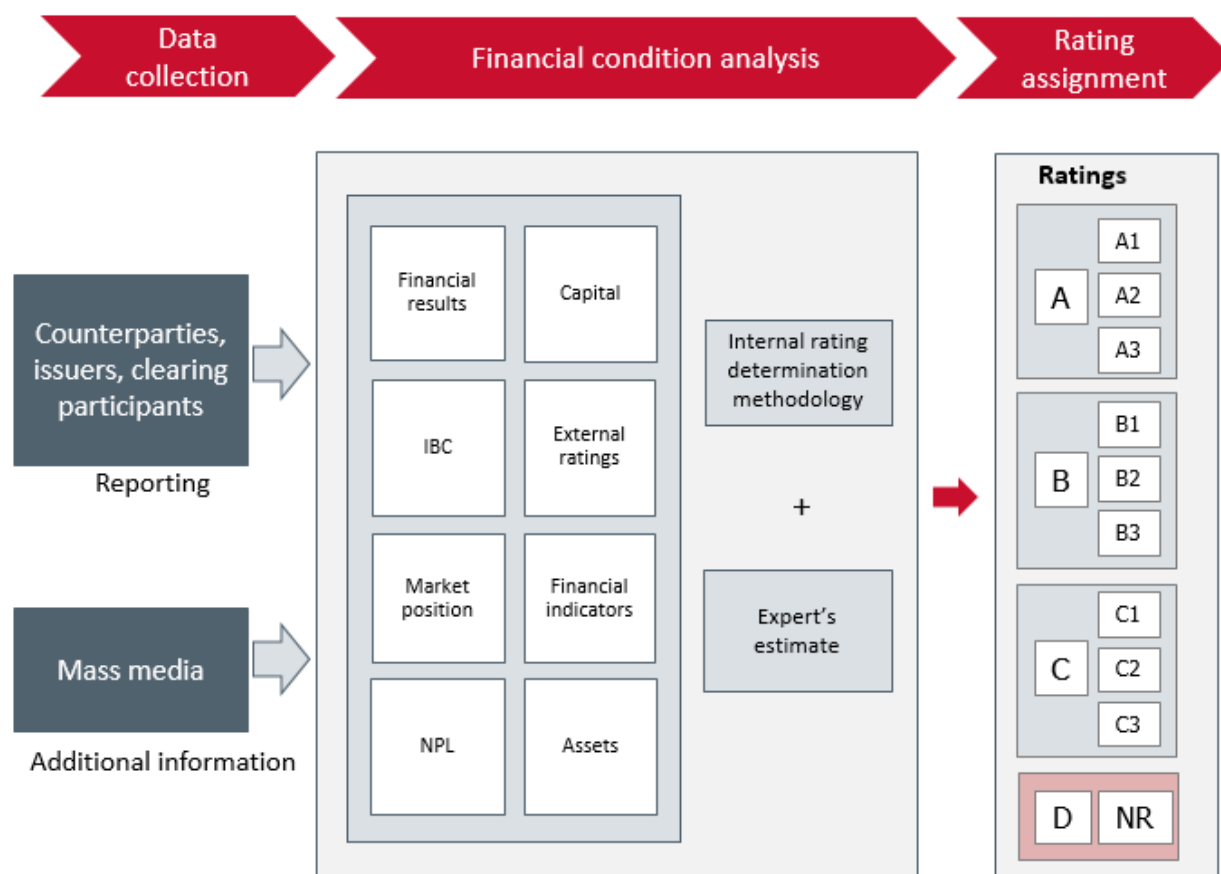
FSF	RUB	USD	EUR	FLB
Resources of guarantee funds of (FXM, SM, DM, CM)s	4,323.8	804	1,035.9	2,209.9
Guarantee fund of SD market	45			

Financial monitoring of clearing members

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. In 2017, to evaluate the financial position of new categories of counterparties and improve certain indicators used in calculation of such internal ratings, the revised Counterparty Internal Rating Guidelines was approved, to which amendments were made in connection with:

- transition to the chart of accounts;
- changed procedures of financial reporting for insurance companies, including the grouping of accounts by items of the balance sheet and income statement. 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 appraisal (with 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 01.01.2018 CCP NCC’s internal rating system covered 975 organizations. The breakdown by types of NCC rated clearing members and counterparties as of 01.01.2018 is shown in the table below:

Breakdown by types of participants as of 01 January 2018, %	
Credit organization, NCOs, state-owned corporations, international organizations	40%
Issuers, corporations	32%
Financial companies	14%
Nonresident credit organizations	4%
Commodity market’s warehouses/ traders	5%
Other counterparties	5%

7.3 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.

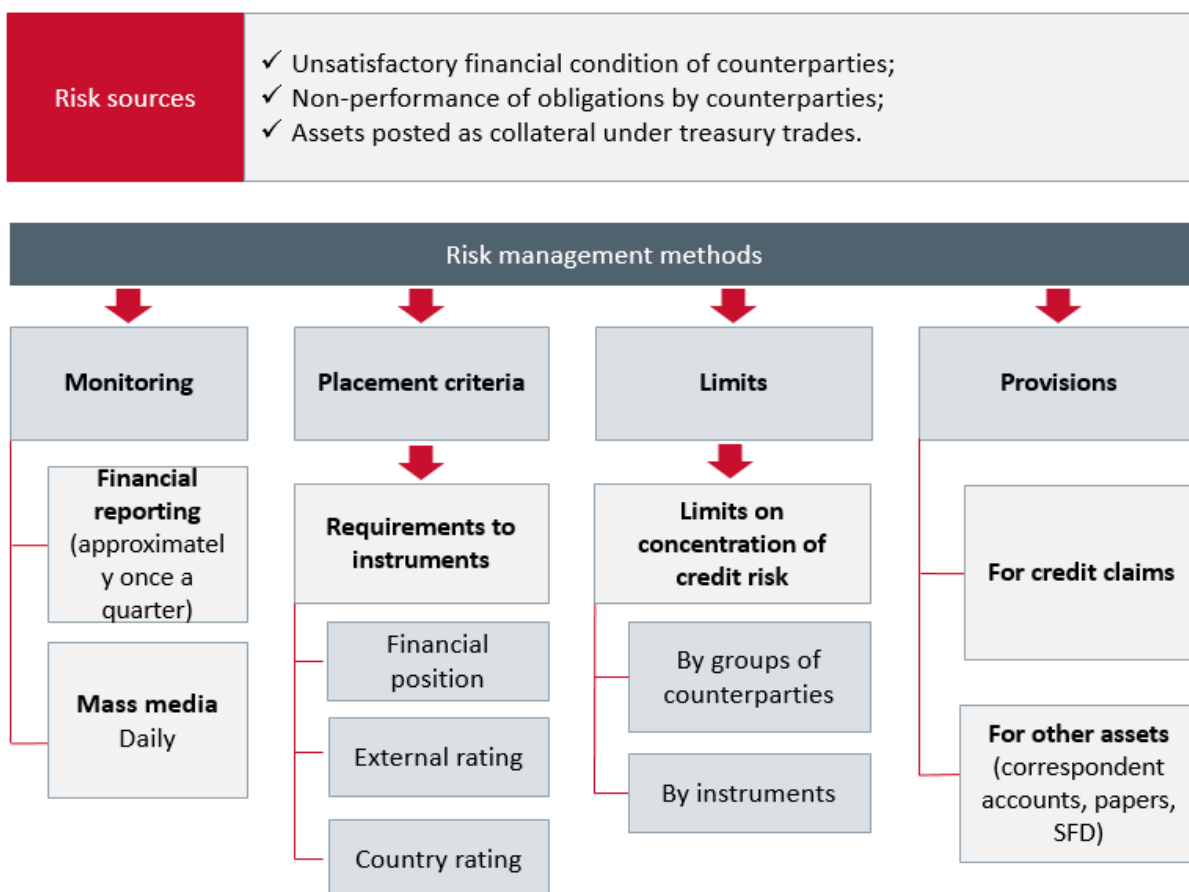
The key elements of managing risks arising in course of banking operations include:

- 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 regards to CCP NCC as a credit organization arises as a result of NCC's investment operations.

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



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:

Financial instruments used	Credit rating requirements for counterparty				
	RF residents		RF nonresidents		
	IBCs /deposits, conversion transactions (including SWAP trades)	At least A-(RU)	At least ruA-	At least BBB-	At least Baa3
Corporate and subfederal bonds	At least A-(RU)	At least ruA-	At least BB+	At least Ba1	
Government bonds	No restrictions apply		At least AA-	At least Aa3	
Repo and reverse repo and other instruments	At least A-(RU)	At least ruA-	At least BB+	At least Ba1	
	ACRA	RAEX	S&P	Fitch	Moody's
Placement of dedicated capital	At least AAA (RU)	At least ruAAA	At least BBB-	At least Baa3	
	ACRA	RAEX	S&P	Fitch	Moody's

Financial instruments used	Maturity Limitations	
	Use of own funds	Use of clearing liabilities
Max. portfolio duration	Up to 18 months	
Repo trades in bonds	Up to 180 days	Maximum terms for MB traded instruments
SWAP (currency)	Up to 365 days	
SWAP (cross-currency interest rate)	Not in use	
SWAP (precious metals)	Up to 365 days	
Bank of Russia deposits	Up to 31 days	No limits apply
IBL (banks rated BB- and BB)	Up to 90 days	
IBL (banks rated ≥ BB+)	Up to 180 days	
Government bonds (RF)	N No limits apply	
Government bonds (other countries)	Up to 3 years	
Corporate bonds	Up to 3 years	

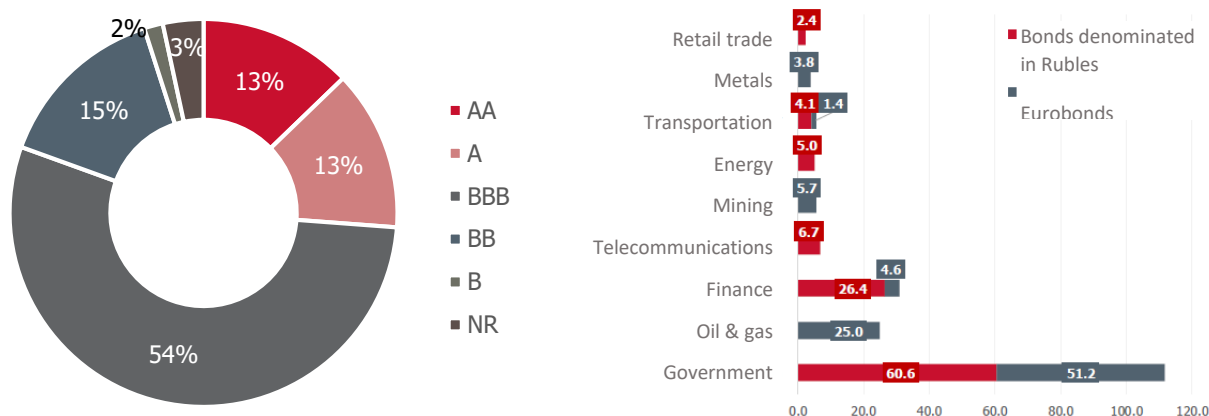
The cornerstone of control of credit risks arising in course of cash allocation is the limiting of treasury operations. The existing system of limits enables limiting of the amount of risks assumed by CCP NCC to the level corresponding to guaranteed performance of the regulatory requirements of the Bank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

As of 01.01.2018 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 in accordance with S&P international rating, as well as the distribution of CCP NCC's securities portfolio by sectors:

Assets breakdown by international ratings, %

Industry breakdown of securities portfolio, RUB billion



As of 01.01.2018 due to the high quality of assets, the capital adequacy ratio (N1ccp requirement) was 160.2% (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 for calculation initial margin 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.

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 01.01.2018, RUB thousand		
	01.01.2018	01.01.2017
Interest rate risk	9,550,416	9,065,559
General interest rate risk	2,310,175	1,744,474
Specific interest rate risk	7,240,241	7,321,085
Equity price risk	0	0
Currency risk	0	0
Interest rate risk, % of capital	20.81%	19.62%

As of 01.01.2018 the interest rate risk amounted to 20.81% of capital (equity) of CCP NCC (19.62% as of 01.01.2017).

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.

NCC is not exposed to equity price 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 1% of NCC capital both as of 01.01.2018 and 01.01.2017, accordingly there were no sensitivity to FX risk. The market risk was considered by NCC during 2017 as not involving any potential losses that would impair its financial sustainability.

Managing interest rate risk in the banking book

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 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 GAP-analysis and duration methods. Throughout the year 2017, the interest rate risk in the banking book remained within the admissible values approved by CCP NCC's Management Board.

Liquidity risk

The conservative asset management policy contributed to maintenance of the liquidity level sufficient to perform payment obligations of CCP NCC as a central counterparty. The liquidity management is aimed at ensuring 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.

During 2017 CCP NCC's liquidity ratios significantly exceeded regulatory ratios for credit institutions. However, since CCP NCC was assigned a new status, the regulatory ratios for credit institutions are not applicable to CCP NCC anymore and has been substituted by the regulatory ratios for non-banking credit organization functioning as a central counterparty:

Meeting liquidity ratios as of 01.11.2017, %			
Liquidity ratios	Limits established by the Bank of Russia	01.11.2017	01.01.2017
Quick liquidity ratio (N2)	Above 15%	83.92	85.12
Current liquidity ratio (N3)	Above 50%	103.54	102.76
Long-term liquidity ratio (H4)	Below 120%	0.58	6.75

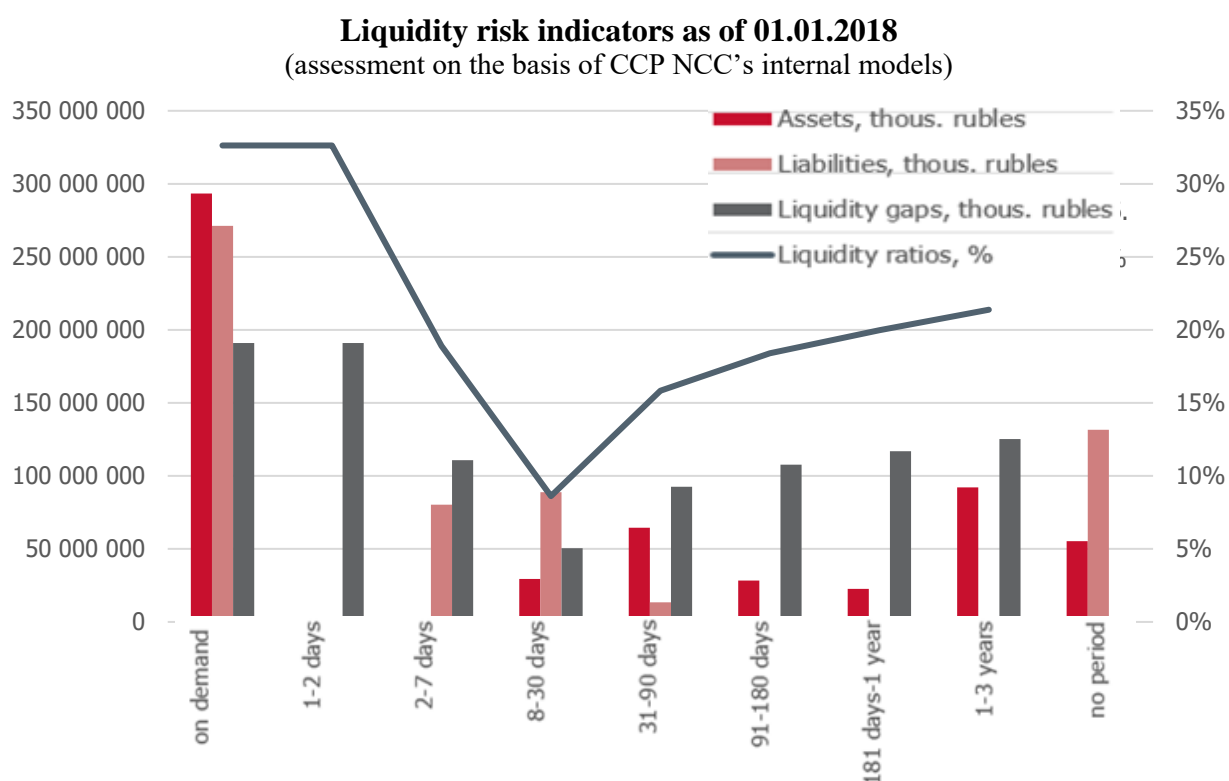
Since CCP NCC was assigned a new status, one of the regulatory ratios (N4ccp) shows the liquidity level. Its actual value for CCP NCC exceeds the minimum threshold several thousand times.

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.

CCP 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 2017 within all periods as shown in the Diagrams below:



Operational risk management

CCP NCC's operational risk management system is a part of its general risk management system; its functioning is aimed to ensure that NCC is capable to exist as 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 organization in NCC takes into account the recommendations of the Bank of Russia, the Basel Committee on Banking Supervision, as well as CPMI-IOSCO.

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 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; and
- periodic (monthly) reporting by CCP NCC as a qualified CCP to the regulator (Bank of Russia) on the list of registered incidents and identified operational risks.

The methodological basis for the efficient functioning of its operational risk management

system is provided by CCP NCC's internal documents defining:

- monitoring operational risk using the system of operational risk indicators;
- identifying operational risks of new products and processes as they are developed;
- collecting and reviewing data on operational risk events occurred in other organizations similar to CCP NCC in terms of their activity profile with the aim of their influencing on CCP NCC's activity;
- developing measures to handle operational risk and control performance of measures to mitigate operational risks;
- testing CCP NCC's resistance to failures of operating and information systems at least once a year;
- upgrading employees' skills for operational risk management;
- system of incentives for employees encouraging them for operational risks identification;
- access rights policy in data entering and processing intended to reduce risk of unauthorized or erroneous actions of employees of the relevant subdivisions of CCP NCC; and
- policy of separation of infomedia at all stages of the life cycle of information systems.

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.

CCP NCC performs regular analysis of its key processes, which results in the implementation of new technologies lowering 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 placed 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 Methodological Recommendations No. 17-MR dated 20.05.2016 "Methodological

recommendations on development of plans for recovery of the financial stability by infrastructure organizations of the financial market”.

In implementation of its business continuity processes, 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 of impact on CCP NCC’s business;
- analysis of business effect – this is an analysis of all CCP NCC’s processes for possible 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 the short, medium and long runs;
- business continuity and emergency action 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;
- business processes 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 used 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 and submits them to CCP NCC’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 Moscow Exchange Group for the Years 2015-2020 and approved by CCP NCC’s Supervisory Board. Strategic risk is 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 CCP NCC’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 delivery operator.

In the process of strategic risk management, CCP NCC adheres to the following principles:

- consistency of this strategy with the nature, capabilities and scope of CCP NCC's activities;
- making prompt changes in CCP NCC's strategic objectives in response to changing internal or external factors;
- measurability of relevant strategic risk parameters;
- regular monitoring of the size of the strategic risk parameters;
- assessment of risks and preparation of information to make proper management decisions; and
- available independent information approaches to all significant risks.

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. On the basis of the established current and planned (target) indicators of risk appetite, CCP NCC takes part in a strategic objectives development.

Legal risk management

CCP NCC's legal risk management system is based on the operational specifics of a non-banking credit organization combining the functions of a central counterparty and a clearing organization in the financial markets of the Moscow Exchange Group 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, CCP NCC has built a comprehensive legal risk management system for all types of CCP NCC's activity.

CCP NCC manages its legal risk in accordance with the Regulations “On Organization of Legal Risk Management System in the Bank National Clearing Center (Joint-stock Company)” approved by resolution of NCC Bank’s Supervisory Board on 24.12.2015 (Minutes No.8), which takes into account the requirements of the Bank of Russia as to the legal risk management set forth in the Bank of Russia Regulation No. 463-P of dated 12.03.2015 “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”, Ordinance No. 3624-U of 15.04.2015 “On the Requirements to the Risk and Capital Management System of Credit Institution and Banking Group”, Ordinance 2919-U”, 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, structural units and employees of CCP NCC. The decision making powers in the process of legal risk management and the control over the legal risk management efficiency comprises several levels: the first level is CCP NCC’s Supervisory Board and the Risk Committee of the Supervisory Board; the second level embraces CCP NCC’s Management Board, CEO, and the Internal Audit Committee; the third level is represented by the Legal Affairs Officer, Legal Department; Internal Control Department; Risk Analysis and Control Department; and Operational and Strategic Risk Management Officer; and the fourth level comprises other subdivisions.

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 the CEO and his/her activity is independent from the Legal Department and subdivisions exercising transactions (trades) associated with legal risk taking.

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 the 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 risks, CCP NCC has developed the standard forms of agreements and other internal documents and establish the procedures for approval by the 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 the Bank 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 2017 the indices of the legal risk assessment level were remaining within the limits set by the resolution of CCP NCC Management Board. In 2017, the increased attention was paid to analysis of claims of clearing members and counterparties as well as the measures to prevent any situations capable of giving rise to legal actions against CCP NCC. Measures for risk mitigation

were promptly taken in relation to each legal risk event, including claims of clients and counterparties against NCC.

The number of legal risk events fixed in 2017 in connection with claims lodged by clients and counterparties against CCP NCC dropped to 5 from 9 in 2016. No payments by CCP NCC were adjudicated by judicial bodies in 2017.

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 the organization, as well as 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, central counterparty and commodity delivery operator lies in a possibility of incurring any expenses (losses) by CCP NCC 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.

The regulatory risk management is provided by the Internal Control Department, whose list of tasks includes performance of the following actions:

- mitigating any arising regulatory risk (collection of information, analysis of information for identifying its association with regulatory risk, preliminary processing of information, interaction with structural units for the purposes of obtaining clarifications, additional information, and recording of events);
- monitoring CCP NCC's compliance with the laws on clearing and clearing activities, on combating unlawful use of insider information and market manipulation;
- making timely and efficient decisions to remedy any identified defects and violations in CCP NCC's activities;
- preventing and managing the conflicts of interest taking account of the specifics of CCP NCC's activities;
- applying the best compliance practices, standards and norms of professional ethics; and
- rendering methodological support CCP NCC's employees in identifying the areas where regulatory risk may arise based on the tasks and functions imposed on the structural unit within its competency.

The regulatory risk events are reported to CCP NCC's management bodies in accordance with the Regulatory Risk Management Regulation.

Reputational risk management

In 2017 CCP NCC addressed the following key objectives while managing its reputational risks (RRs):

1. Monitoring the registered events/incidents along all lines of CCP NCC's activities for the purpose of identifying their association with RR events and assessing the identified events of this type of risk, keeping track on their influence on the RR level on the specially created scale to take, if necessary, measures for mitigating the possible damage to CCP NCC;
2. Commissioning of the automated system for reputational risk management enabling the real-time monitoring, assessment and analysis of events taking place along different lines of CCP NCC's activities and their association with RR events to trace the dynamics of the level of such risk type.

The analysis of the data characterizing the RR management results for the reporting period, the level of this risk types was equal to or below 335 points according to the scale applied, while the established level of risk appetite up to 500 points. The figures below reflect the quarterly dynamics of RR level peaks:

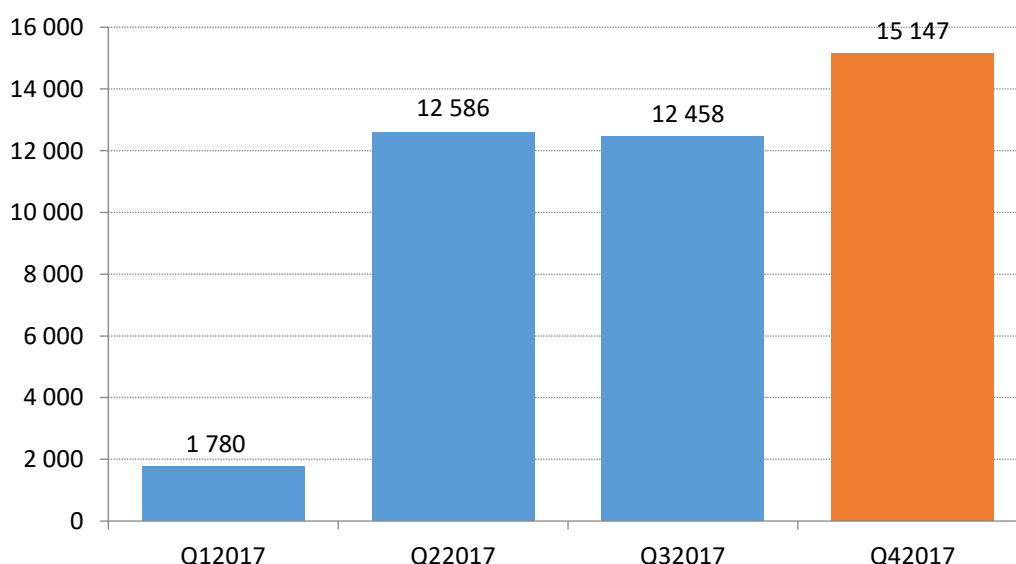
QI – 120	QIII – 100
QII – 165	QIV – 335

By their categorization the registered RR events were referred to 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, suspension of the service of withdrawal/crediting of funds. In the reporting period, they did not influence the curve determining the RR level, as they did not reach the scale and thresholds of sensitivity established by Rubricator.

At the same time, the events from the external factor group reached the sensitivity values and thresholds, which influenced the RR level according to Rubricator. These events were referred overwhelmingly to the factor of appearance of negative information in the external environment – negative publications, mainly on the Moscow Exchange, in isolated instances – on CCP NCC. But they were not critical in terms of maintaining the RR level within the set limits of acceptable level and did not require any prompt response for preventing possible damage.

In 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 for the monitored objects, 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 quarterly dynamics of change of this index is given in the diagram.

Quarter-by-quarter Media-Index dynamics in 2017



Note:

Orange color highlights the period when the maximum level of Media-Index was registered in QIV 2017.

During 2017 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, since QIV 2016 CCP NCC has introduced quarterly hearings of reports by the Legal Affairs Officer on management of risk this type at meetings of the CCP NCC's Management Board.

Custody risk management

For its payments and settlements CCP NCC uses services provided by counterparty banks, depositories and settlement institutions (including the NCO JSC 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 NCO JSC NSD. The quality 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 CCP NCC.

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

- provides accreditation of elevators in accordance with the Elevator Accreditation Rules when performing functions of a Commodity Delivery Operator;
- provides accreditation of warehouses in accordance with the Sugar Warehouse Accreditation Rules when performing functions of a Commodity Delivery Operator;
- controls the actual location of assets owned by the central counterparty, and/or transferred by clearing members to the central counterparty as a collateral for the performance of obligations;
- assesses a possibility for demanding timely the assets owned by the central counterparty 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) insuring the assets owned by the central counterparty 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.

Commercial risk management

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

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 common business risk or reputational risk; and
- provides analysis of income and expenses in case of introduction of new instruments and products.

Systemic risk management

Systemic risks 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 NCC properly and when due.

Also, since CCP NCC is systemically important as a financial market infrastructure facility, its systemic risk may also originate from relationships between CCP NCC 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, CCP NCC additionally:

- 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 central counterparty;
- 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.

7.4 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 and to provide clearing service to participants.

CCP NCC's stress tests the financial risks inherent to its activities, including credit, market and liquidity risks, as well as the risks arising from combination by it of the functions of the central counterparty and other activity types.

The risk of central counterparty determines the amount of losses caused by non-performance, untimely or incomplete performance of financial obligations to CCP NCC by the defaulting clearing members in the markets of the 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.

Since NCC has changed its status, the stress testing is performed 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 guarantee funds and CCP NCC dedicated capital to cover potential (uncovered by initial margin) losses caused by non-performance or undue performance of obligations by two major loss-generating clearing members and sensitivity analysis of sufficiency of the central counterparty's funds to the change in individual risk factors. Reverse stress testing means identification of the hypothetical stress scenarios (risk factor values), where the amount of the central counterparty's funds or liquid funds may take critical (maximum or minimum allowed) values established in the central counterparty'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 stress testing of the central counterparty'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 central counterparty's risks.

The results of stress testing performed in 2017 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.

8. Internal Control System

The change of CCP NCC's status in 2017 from bank to a non-banking credit organization functioning as a central counterparty was one of the year's most important events for the internal control system of CCP NCC. All participants of the internal control system were actively engaged in the preparation and introduction of amendments to CCP NCC's internal documentation, including development of the roadmap and the related liaisons with the regulator.

Independent business audits of CCP NCC are critical components of assessing the efficiency of compliance processes.

The independent audit of the Group Internal Control system of the Moscow Exchange Group conducted in 2017 confirmed its compliance with the local laws and regulations as well as international best practices. Based on the audit results, the corrective action plan was developed, its implementation started in 2017 and continued through 2018.

In 2017 the independent audit of the information security of the companies of the Moscow Exchange Group confirmed that the information security procedures used by them are at a high level and are in compliance with the requirements of the Bank of Russia.

During 2017 the development of compliance function continued and was focused on further improvement of the internal documents, measures to prevent conflicts of interest, implementation of anticorruption practices, measures combating legalization (laundering) of proceeds from crime and financing of terrorism, compliance with the FATCA requirements (the Foreign Accounts Tax Compliance Act), and the standard governing the cross-border exchange of financial information (AEOI/CRS).

Being a part of the internal control system 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, as well as information security risks, by implementing an automated risk management platform intended to provide automation of collection of operational risk events data, mitigation plans and measures, as well as generation of reports including the group-wide reports.

The 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

exerting mutual impact in the course of CCP NCC's activities as a clearing organization functioning as a central counterparty, credit organization and commodity supply operator (CSO).

The internal control is aiming at the following goals:

- ensuring 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;
- achieving reliability, completeness, objectivity and timeliness of preparation and submission of financial statements, accounts, statistical and other reports;
- providing for 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;
- ensuring the compliance with the Russian Federation legislation, CCP NCC's Articles of Association and other CCP NCC's constituent documents;
- preventing the involvement of CCP NCC and its employees in any illegal activity including the legalization (laundering) of proceeds from crime and financing of terrorism, in making suspicious transactions;
- reducing the 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 incompliance with the legislation of the Russian Federation or CCP NCC's internal documents, as well as timely 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 the 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.

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

- control procedures implemented at all levels of management;
- periodic inspections of compliance of all activity areas with the established policies and procedures;
- integration of the control procedures in CCP NCC's daily operations;
- control procedures built into the daily transactions and processes;
- ensuring separation of functions and prevention of conflicts of interest in staff functions;
- ensuring compliance of transactions with the legislation of the Russian Federation and regulations of the Bank of Russia;
- ensuring timely informing the relevant employees of CCP NCC;
- maintaining the necessary level of security of information systems;
- daily monitoring of high risk transactions;
- internal and independent audits of the internal control system;
- performing regular control of efficiency of the measures taken by CCP NCC departments and management bodies based on the examinations that ensure decrease of the level of the identified risks; and

- timely informing the management and Supervisory Board on material risks and deficiencies of the internal control system.

As of 31 December 2017, the system of the CCP NCC's internal control 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 the internal control system, risk management system and the corporate governance;
- Internal Control Service (ICS). ICS operates under the direct control of and reports to the CEO. The head of ICS reports to CCP NCC Supervisory Board on the compliance with the Market Abuse. The main functions of ICS are the mitigation of compliance (regulatory) risk, control over compliance by CCP NCC with the laws on clearing, clearing activities and central counterparty, and the Market Abuse laws;
- Financial Monitoring Service (FMS) is CCP NCC's structural unit for prevention of legalization (laundering) of proceeds from the crime and financing of terrorism, established and operating 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".
- CCP NCC appointed the authorized officer a (head of the Financial Monitoring Service) – a special officer responsible for the implementation of internal control rules to combat legalization (laundering) of proceeds from crime and financing of terrorism (AML/CFT) in CCP NCC. The functions of control over organization of CCP NCC AML/CFT-related work are performed by the Deputy CEO. FMS reports to CCP NCC's Supervisory Board – the report for the year 2017 has been timely submitted;
- Risk Analysis and Control Department is a structural unit of CCP NCC focused on the forming the unified and efficient system of economic risk management for CCP NCC as a credit organization, clearing organization functioning as a – central counterparty, and CSO operating in the of the Moscow Exchange Group. Risk Analysis and Control Department coordinates and monitors the efforts of all structural units (employees) of CCP NCC performing the non-financial risk management functions;
- 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 the reputational risk management is a person responsible for the management of reputational risk and organization of work aimed at mitigation of legal risk. 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;
- authorized officer responsible for the 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 the CEO. Its key responsibilities include the development of a set of measures to protect confidential information (including banking secrecy, clearing information, and 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.

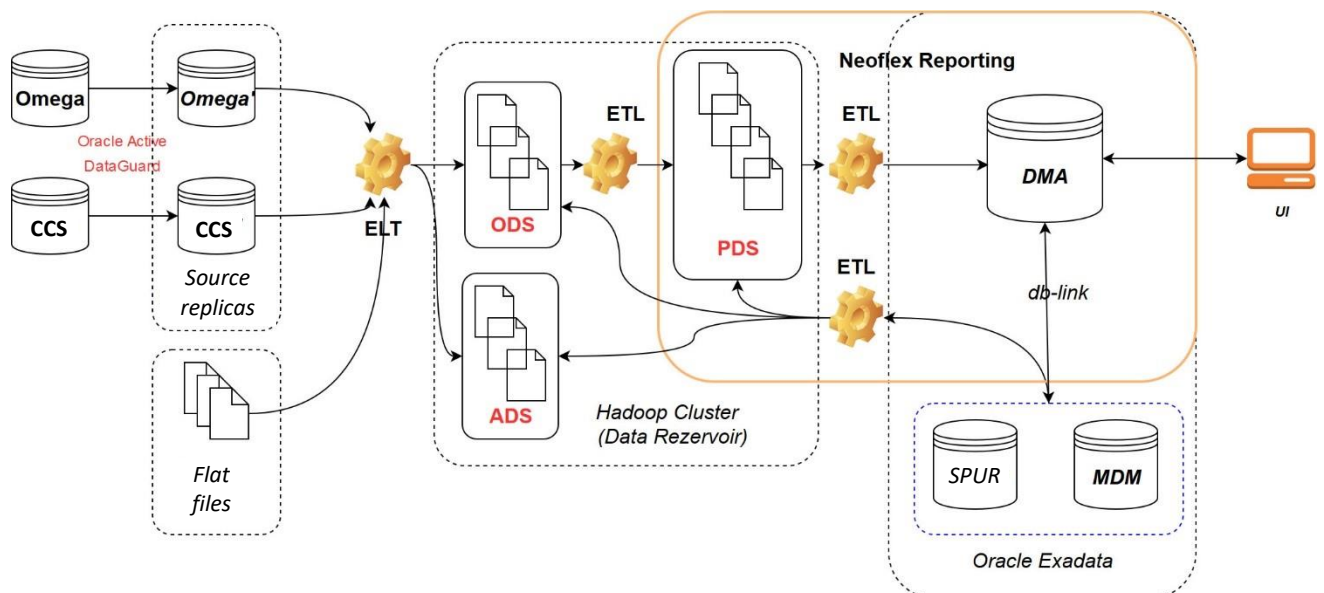
9. Technological Platform

In 2017 CCP NCC was taking further efforts to maintain its fault tolerance level at 99.96% and further develop all of the automated data processing systems operated by Company.

One of the key technological breakthroughs of CCP NCC in 2017 was the CCP NCC Reporting Project which is being implemented to bring generation of all types of reports to be filed to the tax and regulatory authorities to a new level by using a large volume and variety of data from different systems operated by CCP NCC. While implementing this project, CCP NCC selected a brand new target tackling technology. The technological solutions used by CCP NCC for this purpose include:

1. To store the detailed data, CCP NCC uses BigData technology, which allows handling huge volumes and wide variety of structured and unstructured data. BigData represents an alternative to traditional database management systems using the structured data only. CCP NCC selected the Hortonworks based solution for the implementation of this project.
2. The data extraction, upload and/ or transformation processes are implemented in DataGram. The ELT (Extract – Load – Transform) technology is used to collect data from sources in the basic data layer. The ETL (Extract – Transform – Load) method is then used to upload data into the transformed portfolio stratum (PDS) and aggregated data marts (DMAs).
3. User interfaces are developed in Oracle Application Express, which provides a free environment for the prompt development of application software based on DBMS Oracle Database, implemented entirely as a web-based application. All elements generated over the application development cycle in this environment are stored directly in the infrastructure of Oracle Database which ensures the version control without use of files or any additional version control systems.
4. Also, the project uses the DevOps – a production process automation – for development/ testing/ assembly of versions by vendor. This process includes: a) CI element– the assembly of modules, control of their compatibility and dependence, and functional testing, b) CD element – preparation/ deployment of the test environment, installation of modules, and the installation and integration tests.

The architecture of the CCP NCC Reporting Project is explicated below.



As a part of this project, in 2017 CCP NCC deployed the infrastructure for 3 circuits (DEV, UAT, PROD) and launched the pilot production of stage I of the project, which includes automation of 5 reporting forms introduced by the Bank of Russia (Forms 10, 102, 123, 634, and 722 daily reporting form).

The worth mentioning landmark results and events of the past year related to the improvement and development of CCP NCC technological platform and to implementation of the projects and objectives both of CCP NCC and the Moscow Exchange Group in general include:

1. In accordance with Federal Law No. 403-FZ of 29.12.2015 on the change of CCP NCC status from a bank to a non-banking credit organization – central counterparty, within a short time in December 2017, CCP NCC performed the organizational and technological works to ensure that the program systems supported CCP NCC functioning as a non-bank credit organization – central counterparty.
2. To minimize the time taken by recovery upon failure of the main servers supporting its two most load-carrying and top-priority systems – the Central Counterparty System (hereinafter “CCS”) and Centaurus Omega, the bank’s operating day information banking system (hereinafter “IBS”). A part of utilization of the new technological solutions of ORACLE DBMS, CCP NCC implemented the Oracle Active Data Guard (the “OADG”), which provides a real-time data protection and reduces the load on the main database when the data from these systems are used by other information systems for “reading” purposes. In particular, the OADG replica is used for ETL transformation purposes in the CCP NCC Reporting Project.
3. The Clearing Terminal, a new hardware and software system, was launched for implementation of the Single Pool project. The Clearing Terminal was developed and implemented with use of the new advanced IT-platform of the Moscow Exchange and the new approaches defined in the IT-development strategy.
 - first, the access to the Clearing Terminal is provided through CA API Gateway, a single access point to the IT-platform;
 - second, the data exchange with the Clearing Terminal is based on the Data/Calculation Grid, a component for collection and processing of information derived from dissimilar sources;
 - third, to interface with other systems the Clearing Terminal uses BPMS, transaction orchestrator.

This technology facilitates prompt implementation of new services and functions without extra costs and allow offering Public API to our clients integrate their software systems with HW&SW system of CCP NCC.

4. Our clients may now enjoy the full range of functional tests due to creation of the clearing segment for the public test field shared by CCP NCC and Moscow Exchange as part of CCS, the new Clearing Terminal and the WEB-Clearing system. The full cycle of the provisional software testing is now available both to our existing and potential clients which may conduct it with regard to the trade and clearing cycles in their entirety.
5. To improve the fault tolerance of the SD trade and clearing system, the automated failover of the access point otc.moex.com to a standby circuit was provided (at the network equipment level).
6. CCP NCC has completed the scheduled stages aimed at enhancing the IBS automated banking system as a part of attainment of its objective of report generation in compliance with the transfer pricing rules.

In addition, the following steps were implemented and introduced for the development of Centaurus Omega IBS system:

1. Automated matching and processing of SWIFT messages from MT607 to MT605.
2. Change of tax ledgers to reflect the relevant changes in the Russian Tax Code enacted from 01/01/2017 by Federal Law No. 242-FZ.
3. Implementation of embedded derivative financial instrument (EDFI) revaluation mechanism;
4. Facility to record reverse EDFI repo trades.
5. Automated downloading of messages in accordance with Regulation 407-P of the Bank of Russia.
6. Accrual and accounting of penalties at SD market.
7. Daily revaluations of the entire securities portfolio, including REPO trades.
8. Acceptance and processing of Deposit Placement with CCP trades.
9. Download from IBS (in formalized format) of the commodity and service acceptance statements in accordance with the enacted tax forms.
10. Generation of electronic documents (EDs) and attachment of an electronic signature/equivalent of a handwritten signature to ED.

In accordance with its release policy, CCP NCC implemented 3 standard releases and 12 fixed period releases, and installed more than 450 upgrades to the Centaurus Omega IBS.

The annual business development drives growth of the quantitative indicators in the Centaurus Omega IBS, including:

1. The number of Centaurus Omega IBS users increased by 12% during 2017.
2. The volume of transactions increased by 5% to 105,110,269 transactions.
3. The number of accounts of counterparties and corporate issuers increased by 1% to 3,856 pieces; for individuals, the similar indicator increased by 12% to 8,634 pieces.

During the reporting period, CCP NCC continued the development of its website management system and completed the following tasks:

1. Automated publication of FX market risk parameters;
2. Automated publication of the register of clearing members and issuers; and
3. Automated publication of the settlement calendar.

As a result, CCP NCC improved the immediacy and accuracy of notices given to the clearing members, reduced the operational risks associated with disclosure of clearing information, and increased reliability of its IT- infrastructure.

1. CCP NCC further developed the technological base for Softwell NAVIGATOR product ecosystem and launched a web-service for reporting of SD trades to NSD repository.

2. It introduced important enhancements aimed at optimizing FinCad service functioning, including the preload of quasi-static objects into the model (such as calendar combinations, conventions, and evaluation specifications), and launched the cashing of symmetric risk values in addition to cost values.
3. It also launched the Navigator API web-service for integration with registration systems of members and broker interfaces. This service is built into MOEX Passport infrastructure and uses CA API Gateway as an authorization system. Currently, CCP NCC is testing its integration with the Exchange infrastructure.

Quantitative indicators in SD market in 2017 were:

Indicator	Total	Including new launches
Active settlement accounts	49	6
Clearing member-Central Counterparty deals in the SD market	154	142
Peak total transaction nominal value	04.09.2017	RUB72,558,596,800.00

During 2017, CCP NCC continued providing clearing members with an access to the WEB-clearing system, an advanced development stage of the electronic document flow based using WEB-technologies. As of 31 December 2017, the system access was available to 332 members of whom 182 received it in 2017; the number of incoming documents from the clearing members reached 950 per day.

To provide CCP NCC with a secure reliable access to the payment systems of the Bank of Russia and the electronic information services of the Russian Federal Agencies, hands-on trainings in transfer of payments and filing of regulatory reports from a remote standby platform were quarterly arranged. The hardware and software systems available at such remote standby platform are kept in a standby mode for immediate deployment as needed. In 2017, the software of the payment hardware and software systems were upgraded 4 times. Also, CCP NCC conducted a performance testing of the new system designed for interfacing with the settlement systems of the Bank of Russia, which implementation is scheduled for 2018.

The Advanced Host Monitor designed to monitor the Company system and telecommunication channels operability was further developed, the software was upgraded 2 times.

To ensure that CCP NCC complies with the legislation of the Russian Federation and meets the requirements of the Bank of Russia related to the archiving of operation day documents, CCP NCC conducted modernization of its electronic data storage system between April and June 2017 and increased the system capacity to 160 TB.

Between April and December 2017, considerable efforts were concentrated on the transition of generation, control and submission of operation day reports of CCP NCC to the XML format as a basis for XBRL format, which is a prospective international reporting format. Since December, over 90 percent of such reports have been submitted to the Bank of Russia in XML format.

To meet the requirements of the Bank of Russia related to the protection of information in the payment system according to Regulation 552-P and to additionally enhance the protection of its payment systems, CCP NCC has taken extensive technical measures within the section of the payment system of the Bank of Russia operated by CCP NCC. In particular, the second antivirus protection system was deployed in the dedicated sub-network in addition to the common protection system of the Moscow Exchange Group.

CCP NCC intensely implements the virtualization technologies for its server systems. In 2017, the number of virtual servers doubled up to 30 pieces.

As in 2016, the load test performed in 2017 demonstrated the operability of hardware and software systems of CCP NCC under the double ordinary load.

Overall, 2017 saw the gradual development of the CCP NCC technological platform based on the state-of-the-art processes and IT-solutions, which allows to significantly contribute to the business strength and reliability and ensures its sustainable development.

10. Major Financial Performance Results

Major financial performance results as of 01.01.2018 z. (RUB th)

Equity	45,959,393
Net income, total	21,708,668
Operating expenses	1,386,400
Profit before tax	20,322,268
Accrued (paid) taxes	3,835,165
Profit after tax	16,487,104

Dynamics of changes in financial performance results (RUB th)

Indicators	Change 2017/2016	2017	2016
Interest income, total	51%	158,084,511	104,996,458
Interest expenses, total	69%	145,828,861	86,199,398
Net interest income (negative interest margin)	-35%	12,255,650	18,797,060
Changes in provisions for possible losses on loans, debts and equivalents, balances of correspondent accounts and accrued interest income, total, including:	-51%	30	61
Net interest income less provisions for possible losses	-35%	12,255,680	18,797,121
Net income from transactions with financial assets measured at fair value through profit or loss	-367%	-1,277,040	478,177
Net income from transactions with financial liabilities measured at fair value through profit or loss	-100%	-60	-21,601
Net income from available for sale securities dealing	-47%	840,645	1,595,316
Net income from foreign currency transactions	-23%	-2,985,816	-3,895,006
Net income from foreign currency revaluation	52%	4,661,411	3,074,608
Net income from precious metals transactions	16%	633	546
Fee income	17%	8,407,742	7,165,115
Fee expenses	40%	208,119	149,116
Change in provision for other losses	-129%	-1,271	4,380
Other operating income	118%	14,863	6,820
Net income (expenses)	-20%	21,708,668	27,056,360
Operating expenses	16%	1,386,400	1,198,218
Profit (loss) before tax	-21%	20,322,268	25,858,142
Tax refund (expense)	-22%	3,835,164	4,938,982
Profit (loss) for reporting period	-21%	16,487,104	20,919,160

Dynamics of changes in equity (capital) of CCP NCC and its components (RUB th)

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.

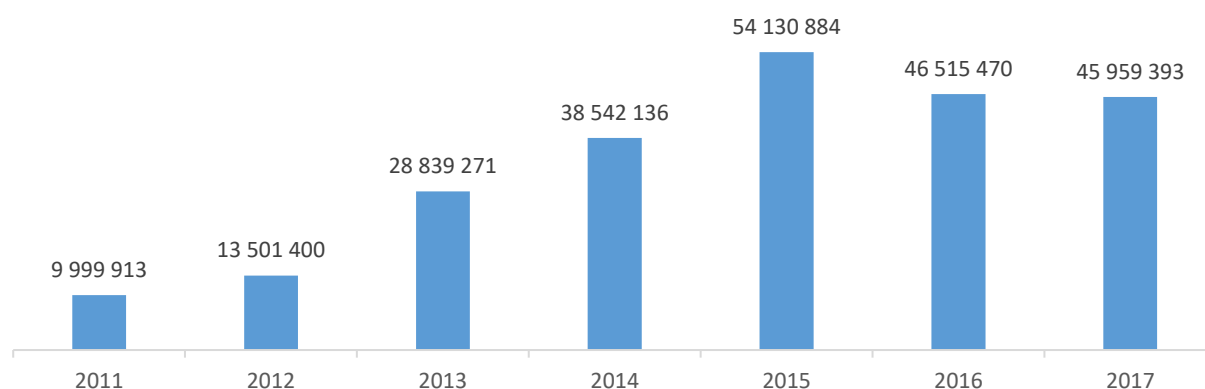
As a member of the Moscow Exchange Group, during the reporting period CCP NCC managed its capital being guided by the objectives set by the Moscow Exchange Group's Strategy for 2016-2020 with regard to development of the centralized clearing and improvement of the reliability of the central counterparty. Considering the need to comply with the regulatory requirements to the capital of credit organizations, CCP NCC 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 the Moscow Exchange involving performance of centralized clearing via the central counterparty. 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.

Item	01.01.2018	01.01.2017
Equity (capital), total	45,959,393	46,515,470
Including:		
Core capital	28,509,192	25,361,995
Basic assets	28,509,192	25,361,995
Supplementary capital	17,450,201	21,153,475

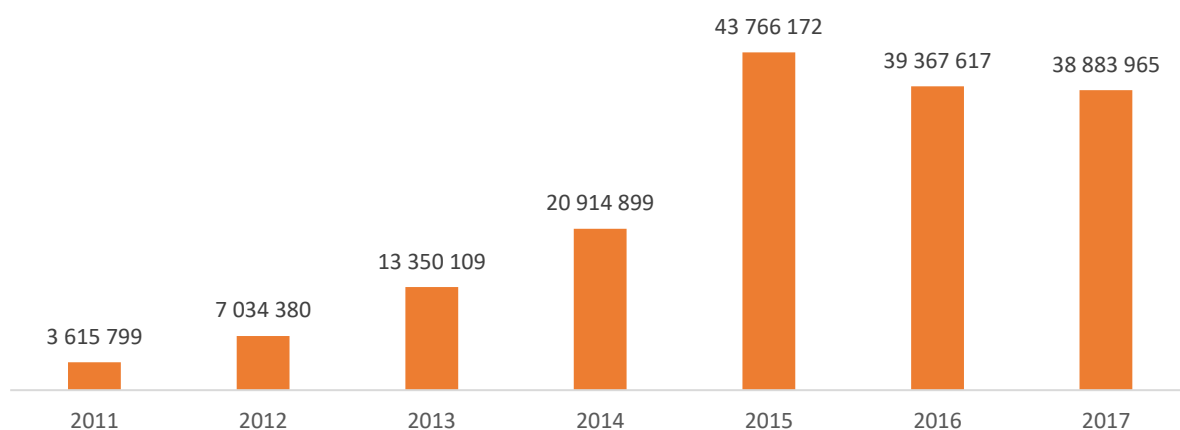
All capital adequacy requirements were met by CCP NCC in full.

Year	2011	2012	2013	2014	2015	2016	2017
Equity	9,999,913	13,501,400	28,839,271	38,542,136	54,130,884	46,515,470	45,959,393
Retained profit	3,615,799	7,034,380	13,350,109	20,914,899	43,766,172	39,367,617	38,883,965
Authorized capital	6,170,000	6,170,000	15,170,000	16,670,000	16,670,000	16,670,000	16,670,000
Reserve fund	308,500	308,500	966,775	966,775	966,775	966,775	966,775
Sources reducing the equity (capital), including:							
dedicated capital	0	0	0	0	6,500,000	9,500,000	9,500,000
CCP capital for coverage of possible losses	0	0	0	0	766,498	889,965	898,664

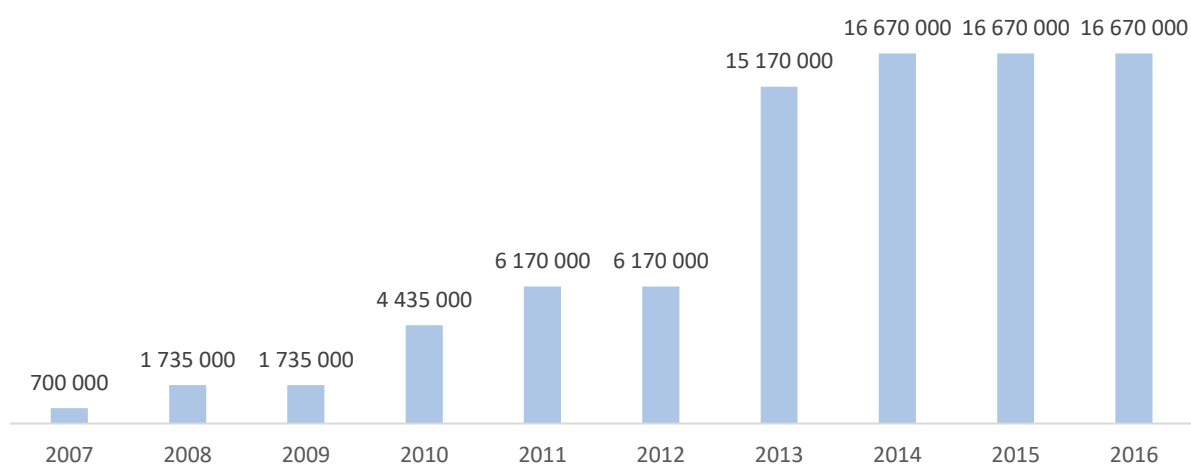
Equity (capital), RUB th



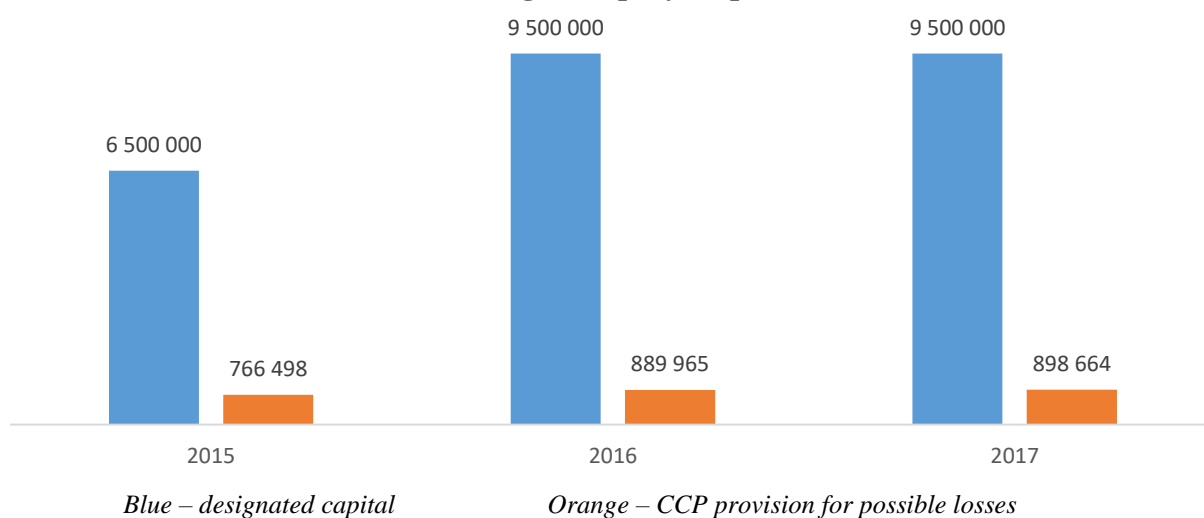
Retained profit, RUB th



Authorized capital, RUB th



Sources reducing the equity (capital), RUB th



On 1 November 2015, the Bank of Russia put into effect the amendments to its regulations governing the central counterparty activity which require a central counterparty 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 the central counterparty 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.

RUB thousand

Part of retained profit intended:	2017	2016
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	9,500,000	9,500,000
for providing termination and restructuring of activities of central counterparty	599,109	593,310
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.	299,555	296,655

11. Human Resources Policy. Information on the Labor Remuneration System

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; and
- 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 increased by 3% on 2016 and reached 165 employees by late 2017. The number of members of CCP NCC Management Board remained unchanged. The CCP NCC did not undertake any staff rightsizing in 2016 and 2017, nor does it plan the same for 2018.

I. Labor remuneration policy

The labor remuneration policy is consistent with CCP NCC’s strategy and nature, scope of CCP NCC’s operations, results of its activities, level and combination of assumed risks.

The labor remuneration system and policy underwent no material changes in 2017. 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 2017 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

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”).

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 a position salary is established in CCP NCC 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;
- 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 installments) 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 installments) 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 CCP NCC, its subdivisions and risk-taking employees (the “Methodology”). In March 2017, CCP NCC Supervisory Board approved the amount of shares of deferred (paid in installments) portion of the annual bonus for the reporting period (2016) 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. If any risk event occurs (issuer credit risk, counterparty credit risk, market risk, liquidity risk), the adjustment will apply to all deferred (paid in installments) portions of annual bonus attributable to previous periods, which are evaluated in the current period, using the approved algorithm provided in the Methodology.

Based upon performance results of CCP NCC for 2017 and the calculation of the to-be-adjusted percentage of deferred (paid in installments) annual bonus portions attributable to previous periods and evaluated in the current period in accordance with the Methodology, in March 2018 CCP NCC Supervisory Board approved the resolution on the payment of such deferred (paid in installments) annual bonus portions attributable to previous periods (the second share for 2015 and the first share for 2016) in full.

During 2017 CCP NCC continued to improve its personnel labor remuneration principles and approaches and updated several documents governing the labor remuneration system including those related to the performance management. The results of this process will have an impact on bonus payments for the reporting year and revision of salaries, and since 2018 they will also have an impact on career planning due to the integration of the value-based assessment and the value based competence model completed in 2017.

In late 2017 the Internal Audit Department assessed the labor remuneration system of CCP NCC and found it consistent with the nature and scope of operations performed by the Company, results of its activities, level and combination of the risks assumed in accordance with the requirements of Instruction 154-I.

II. Social support to employees of CCP NCC

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 being 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 01.01.2018, 93% 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. In addition, 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 Policy. 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.

CCP NCC also promotes healthy living, prevention and avoidance of epidemic surges of acute respiratory viral infections and flue. Its employees may enjoy the corporate discounts in the leading fitness centers, including athletic clubs arranged by Moscow Exchange (running, triathlon, soccer, hockey, etc.).

III. Training and development of employees

The employee training in CCP NCC is arranged in three top-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. 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. Since 2017 CCP NCC has been actively implementing the training concept 70-20-10, which displaces the training focus towards the self-education and on-the-job development (70% of efforts) together with learning by peers' experience (20% of efforts) and actual involvement in training courses (10% of efforts).

As of the end of the reporting period, 95.2% of CCP NCC employees had a higher professional education and 16.9% of employees had an alternative higher-education degree. Also, there were six employees with a candidate of science degree and 42% with special qualification certificates.

In 2017 115 employees of CCP NCC completed training courses, and some employees were even trained under several programs. Each employee had 3 training days during the year on average. Nine employees took mandatory online courses to ensure compliance with the business continuity requirement. On average, each CCP NCC employee takes 9 electronic training courses per year.

As part of its annual review of performance results, CCP NCC assesses employees' competences in accordance with the approved model. This assessment provides the basis for the employee individual development plans which include the annual schedule of training activities.

CCP NCC pays attention to introduction of programs for competences development, leader skills and project management skills required for implementing the bank holding company's

strategic projects. In 2016, the Group established the Corporate University designed to develop competences so that the employees could tackle their business tasks successfully. In 2017 the number of University departments increased to five, as the Project Department, Business Department, and Top Management Department were added to the existing Management Department and Professional Department.

In 2017 9 employees graduated from the Management Department annual program designed to develop management skills, master new approaches and methods of management, and form the management culture. 6 employees are taking the Project Department program aimed at developing the project management skills, design thinking, and project team management. The Professional Department programs are designed to provide in-depth and high quality knowledge in the key business areas of CCP NCC. In 2017 91 employees completed mandatory courses in the Professional Department, of which 13 employees improved their skills, 11 employees took part in relevant conferences, and 70 employees attended professional workshops and training courses; 5 NCC employees are taking the Business Department program focused on the development of business competences in managers of independent structural units.

IV. Health protection of CCP NCC employees and provision of labor safety

The responsible attitude to labor safety is one of the core principles of the CCP NCC's activity in the area of health protection and labor safety of its employees. The main measures for protection of labor and health of employees include the provision of safe job environment, regular medical examinations, job safety trainings for employees, and fostering the health awareness culture.

CCP NCC provides regular instructions in labor safety, electrical safety, fire safety, civil defense and emergency situations. With such frequency as prescribed by the applicable laws, all employees are provided with initial, subsequent and casual instructions in labor safety and their awareness of job safety requirements are checked. CCP NCC ensures availability of all types of job and fire safety instructions and regulations, which are available to employees for review at any time through any accessible resource. Also, employees may take online training courses in labor safety.

In 2017, CCP NCC provided the labor safety training to 21 managers in its specialized training center. Upon completion, the managers passed successfully the examination of their labor safety knowledge. In accordance with the Special Assessment of Labor Conditions all working places of CCP NCC employees comply with the state regulations, labor conditions class 2 – permissible (no harmful and dangerous factors).

All workplaces were declared as such. The launch of new online training courses in labor safety, electrical safety, fire safety issues and the teaching to all employees of the first aid administration rules are scheduled by CCP NCC for 2018.

In 2017, all workplaces were inspected in-process for compliance with the sanitary and anti-epidemic rules and preventive measures. In October 2017, CCP NCC arranged anti-influenza vaccination of its employees. During the period of ARVI and flue epidemics, employees were provided with antiseptic agents and medical face masks.

The pre-trip, preliminary and regular medical examinations as well as mental health evaluations were provided for those employee categories, which require such control under applicable laws. During business house, a corporate doctor is available in offices for emergent medical treatment. Offices are equipped with recreational spaces, kitchens, mini gym studios, water coolers, coffee machines, and vending machines.

In 2017 not a single industrial accident in CCP NCC was registered.

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 the reporting year 2017 to CCP NCC's CEO and Management Board members was determined in accordance with the Federal Law "On Joint Stock Companies", the Labor Code of the Russian Federation, the CCP NCC's Articles of Association, and regulator's 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", terms of the labor contracts made with them and internal documents of the Company.

Approval of balance in 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 collective bodies, assessment of their activities fall within competency of the 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 correlation is 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 Company's financial performance figures and also subject to the risks assumed at his (her) position.

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 the 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 the Management Board members for the reporting year, results of assessment of risks in relation to deferred (paid in installments) parts of the annual bonus, as well as 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 the CCP NCC's Supervisory Board and its commissions, and other factors. To maintain the balance between common corporate (financial, strategic) and individual targets, the aggregate weight of common corporate targets in 2017 accounted for 40% in the total weight (100%) of all targets pursued by the members of collective executive bodies.

Based on the results of 2017 summed up by the CCP NCC's Supervisory Board, 60% of the approved annual bonus for the year performance results will be paid to CEO and the Management Board Members. The remaining 40% of the approved amount of the annual bonus for the results of performance of CEO and the Management Board Members in 2017 is subject to deferred (payment in installments) for three years, including a possibility of reduction or cancellation in case of obtaining a negative financial result for CCP NCC on the whole, according to the procedure and on the terms approved by the Supervisory Board.

The deferred (paid-in-installments) 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-installments) 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-installments) portions of the annual bonus attributable to previous periods, which are evaluated in the current period. The deferred (paid-in-installments) portions of the annual bonus will be adjusted for evaluation of the following risk events occurred: credit risk, market risk, and liquidity risk.

In March 2017 based on the evaluation of risk events occurred in year 2016 and pursuant to the relevant resolution of the CCP NCC Supervisory Board, CEO and members of the CCP NCC Management Board were paid in full the first share of the deferred (paid-in-installments) portion of their annual bonuses for the reporting year 2015 (89% of the total amount of the deferred (paid-in-installments) portion of the annual bonus for 2015).

The amount of all payments (salary, bonus, compensation for and other payments) made to CEO and members of the CCP NCC Management Board in 2017 totaled RUB 93,794,500 (2016: RUB 92,369,600; 2015: RUB 112,578,600).

Remuneration of Supervisory Board Members

On 23 June 2017, the Moscow Exchange, a sole shareholder of NCC, passed Resolution No. 36 on the issues falling within competence of the General Shareholders Meeting, to remunerate the members of the CCP NCC's Supervisory Board elected by Resolution No. 30 of the sole shareholder on 13 May 2016 for performance of their functions in the amount calculated in accordance with the Regulation on remuneration and compensation of expenses of the members of the CCP NCC's Supervisory Board approved by Resolution No. 30 of the sole shareholder on 13 May 2016. The total amount of remuneration of the said members of the CCP NCC's Supervisory Board for performance of their functions was twenty-eight million eight hundred seventy-five thousand rubles (RUB 28,875,000.00).

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 the CCP NCC's Supervisory Board elected by resolution No. 36 of the sole shareholder on 23 June 2017 and resolution No. 40 of 24 November 2017 will be paid upon holding the Annual General Shareholders Meeting of CCP NCC in 2018.

13. Dividends on Shares

On 31 March 2017 PJSC Moscow Exchange, a sole shareholder of CCP NCC, passed resolution No. 35 on payment (declaration) of dividends as follows:

- to pay dividends out of the previous years' retained profit in the amount of RUB 2 099 919 900,00;
- to determine the amount of dividends on shares as RUB 125,97 per one ordinary registered share; and
- to set 11 April 2017 as the date, on which the persons entitled to the dividends are identified.

Also, according to the aforementioned resolution, the dividends were to be paid in cash and subject to such deadlines as provided by the legislation of the Russian Federation.

The dividends were paid on 28 April 2017.

When considering the issues of the Annual General Shareholders Meeting held on 23 June 2017 PJSC Moscow Exchange, a sole shareholder of CCP NCC, passed Resolution No. 36 on the distribution of CCP NCC's net profit and payment (declaration) of dividends, as follows:

- to approve the distribution of net profit in the amount of RUB 20 919 160 319, 88 received in the reporting year 2016:
- to pay dividends for the reporting year 2016 in the total amount of
- RUB 5 199 873 100, 00;
- to retain the remainder of net profit after payment of dividends in the amount of
- RUB 15 719 287 219, 00;
- to determine the amount of dividends on shares of CCP NCC to be RUB 311, 93 per ordinary registered share; and
- to set 5 July 2017 as the date, on which the persons entitled to the dividends are identified.

Also, according to the aforementioned resolution, the dividends were to be paid in cash by funds transfer and subject to such deadlines as provided by the legislation of the Russian Federation but no later than 8 August 2017.

The dividends were paid on 7 August 2017.

On 06 September 2017 PJSC Moscow Exchange, a sole shareholder of CCP NCC, passed resolution No. 37 on the payment (declaration) of dividends, as follows:

- to pay dividends out of the part of the previous years' retained profit in the amount of RUB 5 199 873 100,00;
- to determine the amount of dividends on shares as RUB311, 93 per ordinary registered share; and
- to set 18 September 2017 as the date, on which the persons entitled to the dividends are identified.

Also, according to the aforementioned resolution, the dividends were to be paid in cash by funds transfer and subject to such deadlines as provided by the legislation of the Russian Federation.

The dividends were paid on 16 October 2017.

On 17 November 2017 PJSC Moscow Exchange, a sole shareholder of CCP NCC, passed resolution No. 39 on the payment (declaration) of dividends, as follows:

- to pay dividends out of the part of the previous years' retained profit in the amount of RUB5 199 873 100,00;
- to determine the amount of dividends on shares as RUB 311,93 per ordinary registered share; and
- to set 29 November 2017 as the date, on which the persons entitled to the dividends are identified.

Also, according to the aforementioned resolution, the dividends were to be paid in cash by funds transfer and subject to such deadlines as provided by the legislation of the Russian Federation.

The dividends were paid on 29 December 2017.

In total, the dividends paid by CCP NCC in 2017 amounted to RUB 17 699 539,200 (2016: RUB 25 399 912,300).

14. Observance of the Corporate Governance Code

During the reporting period, CCP NCC strongly focused on the improvement of its corporate governance as one of the most important tools enabling the Company to achieve its strategic objectives.

In this area, CCP NCC is committed to follow the best practices and standards of the corporate governance, being aware that the positive dynamics in this sector is a prerequisite for achieving success in the financial and economic activity, ensuring implementation of new projects and development of the Company's activity in general. The measures taken for the development of CCP NCC's corporate governance system are based on the recommendations of the Corporate Governance Code approved by the Bank of Russia on 21.03.2014, Recommendations of the Bank of Russia and the Basel Committee on Banking Supervision, as well as on the internationally recognized principles of corporate governance.

CCP NCC has approved and is adhering to 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 of the Company. In accordance with the Principles, the corporate governance is intended to appropriately incentivize CCP NCC Supervisory Board and employees to achieve the goals interested both to CCP NCC and its shareholder, as well as to facilitate an effective control encouraging CCP NCC to utilize its resources more efficiently. The application of the Principles by CCP NCC results from its aspiration for improvement of its attractiveness for its shareholder, clients (service users), employees, creditors, and the Bank of Russia, and is based on the following approaches:

Accountability. The Supervisory Board and executive bodies of CCP NCC are accountable to its sole shareholder.

Fairness. CCP NCC's management bodies act equitably and legitimately.

Transparency. CCP NCC's management bodies provide timely and adequate disclosure of reliable information about CCP NCC's activities, including its financial position, performance results, and management bodies.

Responsibility. CCP NCC's management bodies recognize and protect the rights of stakeholders under applicable laws of the Russian Federation.

Aspiration for further development. CCP NCC's management bodies recognize the need for an ongoing improvement of the corporate governance system taking account of development and influence of external factors, and the need for an ongoing control of observance of the rights and interests of its sole shareholder and other stakeholders.

In 2017, the Principles were amended to ensure CCP NCC's compliance with the Federal Law on Clearing, Clearing Activities and Central Counterparty contemplating that at least one third of the members of the central counterparty's Supervisory Board should be independent directors. The criteria of an independent director set forth in such amendments is fully consistent with the requirements of the said federal law and the affiliation criteria and materiality criteria is based on separate provisions of the Corporate Governance Code of the Bank of Russia.

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 the high 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.

As in 2017 CCP NCC was assigned the status of a non-banking credit organization – central counterparty, it reviewed the compliance of the independence of the current members of the Supervisory Board with the updated independence and affiliation criteria resulting in recognition of three members of the Supervisory Board to be independent directors.

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 the 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 them possess a 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 the Company's financial stability and ensure continuity of its clearing activities. The members of the Supervisory Board's Risk Committee 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.

To improve efficiency and control of the state of its corporate governance, in 2017 CCP NCC assessed the state of its corporate governance with engagement of the Supervisory Board members in such assessment. The performed assessment demonstrated the improved state of the corporate governance in several respects, including the increased number of independent directors on CCP NCC's Supervisory Board and organization of its activities.

The existing corporate governance practices of CCP NCC enable the Management Board and CEO to perform reasonably, in good faith, solely for the benefit of the Bank, 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.

One of the key principles of corporate governance of CCP NCC is the timely disclosure of reliable information on the Company in compliance with the legislation of the Russian Federation and internal documents of CCP NCC. The information is disclosed pursuant to CCP NCC Information Policy Regulation approved by the Supervisory Board and consistently 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 in course of its performance of functions of a credit institution, clearing organization and central counterparty. The Company discloses its financial statements and accounts according to the Russian and international standards, as well as 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, and therefore the website contains the information sufficient for forming an objective understanding of material aspects of the CCP

NCC's activities. As a rule, material event 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 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 from 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 CCP NCC or its sole shareholder, to audit and confirm the reliability of its financial statements.

The Company maintains the corporate Code of Business Ethics which sets forth the principles governing the relations between CCP NCC 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. In addition, CCP NCC has approved an Anticorruption Policy, which provides guidelines for the Company's activities in ensuring compliance with the anticorruption laws and describes the situations containing the signs of corruption risk, as well as the measures aimed at their preventing and combating corruption in CCP NCC's activities.