Operations with Central Counterparty (T+, REPO with CCP, Negdeals with CCP)
on Moscow Exchange Equities&Bonds market
through the ASTS Bridge API

Document version: 3.3

This guide describes the implementation of functionality of trading modes with Central Counterparty (T+, REPO with CCP, Negotiated deals with CCP) for external systems using ASTS Bridge to interact with ASTS Trading System.

All the following structure of information objects is based on `IFCBroker_42` brokerage interface.

Contents

Changelog

October 25, 2021

- Opportunity to cancel the first part of REPO with CCP negotiated trade.

March 29, 2021

- Conclusion of REPO with CCP trades at the evening trading session.

July 2, 2019

- Early settlement of REPO with CCP trades.

June 9, 2014

- Execution reports are available for negotiated deals on REPO with CCP and Negdeals with CCP (NDM) modes.
- Intermediate clearing session.
- `CCP_*` tables are decommissioned and replaced with `ASSETS`, `RM_PRICERANGE`, `RM_PRICERANGE_FIRM`, `RM_INDICATIVE`, `RM_HOLD` tables.
- Liabilities on Principle payment is considered in Single Limit calculation.

October 21, 2013

- REPO with CCP negdeal orders may be submitted with Discount value specified.

July 8, 2013

- Consolidated T0 and T+ cash and securities positions for trades settled in RUB.
- New in REPO with CCP:
    - The new Y1/Y2 settlement code is available for REPO with CCP. Implementation is the same as for the existing Y0/Y1 settlement code.
    - Negotiated REPO with CCP with Shares. Implementation is the same as for the existing negotiated REPO with CCP with bonds.
    - Income transfer. Dividends paid during the REPO term are transferred in the same way as it has been with coupon payments and bond amortization.
    - "Techinal" trades and orders on Principle payment are now represented in the NEGDEALS table by both orders: submitted by NCC (addressed to Participant) and automatically generated order on behalf of Participant (addressed to NCC). Previously – just one order submitted by NCC.
- Decimals. In order to be able to display share prices in REPO with CCP with two digit precision the value of the DECIMALS field in SECURITIES table for some securities on REPO with CCP boards may differ from the value on main trading board.

- Options to prohibit short selling or buying without full prefunding

Related Interface Objects

Reference Tables

`BOARDS` – list of available trading boards.

`CLIENTCODES` – list of own clients to be used at order entry.

`FIRMS` – list of all the firms on the market to be used to select negotiated deal counterparties.

`SEC_SETTLECODE` – settlement codes, accrued interest, settlement dates and REPO rates for all the securities.

`SECURITIES` – list of all securities on all the boards (according to the trader and firm permissions) with corresponding static and online market data.

Trading Tables

`EXT_ORDERBOOK` – orderbook for securities traded on order-driven market (Main Trading Mode).

`NEGDEALS` – sent and received negotiated deal orders.

`ONENEGDEAL` – details about one negotiated deal order.

`ONEORDER` – details about one order (Main Trading Mode).

`ORDERS` – all orders of the firm, submitted on Main Trading Mode.

`TRADES` – all orders of own firm (or trader, depending on privileges), including order-driven market, negotiated deals, details on transfer orders between accounts and payments in REPO with CCP modes.

Trading Transactions

`CCP_REPO_COMPLEX_NEGDEAL` – enter REPO with CCP negotiated deal order that doesn't require confirmation

`CCP_REPO_NEGDEAL` – enter REPO with CCP negotiated deal order

`CCP_REPO_ORDER` – enter order for REPO with CCP

`COMPLEX_TRANSFER` – enter order for transfer between accounts that doesn't require confirmation

`NEGDEAL` – enter negotiated deal order ("NDM" mode)

`ORDER` – enter order for Main Trading Mode

`WD_NEGDEAL` – withdraw active negdeal orders

`WD_ORDERS` / `WD_ORDER_BY_NUMBER` – withdraw active orders on Main Trading Modes.

`WD_REPORT` – withdraw trade settlement report that has not been executed yet.

Positions and Liabilities Tables

ACCOUNT_BALANCE – firm's current and planned positions on securities per trading accounts.

BANK – settlement organizations.

BANKACC – firm's position codes – settlement account/code identifier in the Clearing Center.

BANKUSE – accounts in the Clearing Center and Settlement House.

FIRM_HOLDING_TOTAL – firm's total positions by securities.

POSITIONS – firm's positions by money.

RM_HOLD – liabilities and claims on assets for trades, concluded in REPO with CCP modes.

RM_POSN – liabilities and claims on money for trades, concluded in REPO with CCP modes.

SECTRANSFERS – details on transfer orders between main trading accounts and collateral accounts.

TRDACC – firm's trading accounts, including collateral accounts.

Risk Parameters Tables

ASSETS – Risk-Parameters – all significant risk parameters in the context of securities issues that allowed to be traded on REPO with CCP.
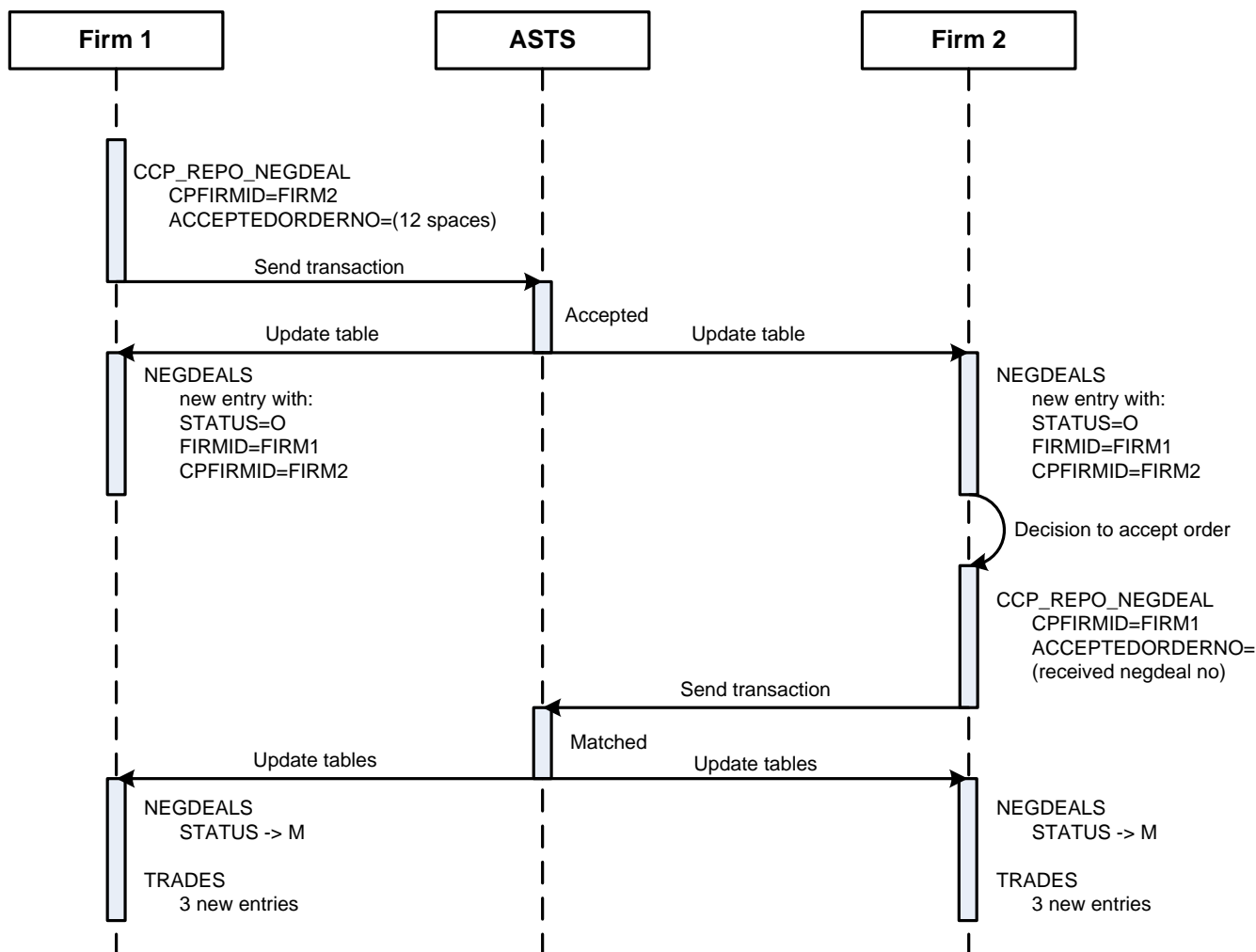
PRICEMOVELIMIT – Price move limits.

RM_INDICATIVE – Percent risk parameters – percent risk range in the context of securities issues, risk rate, and REPO term.

RM_PRICERANGE – Market risk parameters - market risk range in the context of securities issues and risk rate.

RM_PRICERANGE_FIRM – Risk-parameters defined by the Firm.

REPO with CCP Negdeal Conclusion

1. Firm 1 sends an order to Firm 2 (transaction: `CCP_REPO_NEGDEAL`) with, among others, the following parameters:

> `CPFIRMID` = ID of Firm 2 in the Trading System

> `ACCEPTEDORDERNO` = 12 spaces (gaps)

Only one of the three following REPO order parameters can be specified:

> `QUANTITY` (number of lots in the order)

> `REPOORDERVALUE` (REPO value in rubles)

> `DISCOUNT` (initial discount)

Note: DISCOUNT is not mandatory parameter.

Order direction (`BUYSELL` field) corresponds to 2nd part of REPO trade.

REPOTERM value should be indicated as number of calendar days between settlement dates of 1st and 2nd REPO parts. REPO term is calculated from the day after 1st part settlement date to the day of actual 2nd part settlement.

After the order is accepted by ASTS Trading System, the new record will appear in `NEGDEALS` table for both participants with the following details:

FIRMID= Firm 1 ID, CPFIRMID= Firm 2 ID.

Thus, if FIRMID is presented by ID of the own firm, the order is meant to be sent, and if CPFIRMID equals to own firm, order is meant to be received.

STATUS field contains the current status of the order. Possible values are listed in the TOrderStatus type of the brokerage interface:

O	-	Active.
M	-	Trade is concluded.
W	-	Withdrawn.
F	-	Rejected by counterparty.
R	-	Rejected by the Trading System.
C	-	Withdrawn by the Trading System.
T	-	Order activation time hasn't come yet
D	-	Cancelled by Trading System on user's disconnect (COD)
E	-	Waiting for an event to start
S	-	Internal error
Q	-	Order was not activated. Lack of collateral.
X	-	Order was not activated. Lack of collateral.

2. CCP_REPO_NEGDEAL transaction is also used to accept a received negdeal. In order that two counter-orders led to trade conclusion, they must contain same values in the following parameters: SECBOARD, SECCODE, SETTLECODE, REPORATE, REPOTERM, QUANTITY / REPOORDERVALUE.

REPOENTRY field of the NEGDEALS table should be used to determine which field (QUANTITY or REPOORDERVALUE) was specified in the initial order. Possible values are listed in the TRepoEntry type of the brokerage interface:

7	-	REPO Value.
8	-	Quantity.

When forming an accept order It's recommended to specify the number of received negdeal in the ACCEPTEDORDERNO field; in this case both parameters – REPO Value and Quantity should be defined. If number is specified, the trade will be concluded based on particular negdeal. If number is not specified, and multiple similar negdeals were received, the trade will be concluded based on the earliest one.

3. After orders matching, the trade is concluded, and STATUS field of the corresponding record in NEGDEALS table of both participants will assume the value "M".

At the same time three new records with sequential trade numbers (TRADENO) will be added to TRADES table of both firms:

1. "Parent trade", containing the following values: PRICE – REPO rate specified in the order, BUYSELL – direction of the 2nd REPO part, SETTLECODE – settlement code for the 1st part, TRADETYPE – "I".

2. Actual trade for the 1st REPO part, containing the following values: `PRICE` – price of the 1st REPO part, `TRADETYPE` – "J".

3. Actual trade for the 2nd REPO part, containing the following values: `PRICE` – price of the 2nd REPO part, `TRADETYPE` – "j".

`ORDERNO` value is similar for all three records. `PARENTTRADENO` field in the `TRADES` table indicates the number of the "Parent trade" (for both records on 1st and 2nd REPO parts),.

Commission fee value is displayed in corresponding fields of both "Parent trade" and actual trade for the 1st REPO part.

`ALL_TRADES` table displays only "Parent trade".

It is important to remember that the `NEGDEALS` and `TRADES` tables <u>should be opened only once</u> during one connection session. If a table is closed and opened again, then only new entries will appear there, and in order to retrieve all the previous entries reconnecting is required.

Order Withdrawal

If the negdeal order initiator decides to withdraw it, then `WD_NEGDEAL` transaction should be used. After its execution the `STATUS` of the order in the `NEGDEALS` table will change to "W" for both firms.
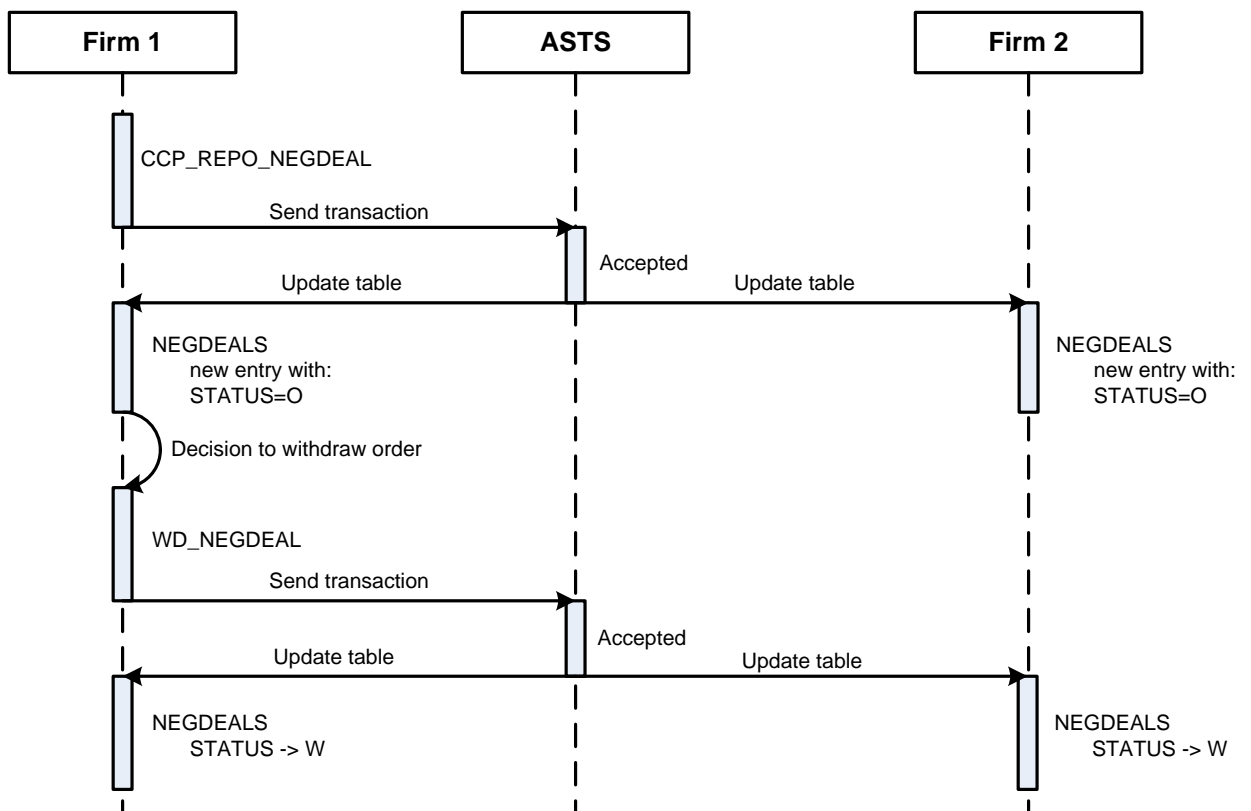
Order Rejection

If the negdeal order receiver decides to reject it, then `WD_NEGDEAL` transaction should be used. After its execution the `STATUS` of the order in the `NEGDEALS` table will change to "`F`" for both firms.

REPO with CCP Complex Negdeal Conclusion

REPO with CCP complex negdeals (`CCP_REPO_COMPLEX_NEGDEAL` transaction) are used to conclude trades between firm and its client or between clients of the firm. To do so, only one order is required without any additional confirmations. The trade is concluded at the moment of order registration in the Trading system orders queue.
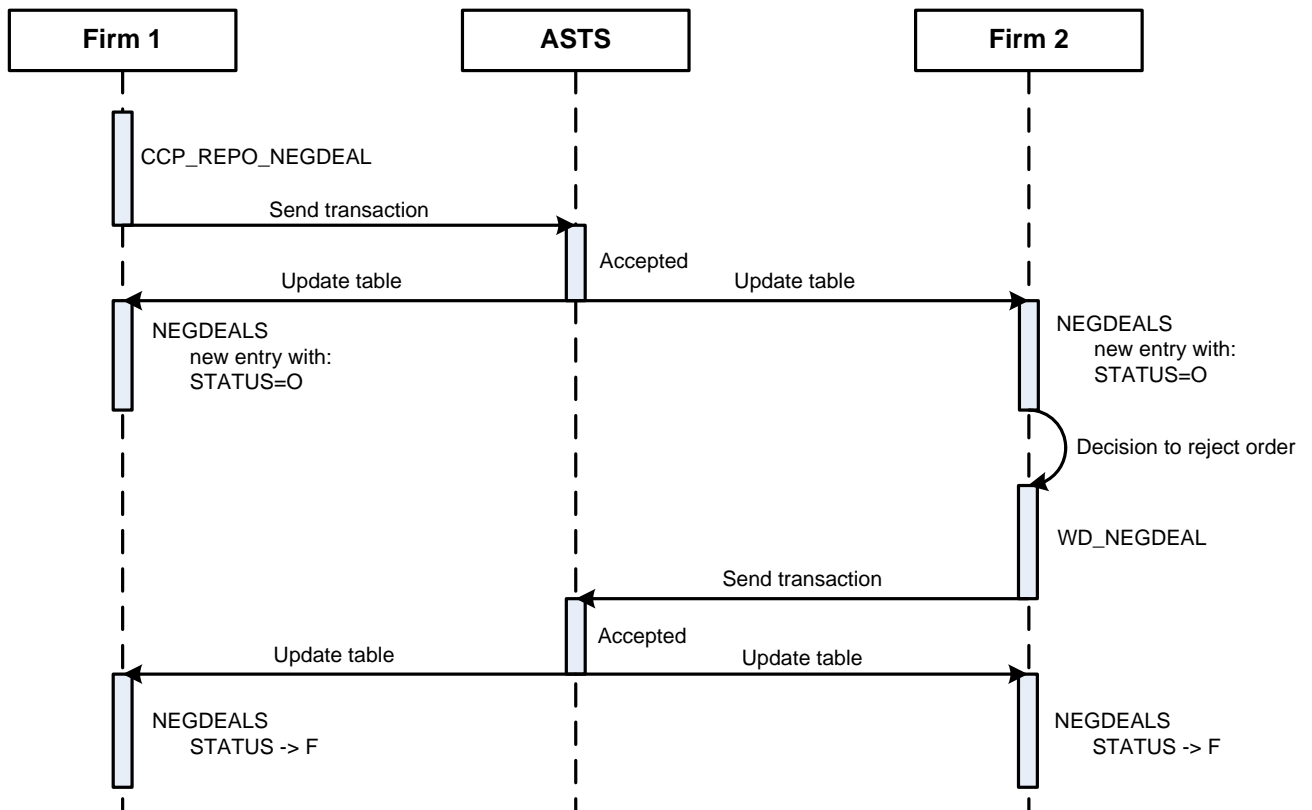
Parameters of these transactions should be filled similar to REPO with CCP Negdeal.

After submitting an order to the Trading System, two successfully executed counter-orders will be added to the `NEGDEALS` table, and three records for each of two trading accounts/clients will be added to the `TRADES` table (these records are completely similar to that ones, generated by REPO with CCP Negdeal Conclusion procedure, listed above).

Execution Report Submission

Execution reports may be submitted for all T+ trades with already occurred settlement date that were concluded based on Negdeals with CCP and REPO with CCP. Such trades are displayed in the "USTRADES" table (unsettled trades). This behavior is
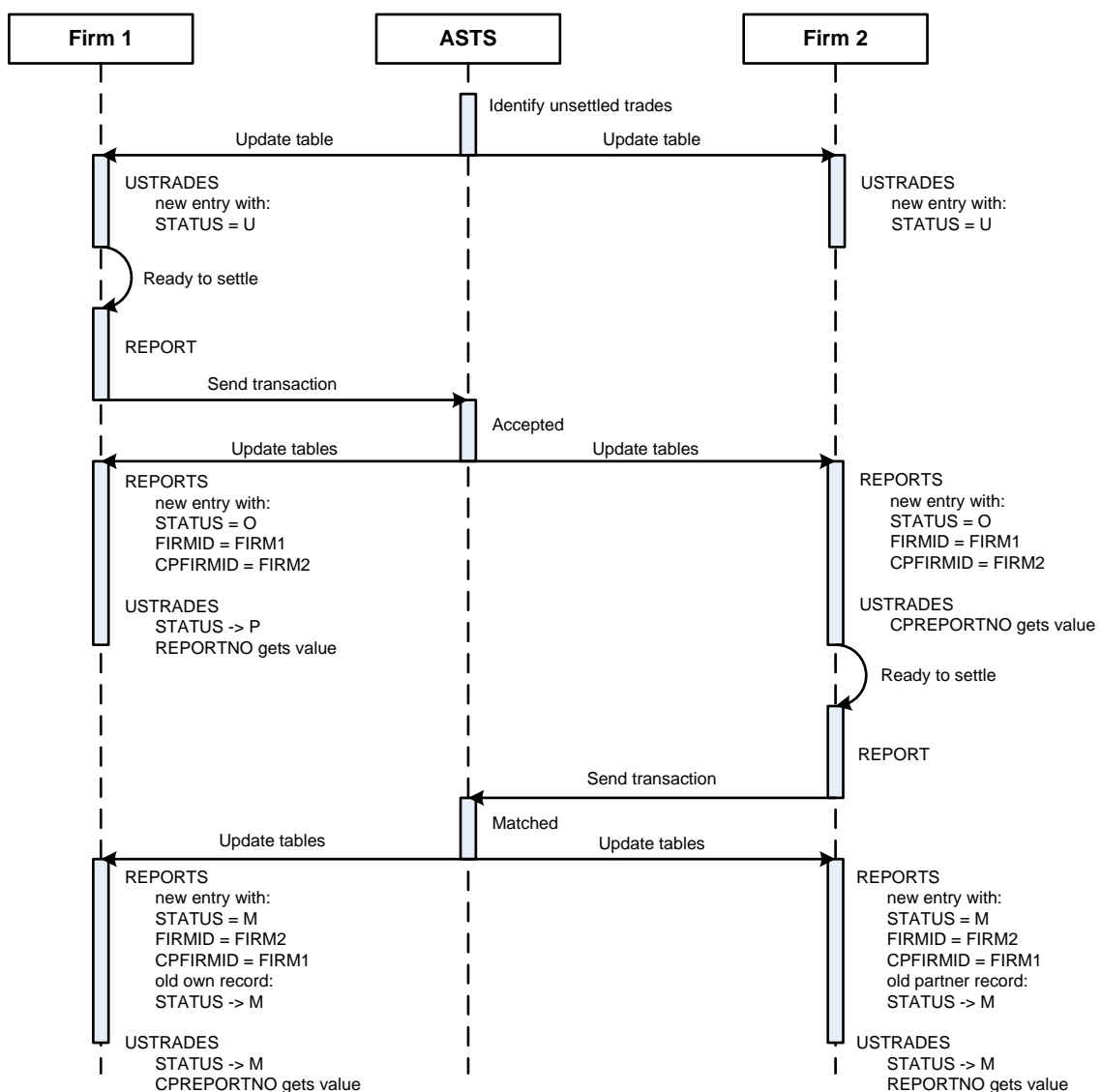
similar to Negdeals and REPO trades without CCP. Execution report may be submitted for both 1st and 2nd parts of REPO trade.

Execution reports submission is not an obligatory action for trade settlement. Execution reports matching lead to change of current participants' positions and the time of reports matching is treated as the time of liabilities termination for the corresponding trade.

Participants may submit regular or Urgent Execution Reports (for one trade) and Complex reports (for several trades). Please note that T0 and T+ trades cannot be included into one Execution Report. In case of Urgent Report trade settlement is performed online

If the Execution Report was not submitted before the 1st clearing session start than trade's status will change to USTRADES.STATUS=M (settled trade) and this trade will be included into 1st clearing pool.

The following scheme shows trade settlement procedure via Execution Reports matching:

Firm 1	ASTS	Firm 2
	Identify unsettled trades	
Update table		Update table
USTRADES new entry with: STATUS = U		USTRADES new entry with: STATUS = U
Ready to settle		
REPORT		
Send transaction	Accepted	
Update tables		Update tables
REPORTS new entry with: STATUS = O FIRMID = FIRM1 CPFIRMID = FIRM2		REPORTS new entry with: STATUS = O FIRMID = FIRM1 CPFIRMID = FIRM2
USTRADES STATUS -> P REPORTNO gets value		USTRADES CPREPORTNO gets value
		Ready to settle
		REPORT
	Send transaction	
	Matched	
Update tables		Update tables
REPORTS new entry with: STATUS = M FIRMID = FIRM2 CPFIRMID = FIRM1 old own record: STATUS -> M		REPORTS new entry with: STATUS = M FIRMID = FIRM2 CPFIRMID = FIRM1 old partner record: STATUS -> M
USTRADES STATUS -> M CPREPORTNO gets value		USTRADES STATUS -> M REPORTNO gets value

1. FIRM 1 submits REPORT transaction. The Execution Report may contain 1 to 99 trades with similar TRDACCID, CPFIRMID, CPTRDACCID parameters.

When working with the current version: use REPORT(CLEARINGTYPE="M") transaction to submit Execution Report for several trades (net) and REPORT(NUMTRADES="01", CLEARINGTYPE="S") for Urgent Report.

2. The corresponding records are added to the REPORTS tables of both participants.

If FIRMID field contains own firm identifier than the record represents the outgoing report. If own firm identifier is contained in CPFIRMID field than the record represents the received report.

The following changes will be made to the corresponding record in USTRADES (unsettled trades) table:

STATUS field changes to "P" on the sender side.

REPORTNO and CPREPORTNO fields on both sides are filled with the report number. If that report contained several trades than all the corresponding records will have similar REPORTNO and CPREPORTNO values.

3. FIRM 2 should also use REPORT transaction containing the same set of trades in order to settle the liabilities. CPREPORTNO field of the USTRADES table may be used to define which trades should be included into the particular report.

4. After the reports processing and matching, STATUS field of USTRADES and REPORTS tables on both participants' sides change to "M".

Possible values of STATUS field of the USTRADES table:

U - unsettled

P – included into sent report

M - executed

G – unsettled margin call

N – one of the participants submitted the report for margin call rejection

C – canceled by the Trading System

W – withdrawn by participant.

Note: STATUS="C" is used only in case of manual trade cancelation by the Exchange.

Early settlement of REPO with CCP trades

Early settlement is possible between the next date after a first part settlement and the day preceding the second part settlement.

To execute early settlement both trade parties should enter an instruction for settlement date change (a new EARLY_SETTLE transaction from ASTS Bridge broker interface). Then such a trade will be settled 'today' via a standard procedure, including an opportunity to send a settlement report.

For second parts of REPO with CCP trades displayed in the USTRADES table cash liabilities and claims for second trade parts will be displayed assuming their early settlement 'today'. These liabilities and claims are calculated using the interest accrued during the actual term that has passed. Interest is calculated using the rate indicated in the original REPO with CCP trade and for the elapsed period including a current date.

In the USTRADES table, the date corresponding to the current trading day is indicated in the SETTLEDATE field, and the value "Y" is indicated in the EARLYSETTLESTATUS field.

In the REPORTS table, in the REPORTTYPE field, the report type "E" is available - a report for early execution.

SETTLEDATE field in the USTRADES table indicates the date corresponding to the current trading day. The EARLYSETTLESTATUS field specifies the value "Y".

There is a report type "E" - a report for early execution in the REPORTTYPE field in the REPORTS table.

Withdraw Execution Reports

Execution report that was submitted by participant but not yet accepted by counterparty may be withdrawn using WD_REPORT transaction.

After WD_REPORT execution STATUS field of the USTRADES table will revert to "U", REPORTNO and CPREPORTNO fields – empty, STATUS field of the REPORTS table will change to "W".

Opportunity to cancel the first part of REPO with CCP negotiated trade

Cancellation of REPO with CCP Negdeal is possible only on the date of the trade.

It is can not submitted to issue a report for cancellation of the trade if:

1. if the counterparties have previously submitted Execution Reports of the first part of REPO and they have already been matched.

2. if the trade has moved to the "Executed" status:

   - later than 16:00 – for a trade with settlements in RUB or USD, concluded before 16:00, for a trade with settlements in CNY, concluded from 12:00 to 16:00, for a trade with settlements in EUR, concluded from 15:15 until 16:00;

   - later than 19:00 - for a transaction with settlements in RUB or USD concluded from 16:00 to 19:00;

   - later than the deadline set by the schedule for determining the final net positions in the settlement currency of a trade with the settlement code Y0/Yn: later than 12:00 for CNY-settled trades concluded before 12:00, later than 15:15 for EUR-settled trades concluded until 15:15;

3. The cancellation report failed the check for the money settlement position.

   The verification is passed if the value of the cash settlement position, taking into account the Cancellation Order, does not become negative, or, if the cash settlement position was negative before the moment of verification, then its value after the verification will not become less than it was before the moment of verification.

4. The Cancellation report did not pass the collateral check at the time of registration in the trading and clearing system.

There is no compensation, the commission is not returned.

The cancellation workflow involves the following steps:

1. One party sends the CANCEL_TRADE transaction.

2. The STATUS field for this trade in his USTRADES table will change to 'N' and the REPORTNO field will contain the unique ID of the cancellation report. The other party will get the cancellation report number in the CPREPORTNO field.

3. The other party needs to send the matching CANCEL_TRADE transaction.

4. When two cancellation reports are matched then the STATUS of the trade entry in the USTRADES tables of the both parties will change to 'W' - Canceled by the user.

Information about canceled trades

Changes in clearing reports due to opportunity to cancel the first part of REPO with CCP negotiated trade:

EQM06 (EQM06P/ EQM06R), EQM6C: value of InfType=4 field have new description "Unsettled and terminated trades / Unsettled credit contracts / Unconcluded deposit contracts"

SEM03: Trades register is supplemented with two new attributes to mark canceled trades and specify numbe of a trade cancellation order:

- CancelOrder - Number of trade cancellation order;
- IsCancel - Flag to mark canceled trade. The field have Y value for canceled trades and NULL value in other cases.

REPO with CCP Trade Conclusion in the Main Trading Mode

In order to enter REPO with CCP order in Main Trading Mode, `CCP_REPO_ORDER` transaction should be used. All general order types of Main Trading Mode are supported: limit/market orders; at one or different price; Put into queue/Fill and Kill/Fill or Kill). Unlike previously used method of market orders placement, (price field contains zero), to submit a REPO with CCP market order, `PRICE` field must not contain any characters (filled with spaces for the whole length).

Similar to negdeals, when trade is concluded in the Main Trading Mode, three records appear in the `TRADES` table for each trade. `TRADETYPE` field will assume "G", "H", "h" values respectively for "Parent trade", 1st and 2nd actual trades.

When concluding trades in the Main Trading Mode, partial orders execution is also possible.

REPO with CCP Order Withdrawal in the Main Trading Mode

Orders withdrawal can be performed with the same transactions as in other trading modes – `WD_ORDERS` or `WD_ORDER_BY_NUMBER`.

Income Payment Liabilities

If during the REPO term liabilities on principle payment (coupon payment, amortization) or dividend payments occur, details on them is provided as "technical" trades on `RFND` board in the `TRADES` table. These "technical" trades have the following parameters: "L" type, 'W0' settlement code, "0" quantity of lots. `EXTREF` field is filled with the number of trade, on which the principle payment occurs.

At the same time liabilities to return income begin to be blocked in the Single Limit. The Single limit will not change at this point (unless the real payout is different from the blocked payout). When the payout time comes, a technical transfer transaction occurs in TRAN mode in the RFN* mode. At this moment, the blocked value is withdrawn from the RFND position and the TRAN transfer itself starts to be taken into account in the Single Limit.

"Technical" orders (sent by participant to Clearing Center and the opposite ones) that led to trade conclusion are added to the `NEGDEALS` table.

Fields of technical order that were submitted by the Clearing Center are filled as follows:
– `MATCHREF` contains the payment type code: "5" – coupon, "6" – amortization, "7" – dividends.

– `BROKERREF` – similar to initial order.

`BROKERREF` field of participant's order (addressed to Clearing Center) contains the payment type name: `COUPON_PAYMENT`, `PRINCIPAL_PAYMENT`, `DIVIDEND_PAYMENT`.

`DIVIDENDVALUE` field of the `SECURITIES` table contains the value of dividend payment. `DIVIDENDDATE` refers to the registration date of the list of persons eligible to receive dividends

Liabilities on Principle payment are displayed in the `POSITIONS` table with `TAG=RFND` and included into Single Limit Calculation.

Income transfers are made in cash.

T+ Trades Conclusion on Main Trading Mode and Negotiated Deals Mode

To submit an order in T+ trading mode with Central Counterparty, the same transactions as on T0 mode are used: "`ORDER`" for orders on Main Trading Mode and "`NEGDEAL`" for Negotiated Deals mode.

Collateral accounts

BankAcc (position code)

`BANKACCID` (position code) is introduces in the current implementation of the Trading System.

Position code defines the way how trading accounts, collateral accounts, T0 money positions and Collateral money positions correspond to each other. The data is displayed in "`BANKACC`" and "`TRDACC`" tables.

Collateral accounts for securities

Collateral account (section 36 of depo account) can be registered in the Trading System in addition to main trading account (section 31 of depo account) and can be identified by "`FIRMUSE=U`" parameter in the "`TRDACC`" table (in this case "`TRDACCID`" value differs from "`MAINTRDACCID`". Collateral account has the same position code as main trading account.

Settlement Organizations

Each position code corresponds to Settlement organizations and a particular real account. Details provided in the "`BANK`" and "`BANKUSE`" tables.

Collateral positions for money

In addition to T0 money position, a collateral position with "`TAG=UTSR`" (for rubles) is opened in the Trading System and displayed in the `POSITIONS` table. For other currencies: euro - UTSE, dollar - UTSD, etc.

Clearing member may send an application to consolidate the EQTV and UTSR positions to be used for both T0 and T+.

Consolidated T0 and T+ securities and cash positions for trades settled in RUB

It is possible to use either T0 trading-clearing account (accounts like L01-…) and T+ trading-clearing account (accounts like L01+…) to enter orders in any trading mode (T0, T+, REPO with CCP).

Besides, a clearing member may submit an application to mark his T0 account as having a consolidated cash position with T+.

Depending on the trading mode and type of trading-clearing account the following cash positions and depository partitions will be used:

Order-driven market:

#	TRDACC type	Trading mode	Cash position	Partition of a depository account
1	T0	T0	EQTV	31
2	T0 consolidated	T0	UTSR	31
3	T+	T0	UTSR	36
4	T0	T+	UTSR	36
5	T0 consolidated	T+	UTSR	36
6	T+	T+	UTSR	36

REPO with CCP:

#	TRDACC type	Settlement code	Cash position		Partition of a depository account	
			1st part	2nd part	1st part	2nd part
7	T+	Y0/Y1	UTSR	UTSR	36	36
8	T+	T0/Y1				
9	T0	Y0/Y1	UTSR	UTSR	36	36
10	T0 consolidated	Y0/Y1	UTSR	UTSR	36	36

EQTV – cash account in NSD (National Settlement Depository)

UTSR – collateral cash account in NCC (National Clearing Centre)

BANKIDT0, BANKIDTPLUS and DEPUNITID fields of the TRDACC table provide details on settlement organization for a particular account (NSD or NCC) and DEPO account section, TRDACC corresponds to.

Collateral

In order to take part in trading with the central counterparty, participants need to transfer money and/or securities to the collateral accounts. Based on these assets, the value of a Single Limit is calculated in the Trading System.

Securities, used in collateral are similar to ones traded in T+ and REPO with CCP modes.

Money balance on Collateral account in the Clearing Center is uploaded to the Trading System and displayed in the OPENBAL field of the POSITIONS table with "TAG=UTSR".

During the trading day participant may transfer money from T0 position to collateral and back again.

Money balance on Collateral account in the Clearing Center is uploaded to the Trading System and displayed in the opening balance of the collateral accounts (OPENBAL field of the ACCOUNT_BALANCE table).

During the trading day Participant can transfer securities from T0 position to collateral and back again.

Transfers

To transfer money or securities to the collateral during the trading day, `COMPLEX_TRANSFER` transaction with `SECBOARD=TRAN` should be used. Accounts to withdraw and deposit should be specified in the transfer order.

Use `SECCODE=RUB` to transfer money. Decimals are not permitted to rubles transfers.

Transfer orders are displayed in the `SECTRANSFERS` table and successfully executed transfers – as concluded trades in the `TRADES` table with "`TRADETYPE=F`".

Securitiy transfers may be performed by Clearing Member between trading and collateral partitions of one depositary account only. Cash can be transferred between any trading and collateral accounts within a firm.

Liabilities Settlement

Liabilities Settlement procedure requires the needed assets to be transferred to Participant's Collateral accounts.

`SETTLEBAL` field of the `POSITIONS` table displays planned money positions after the prospective settlement. The negative value means that amount of money on the particular Collateral account is insufficient to perform liabilities settlement.

`SETTLEBAL` field of the `ACCOUNT_BALANCE` displays planned securities positions after the prospective settlement. The negative value means that securities assets on the Collateral account are insufficient to perform the settlement.

At the settlement stage transfers from T0 to T+ are performed automatically for a missing amount by default. Clearing Participant may submit an application to the Clearing Center to disable this option or change its' behavior to transfer the whole amount of money/securities needed instead of missing amount.

First clearing session (Liabilities settlement procedure) starts at 17:00 (MSK) and performed as follows:

1. Verification of assets sufficiency to perform net liabilities settlement for T+ and REPO with CCP trades with settlement date already occurred and included into 1st Clearing Pool. In case of assets insufficiency regular position transfer procedure is performed: REPO with CCP and Negdeals with CCP (NDM) trades are concluded on `TADM` and `NADM` boards. These trades will also be included into 1st clearing pool.

2. Liabilities settlement for T+ trades. The corresponding changes are made to current security positions (`ACCOUNT_BALANCE.CURRENTPOS`) and money positions (`POSITIONS.CURRENTPOS`).

3. Once the liabilities settlement procedure is complete an event with type "T" (T+ Liabilities Settlement) is added to the `TRADETIME` table.

4. NSD performs securities settlement procedures for trades included into 1st Clearing Pool.

5. Once the securities settlement is complete by NSD the corresponding changes are made to securities opening balance (`ACCOUNT_BALANCE.OPENBAL`).

6. The time of the opening balance change is added to the TRADETIME table as event with type "I" (Clearing end) and treated as liabilities settlement time and the end of the clearing session.

Second clearing session starts at 19:00 MSK in order to settle the liabilities for trades included into 2nd Clearing Pool and performed similar to the 1st clearing session (17:00).

In case the trade is settled based on Execution Reports than Reports matching time is treated as the time of liabilities settlement.

The following trades are included into the 1st Clearing Pool (17:00 MSK):

1. All T+ trades (both order-driven and negotiated deals) with the settlement date already occurred.

2. Trades on negotiated deals with CCP that were concluded after 16:00 in case Execution reports for a particular trade were submitted and matched before 17:30.

3. All other trades with CCP with the settlement date already occurred that were concluded on equities&bonds market before 15:59:59 MSK (except T+ trades that were previously settled before 15:59:59 using Urgent Execution Reports – such trades will be settled as T0 trades at 17:30).

4. All T0 trades without CCP and 1st parts of REPO trades with Rb settlement code with settlement date already occurred, that were concluded on equities&bonds market before 17:30 MSK.

5. All other trades without CCP concluded on equities&bonds market that were settled using Execution Reports that were submitted and matched before 17:30.

6. Liabilities on Cancellation payoff (compensation for the cancellation of the 1st part of REPO trade) in case Cancelation Orders were submitted and matched before 17:30.

7. Transfers between T+ and T0 positions executed before 17:30 (trades on TRAN board).

8. Liabilities prolongation trades concluded during the clearing session (NADM and TADM boards).

The following trades are included into the 2nd Clearing Pool (19:00 MSK):

1. Trades with CCP with Y0 settlement code concluded after 16:00 MSK in case Execution Reports were not submitted and matched before 16:30.

2. T0 trades and 1st parts of REPO trades with Rb settlement code with settlement date already occurred, that were concluded between 17:30:00 and 18:59:59.

3. All other REPO trades without CCP and NDM trades (concluded on negdeal orders) in case Execution Reports were submitted and matched between 17:30:00 and 18:59:59.

4. Liabilities on Cancellation payoff (compensation for the cancellation of the 1st part of REPO trade) in case Cancelation Orders were submitted and matched between 16:30 and 18:59:59.

5. Transfers between T+ and T0 positions executed between 17:30 and 18:59:59 (trades on `TRAN` board).

6. Liabilities prolongation trades concluded between 19:00:00 and the end of the clearing session (`NADM` and `TADM` boards).

Data on liabilities settlement is displayed in EQM06 xml-report as follows:

`ReportTime` field contains the time of current and planned positions change after the liabilities settlement (execution time of trades with Z0 settlement code and Urgent Execution Reports settlement time in NSD, time of regular or complex Execution Reports matching, T0 trades conclusion time, time of current and planned T+ positions change after liabilities termination).

`SettleTime` field – time of the opening balance change after the securities settlement performed by NSD (execution time of trades with Z0 settlement code and Urgent Execution Reports settlement time – this value is similar to ReportTime, time of the clearing session end all other trades are included to - "Clearing End" event with type "`I`" in the bridge interface).

Conclusion of REPO with CCP trades at the evening trading session

Conclusion of REPO with CCP Negdeal in the evening trading session (19:00:01 — 23:49:59) allowed:

- within one trading-clearing account: Y0, T0, Y1, Y2 - for REPO with CCP (included GCC)

- between different trading-clearing account: Y1, Y2 - for REPO with CCP (included GCC) and Deposits with CCP

Liabilities with the current execution date concluded during the evening trading session will be terminated at 23:50 following the results of the netting.

Trading and clearing reports are sent to participants after 23:50 and before 9:00 on the next settlement day.

In the clearing reports "Trades included into clearing" (EQM06 / EQM6C / EQM6D) for trades concluded in the evening session, the SESSION field is not filled in.

Risk Management System

Risk Management System is responsible for Single Limit calculation for each position code, based on money and securities in collateral. Calculation is performed using Risk-Parameters values which are pre-defined in the Trading System.

Single Limit is calculated at the basis of value of securities on T+ accounts, liabilities on trades concluded in T+ and REPO with CCP modes, and money in collateral. Actual value of the Single Limit is displayed in the `POSITIONS` table with "`TAG= UTSL`".

Both current and planned positions are calculated for a Single Limit. Current positions correspond to Participant's opened positions on T+ and REPO with CCP, Planned positions are calculated for Participant's active orders.

Planned Single Limit value is checked by the Trading System at the order entry step. If the order leads to a negative Single Limit value, it will be rejected by the Trading System.

Risk-parameters are displayed in the following tables: `ASSETS` (Risk-Parameters), `RM_INDICATIVE` (Percent risk parameters), `RM_PRICERANGE` (market risk parameters).

Options to prohibit short selling or buying without full prefunding

Depending on the category of clearing membership, instrument class and trading mode (please refer to business documentation for further details on these categories) the clearing center may set a "prohibit short selling" or "prohibit buying without full prefunding" flag for a clearing member or a security.

Clearing members admitted to trading without full collaterals are able to set the following options on their own:

- prohibit buying without full prefunding from a particular settlement account;
- prohibit short selling from a particular trading-clearing account;
- set the short selling limit for a trading-clearing account and security.

When clearing center completely disables both short selling and non-prefunded purchasing for a firm or a security then the FULLCOVEREDFLAG=YES flag will be set in FIRMS or ASSETS tables.

Prohibition of buying without full prefunding on a particular bank account can be set either by Clearing Center or by Clearing Member himself using SET_BANKACC_FULLCOVERED transaction. FULLCOVEREDBUY field in the BANKACC table shows the current status.

Prohibition of short selling from a particular trading-clearing account can be set either by Clearing Center or by Clearing Member himself using SET_TRDACC_FULLCOVERED transaction. FULLCOVEREDSELL field in the TRDACC table shows the current status.

Besides the full prohibition of short selling, clearing center or clearing member admitted to trading with partial collateral may set the short sale limit using the SET_HOLD_FCLIMIT2 transaction. Information on this limit is displayed in the following fields of the ACCOUNT_BALANCE table:

LIMIT1SET – limit defined by Clearing Center is active;

LIMIT1 – value of the limit defined by clearing center;

LIMIT2SET – limit defined by Clearing Member is active;

LIMIT2 – value of the limit defined by Clearing Member.

When the limit is set (or short selling is disabled) the volume of planned position covered by collaterals is displayed in the PLANNEDCOVERED field of RM_HOLD and ACCOUNT_BALANCE tables.

Similarly the amount of cash position covered by prefunding is displayed in the PLANNEDCOVERED field of the RM_POSN table.

Individual Risk Parameters

SET_RM_PRICERANGE_FIRM transaction may be used by participant to determine the multiplication coefficient (with two decimals) that will be applied to risk parameters range (intervals between settlement price and upper and lower price range bounds). Individual risk parameters are applied to the particular combination of trading account and asset.

Changes of individual risk parameters take effect on next trading day and remain active until the next modification. Data on Individual Risk parameters is displayed in RM_PRICERANGE_FIRM table.

Mark-to-market Procedure

Mark-to-market procedure is performed at the morning before the beginning of trading day to ensure that Collateral amount is sufficient.

During the Mark-to-market procedure, the value of Single Limit can become negative.

In this case Participant will receive a Marginal Call for an absolute value of negative amount of Single Limit. Marginal Call should be settled until 17:30 (Moscow time) of the current trading day.

Margin Call value is displayed in the MARGINCALL field of the POSITIONS table.

Marginal requirement can be settled by transferring additional collateral or closing firm's positions. In case of negative Single Limit, only orders which lead to its increase are allowed.

Liabilities Prolongation

In case of Clearing Member has insufficient funds to settle own net liabilities, the settlement is deferred to the next day by concluding REPO with CCP trade with a forfeit.

Details on these trades are displayed in the TRADES table as trades on TADM board. Participant may submit an application to the Clearing Center in order to perform liabilities prolongation as dual NDM with CCP negdeal trades on NADM board.

In case such trade is concluded a corresponding record appears in the NEGDEALS table with the MATCHREF field, containing one of the following values:

'1' – Securities loan from the Clearing Center

'2' – Money loan (rubles) from the Clearing Center against securities

'3' – Clearing Center's securities loan from replenishment provider

'4' – Reverse REPO trade with the participant, who borrowed securities from the Clearing Center to reduce Clearing Center's liabilities on securities.

This value is also included into MATCHREF field of SEM02 and SEM03 trading reports.

The type of the trade, concluded to execute unsettled liabilities on trades with partial collateral is added to the TYPE fileld of In EQM06 clearing report with one of the following values:

"1" – REPO trade, unsettled on Clearing Participant side;

"2" – buy-sell trade, unsettled on Clearing Participant side;

"3" – REPO trade, unsettled on Central Counterparty side;

"4" – buy-sell trade, unsettled on Central Counterparty side;

"5" – REPO trade or Debt Agreement concluded by Clearing Center.

The following table shows the accordance between `MATCHREF` and `TYPE` fields:

MatchRef	Type	
	`"TADM"` board	`"NADM"` board
1, 2	1	2
3	5	5
4	3	4

Mandatory closing of positions

In case Clearing Member has failed to execute the Margin Call within a term, Clearing Center performs the procedure of Mandatory closing of positions. During this action, "closing trades" are concluded between Clearing Center and Member as negotiated deals with a tomorrow settlement (`Y1` settlement code). These trades represent an occurred market risk events of unsettled liabilities that lead to Single Limit increase for a particular bank account.

"Closing trades" conclusion leads to full or partial margin call execution. Oppositely directed liabilities and claims on REPO with CCP trades with already occurred settlement date and "Closing trades" are closed against each other.

In case of mandatory closing of positions, Clearing Member's bank account status is set to "Mandatory closing". This means that the Member loses the ability to submit or withdraw any orders.

"Closing trades" are initiated by Clearing Center staff. Details on mandatory closing of positions are presented as trades on corresponding trading boards that which affect the Single Limit calculation.

Appendix 1. REPO Parameters Calculation: Discount

Discount on REPO with CCP trades is determined by the formula:

- For regular orders (order book trades):

  Discount value for regular orders (order-driven market) is set equal to the minimum value of 0.3 and to 1st level market risk value:

$$DiscountREPO_1 = min[\ 0,3;\ ceiling(\frac{S\_1}{\sqrt{2}}, 2)],$$

  where ceiling(...,2) is the function of rounding up to the 2nd decimal place,

  S_1i is the1st level market risk value. It is determined as a percentage.

- For off-order book trades:

$$[-min(0,9;\ 3 \times S\_1_i);\ min(0,9;\ 3 \times S\_1_i)].$$

  Acceptable discount values are set in the range from the minimum value of 0.9 and the negative of 1st level market risk value to the minimum value of 0.9 and the 1st level market risk value:

Detailed information of REPO parameters calculation is available in the document.