Time Weighted Average Price Algorithm

New features in order algorithmic placement

VWAP – the existing FX order type which is filled at prices with a weighted average value not greater than the limit price specified in the order.

TWAP – a new method to execute orders which allows evenly filling the quantity you wish to buy or sell within the chosen time period; at fixed intervals, the TWAP algorithm places multiple orders of certain sizes and at certain prices in the trading system.

Order types placed by TWAP:

- Market order: an order is executed immediately with the remaining part cancelled
- IOC limit order: an order is executed immediately with the remaining part cancelled

TWAP algorithm:

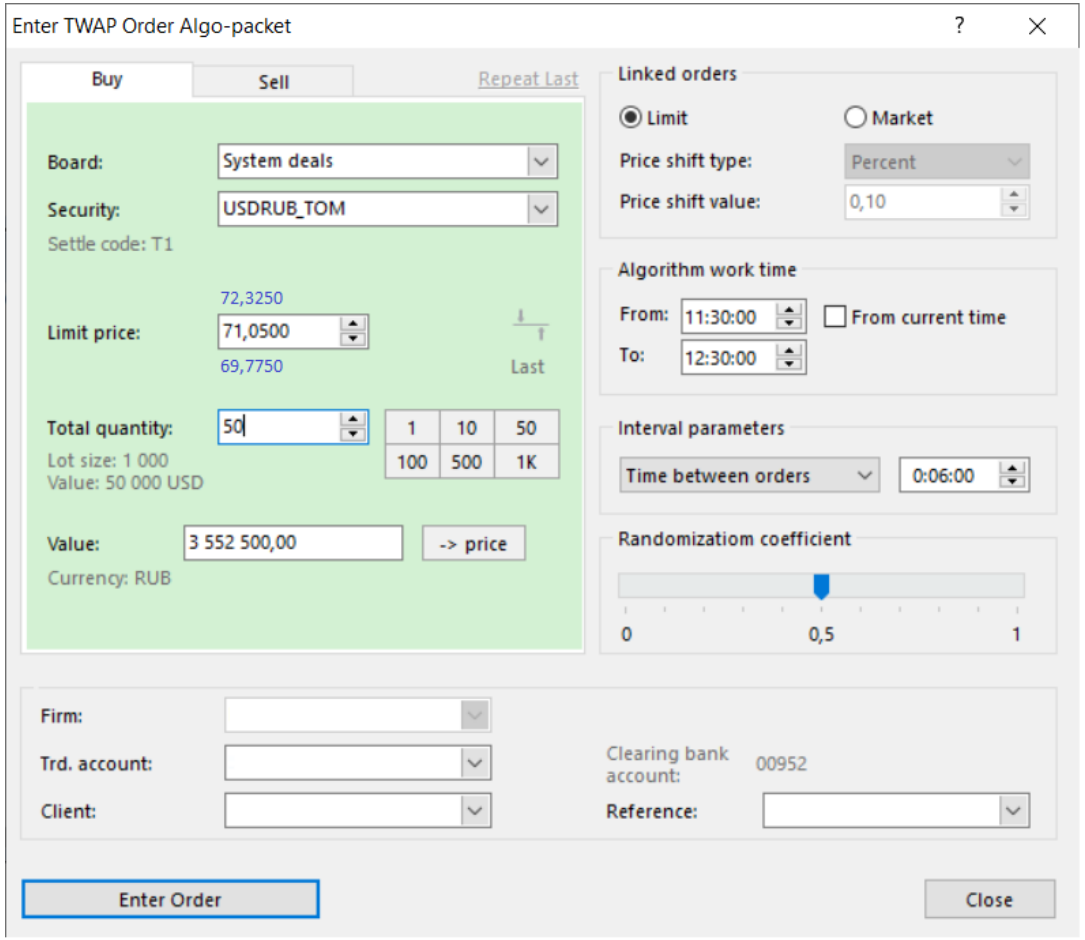
- Execution time: within the main trading session, i.e. from 10:00-23:50 MSK
- The price: market or limit
- Rate: the worst rate (for limit orders)
- The total quantity submitted for execution within TWAP
- Random deviations for times orders are placed and orders quantities (0– no deviation from normal distribution; 1- max spread (±50% from average values))
- Time intervals between the orders:
    - Time in the hh:mm:ss format, or
    - The number of orders that may be placed in the trading system

Trading boards:

- Main order book (CETS)
- Block trades – Speedbump (SDBP)
- OTC trades (OTCT)

Available instruments: SPOT, SWAP (TODTOM, TOMSPT) and SWAP contracts in the Main Board (CETS mode), Speedbump (SDBP mode), OTC trades (OTCT mode)

EXAMPLE: TWAP algorithm in selling USDRUB_TOM from 11:30 to 12:30 for a total of USB 50,000. IOC orders (USD 5,000 each); six-minute intervals; the price limit at RUB 71.05



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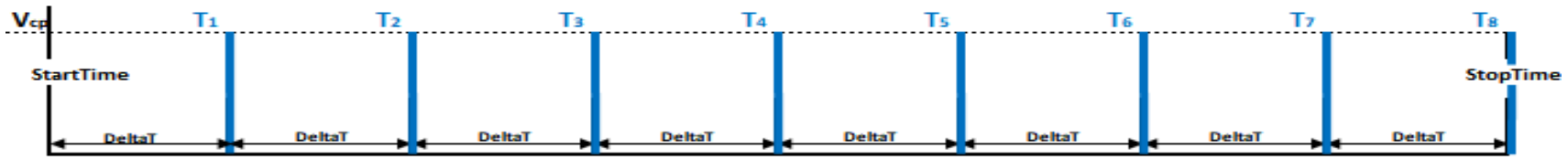
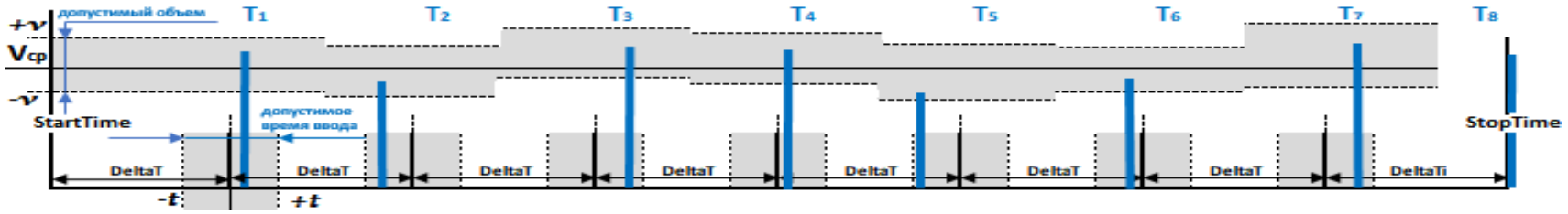
APPENDIX: TWAP algorithm process

- From the start of TWAP, the algorithmic module places generated orders evenly distributed by time and quantity:



- The order quantity is calculated automatically with the remaining balance of the previous order rolling over the next order. The total remaining quantity is distributed evenly between the remaining orders.
- If random deviation has been set for times the orders are placed and quantities of the orders, the TWAP algorithm process is less predicable during the day:



- All orders placed in the trading systems are subject to regular checks, including check for the Single Limit sufficiency. Margin is blocked only for orders already placed in the trading system and subsequent trades.
- At the end of the execution time, the TWAP algorithm is terminated regardless of the quantity executed.
- A member may terminate/changes the TWAP algorithm at any time.
- A new optional field "Number of algorithmic package of orders" is added to the xml-structure of reports on CUX22 orders, on CUX23 trades and in the CUX24 transaction statement (AlgoOrderNo). In reports on orders and trades in OTCT mode (CCX122, CCX123), an optional field "Number of algorithmic package of Offers" (AlgoOrderNo) is also added.

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