

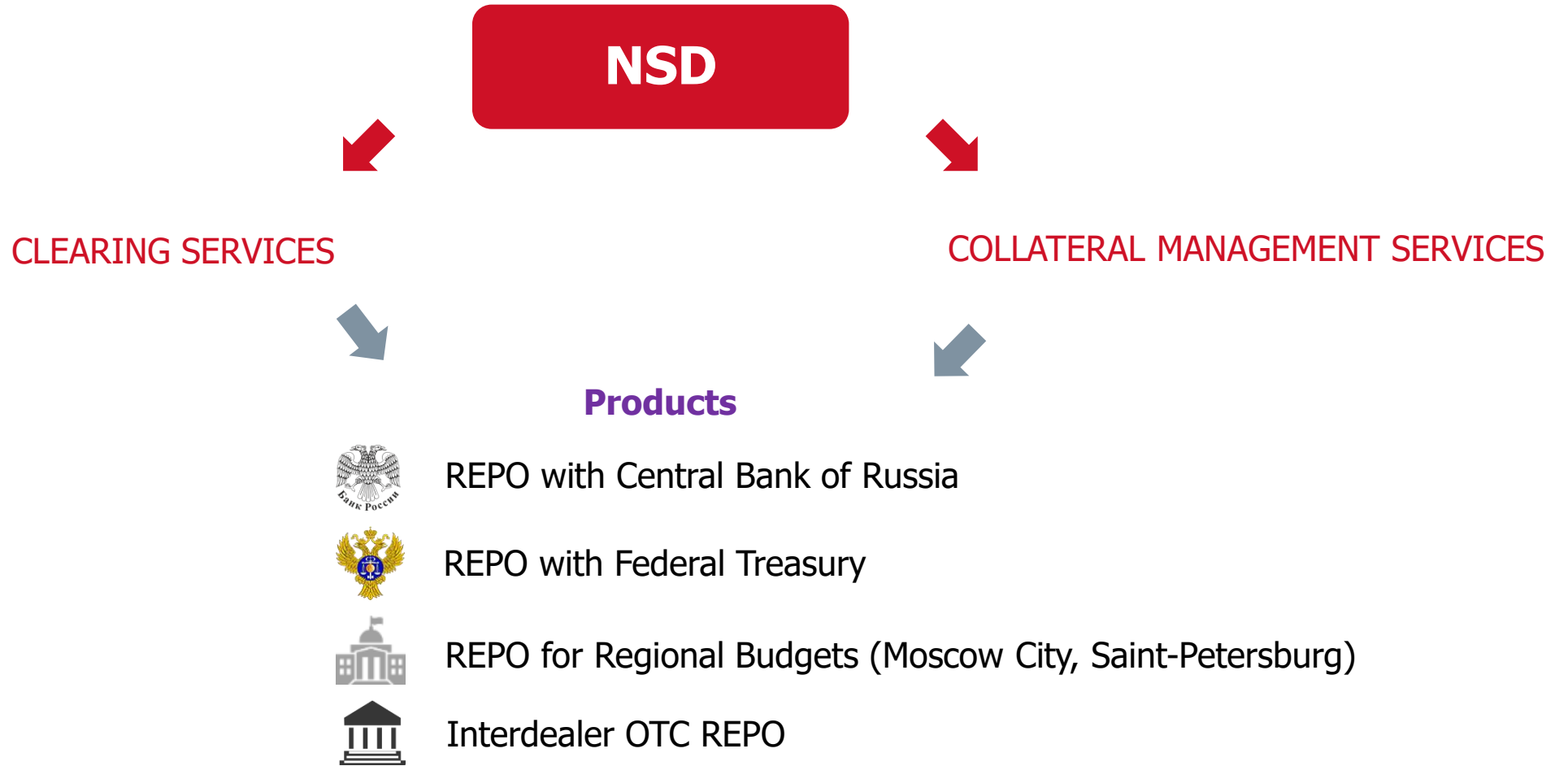


**NATIONAL
SETTLEMENT
DEPOSITORY**
MOSCOW EXCHANGE GROUP

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Product manager
Triparty Collateral Management at NSD

TRIPARTY COLLATERAL MANAGEMENT IN NSD

NSD SERVICES AND PRODUCTS



KEY FEATURES OF NSD'S COLLATERAL MANAGEMENT

NSD provides settlement and collateral management services (CMS) where securities are held as collateral to cover trade exposures of bilateral repurchase agreement.

NSD outsources most of the functions related to REPO trades providing high quality service with daily exposure control.



DVP Settlement
in RUB and
other
currencies



Securities
allocation



Collateral substitution
upon demand



РЕПО с корзиной
ценных бумаг



Mark-to-market on
a daily basis



Automatic
margin calls
handling



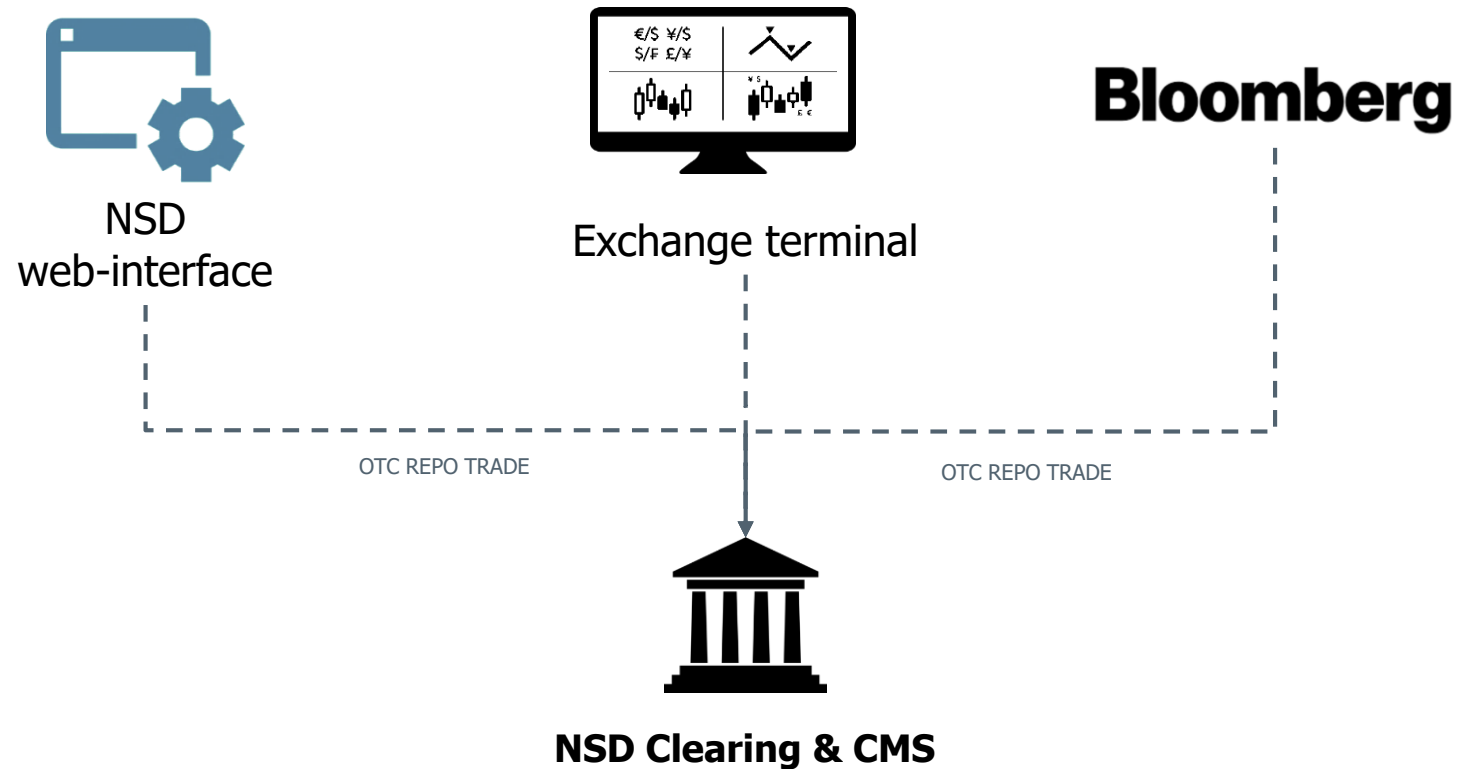
Reporting to
Trade repository



Corporate actions
processing

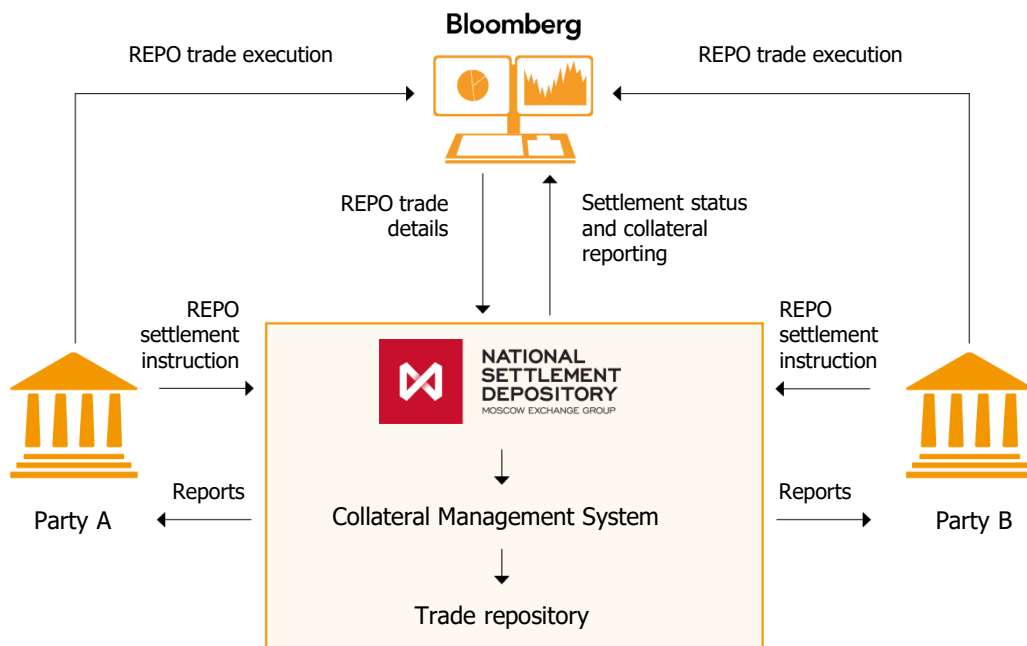
INTEGRATION

Tri-Party repo collateral management is a post-trade processing service provided by NSD to its clearing members. The collateral management engine is an open-architecture platform interoperable with web-interface, Bloomberg and exchange platforms:

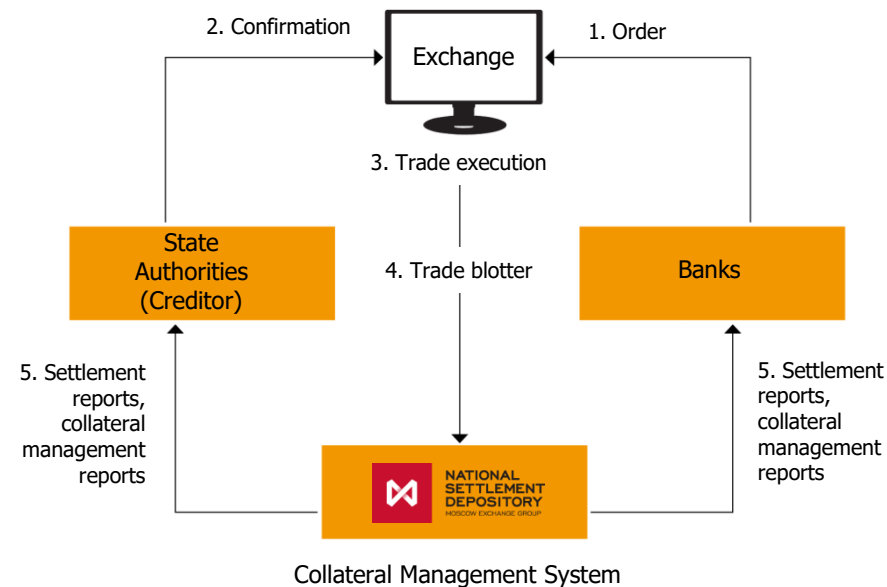


TRADE EXECUTION AND SETTLEMENT PROCESS

BILATERAL INSTRUCTIONS



EXCHANGE TRADING RESULTS



REPO TRADE PARAMETERS AND SETTLEMENT OPTIONS

- Both fixed and open term repo
- Repo currency: RUB, USD, EUR, CNY, HKD, GBP, CHF
- Both fixed and floating repo rates are supported
- Eligible collateral – all securities accepted for safekeeping
- Daily mark-to-market with pricing from different sources
- Margining: haircuts and daily collateral calls in securities or cash
- Concentration limits for basket of securities
- Trade settlement on delivery against payment basis (DVP)
- Online settlement (DVP1) or batch settlement with netting (DVP3)

STATISTICS

Clearing and Collateral Management

YEAR	VOLUME OF DVP TRANSACTIONS (B/S), BLN RUB	QUANTITY OF DVP TRANSACTIONS (B/S),	VOLUME OF TRIPARTY REPO TRANSACTIONS, BLN RUB
2013	1,7	80k	14
2014	2,2	106k	57
2015	2,5	88k	46
2016	4,5	108k	47
2017	7,3	178k	43
2018	8,0	210k	17

NSD's clearing participants – **294**, among them more than **50% (158)** are clients of NSD's collateral management platform as of 01.03.2019.

NEW TECHNOLOGIES

Traditional services

Traditional safekeeping and accounting model

CMS services

- Allocation
- Settlement
- Mark-to-market
- Margining
- Reporting



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Blockchain



smart-contracts



- Oracle
- Market Data

Customer business logic



THANK YOU!



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 - Changes in (a) domestic and international legislation and tax regulation and (b) state policies related to financial markets and securities markets
 - Competition increase from new players on the Russian market
 - The ability to keep pace with rapid changes in science and technology environment, including the ability to use advanced features that are popular with the Company's and its subsidiaries' customers
 - The ability to maintain continuity of the process of introduction of new competitive products and services, while keeping the competitiveness
 - The ability to attract new customers on the domestic market and in foreign jurisdictions
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