

Changes in the FX and Equity markets ASTS trading and clearing system related to the Unified Collateral Pool project (UCP)

Project details are available at the NCC website:

<http://www.nkcbank.com/UserFiles/File/Unified%20pool/Unified%20Collateral%20Pool.pdf>

Table of contents

Changes in software and connectivity protocols	2
Technical transfers	2
Settlement accounts for UCP	3
Asset profile transfer to other markets.....	4
Changes in position tables and lists of TAGs	4
Changes that affect all users	6

Changes in software and connectivity protocols

Changes are implemented in:

- new ASTS Bridge broker interfaces `IFC_Broker28` (FX market) and `IFCBroker_28` (equity market);
- new versions of trader terminals - MICEX Trade Currency 3.12 и MICEX Trade SE 3.12;
- clearing XML reports.

FIX and FAST UDP multicast marketdata are not affected by this project.

Key changes in broker interfaces:

- New `BANKACC.UNIFIEDPOOL` flag (FX and equities) shows if a settlement account has the unified pool status.
- `TRADES.STATUS` field (FX and equities) – trade status.
- `SECTRANSFERS.TRANTYPE` and `TRADES.TRANTYPE` fields (equities) – type of transfer.
- `TRANTYPES` table (equities) – list of available types of transfers.
- Length of all fields with total values (`QUANTITY`, `HIDDEN`, `BALANCE`, etc.) increased from 10 to 16 bytes.
- `POSITIONS.SETTLEBAL` (FX) – planned position after settlement. On the current production version of the FX market this value is actually the same as in the `PLANNEDPOS` field. Now the planned position is calculated as current position plus T0 orders. But because there are no T0 orders on the FX market (there are only T+0 orders with partial collateral) the planned position will be equal to current position.
- New `RM_POSN` table on the FX market.
- The `SECACCINT.DECIMALS` (equities) field has been removed as redundant since all the values are now received with decimal point and with the maximum possible precision.

New in MICEX Trade terminals:

- Option to connect to the NCC web service to manage collateral and assets.
- Request for asset profile transfer (using the NCC web service).
- Request for collateral transfer (using the NCC web service).
- Tables with details on the above named requests.
- New fields and tables similar to the ones added to broker interfaces.

Structure of clearing XML reports for all markets will be updated. More details to follow.

Technical transfers

A new trading board is added to the FX and equity systems: `TRAD - NCC Transfers`.

There are additions on how information on assets and liabilities is displayed on the FX and equity markets. The following types of transactions that affect current position on a settlement account will be shown in trading and clearing systems as technical transfers:

On equity market:

- Dynamic deposit and withdrawal of assets.
- Transfer of money to/from a UCP account.
- Charge of commission fee.
- Crediting of variation margin calculated on the FX or derivatives market for the equity market UCP settlement accounts.
- Asset profile transfer for the UCP.
- Charge of commission fee for clearing collateral held in foreign currencies or precious metals.

On FX market:

- Crediting/debiting of variation margin.
- Charge of commission fee.
- Charge of commission fee for asset accounting.
- Debiting of a settlement account.
- Crediting of a settlement account.

Depending on a type of transaction a newly generated technical transfer includes either IDs of two clearing members or ID of a clearing member and the NCC's ID. The `TRANINFO` field in the `TRADES` and `SECTRANSFERS` tables will show transaction code and additional information. Available transfer type codes from the new `TRANTYPE` field are listed in the new `TRANTYPES` table.

Special technical accounts are created for every settlement code in the equity market trading and clearing system for such transactions related to the position updates.

The existing technical transfers for refund payment for REPO with CCP trades with settlement in foreign currencies have been merged from the `RFNE` and `RFNU` boards to the `RFND` board (currently used for refund payments in Rubles). And the `SECCODE` field will now show the currency (`RUB`, `USD`, `EUR`) instead of the instrument code.

New technical transfers for commission fee will show `RUBCOM` in the `SECCODE` field.

The existing automated transfers from T0 to T+ accounts will be moved from the `TRAN` board to the `TRAD` board.

Settlement accounts for UCP

The following new flag shows if a settlement account is used for the unified collateral pool:
`BANKACC.UNIFIEDPOOL`.

If a clearing member decides to use the unified collateral pool technology then it is possible to merge a settlement account from another market with a UCP settlement account. In such case a settlement account in unsettled trades will be replaced with a UCP account. On the FX market this replacement will be displayed as two technical trades (opening trade and closing trade) on the `SHFT` board.

Asset profile transfer to other markets

Clearing members can transfer asset profiles to the derivatives and FX markets using any of the following interfaces:

- MICEX Trade SE, MICEX Trade Currency and Spectra terminals.
- The NCC EDI system.
- The NCC Web Clearing portal.

Asset profile transfer is implemented as a distributed transaction process with the following workflow:

1. A technical trade is created on the equity market `TRAD` board.
2. If the derivatives or FX market system confirms a possibility of such a transfer then this trade is marked as settled.
3. If the derivatives or FX market system rejects this transfer then the technical trade status changes to "Cancelled by the trading system".

Status of technical trades is shown in a new field: `TRADES . STATUS`. This field may also be used to read status of other trades concluded by a trade member.

New settlement codes are used in technical transfer trades:

On equity market:

<code>TRAN_B</code>	Asset credit/debit
<code>AO_B</code>	Asset profile transfer/return, asset credit/debit in two phases
<code>NO</code>	Create T+ claims/liabilities

These transfers change the opening balance value for positions.

On FX market:

<code>TRAN</code>	Asset credit/debit
<code>AO</code>	Asset profile transfer/return, asset credit/debit in two phases
<code>NO</code>	Create T+ claims/liabilities

These transfers change the current position value.

Changes in position tables and lists of TAGs

1. New position codes (`POSITIONS . TAG`) are added on the equity market:

<code>BYCU</code>	Profile transferred to FX market - BYN
<code>BYFO</code>	Profile transferred to derivatives market - BYN
<code>CYCU</code>	Profile transferred to FX market - CNY

CYFO	Profile transferred to derivatives market - CNY
EUCU	Profile transferred to FX market - EUR
EUFO	Profile transferred to derivatives market - EUR
GBCU	Profile transferred to FX market - GBP
GBFO	Profile transferred to derivatives market - GBP
GLCU	Profile transferred to FX market - GLD
GLFO	Profile transferred to derivatives market - GLD
HKCU	Profile transferred to FX market - HKD
HKFO	Profile transferred to derivatives market - HKD
KZCU	Profile transferred to FX market - KZT
KZFO	Profile transferred to derivatives market - KZT
RUCU	Profile transferred to FX market - RUB
RUFO	Profile transferred to derivatives market - RUB
SLCU	Profile transferred to FX market - SLV
SLFO	Profile transferred to derivatives market - SLV
UACU	Profile transferred to FX market - UAH
UAFO	Profile transferred to derivatives market - UAH
USCU	Profile transferred to FX market - USD
USFO	Profile transferred to derivatives market - USD
UTSA	Assets - UAH
UTSB	Assets - BYN
UTSH	Assets - HKD
UTSK	Assets - KZT

2. In the IFC_Broker28 interface of the FX market all the ASSETS related to currencies will be moved from the RM_HOLD to the RM_POSN table.

3. On the FX market the following position identifiers (POSITIONS.TAGS) containing data on positions for TOD settlement will be removed: ASET, BSET, CSET, ESET, GSET, HSET, KSET, PSET, RSET, SSET, USET, WSET.

The "Positions for settlement" table will also be removed from MICEX Trade Currency terminal.

All the above mentioned tags are excessive as they contain data that may be obtained in a different way:

When using the new IFC_Broker28 interface:

- Opening balance for settlement (today's obligations and claims at the beginning of the trading day) - net value of (CREDITBALANCE - DEBITBALANCE) of the RM_POSN table for the DATE='today' row.
- Current balance for settlement (current obligations and claims that should be settled today, including TOD trades) - the RM_POSN.VALUE for the DATE='today' row.
- Planned position for settlement (current obligations and claims that should be settled today, including active orders) - net value of (VALUEBUY - VALUESELL) of the RM_POSN table for the DATE='today' row.

When using the current production versions of the broker interfaces:

- Opening balance for settlement (today's obligations and claims at the beginning of the trading day) - net value of (CREDITBALANCE - DEBITBALANCE) of the RM_HOLD table for the DATE='today' row.

- Current balance for settlement (current obligations and claims that should be settled today, including TOD trades) - net value of (DEBIT - CREDIT) of the RM_HOLD table for the DATE= 'today' row.
- Planned position for settlement (current obligations and claims that should be settled today, including active orders) - net value of (VALUEBUY - VALUESELL) of the RM_HOLD table for the DATE= 'today' row.

4. On the equities market the meaning of VALUEBUY/VALUESELL fields in the RM_HOLD table has changed. Now instead of the value in active buy/sell orders they will show claims/liabilities for active orders. This change affects all versions of broker interfaces.

Changes that affect all users

Here is the summary of the above described changes that affect all users – even those who do not use the UCP functionality and stick to the previous versions of broker interfaces.

Equities market

- Data on refund payments from RFNU and RFNE boards will be merged into RFND board. The SECCODE field will show the currency ID instead of the instrument code.
- The RM_HOLD.VALUEBUY/VALUESELL fields will now show claims and obligations for active orders.
- Changes in XML reports (more details will be provided separately):
 - Contents of the EQM13 and EQM23 will change with no XML structure affected.
 - Timing of the EQM13 report delivery will change.
 - Additional attributes will be added to other reports without XML structure changes.
- Automated technical transfers from T0 to T+ accounts will move from TRAN to TRAD board.
- The new TRAD boards with all the new technical transfers will be available to all the clearing members.

FX market

- Removal of position code identifiers with data on positions for TOD settlement.
- Changes in XML reports (more details will be provided separately):
 - Structural changes in the CCX10 report. Change of timing of this report delivery.
 - Additional attributes will be added to other reports without XML structure changes.
- The new TRAD boards with all the new technical transfers will be available to all the clearing members.