

Please find attached:

- Ineffective and Erroneous Transaction Fees

I. Ineffective Transaction fees:

To define the term, any of the following actions is considered as the transaction:

- order placement (“Add Order”),
- order cancellation (“DelOrder”),
- order modification (made as concurrent order cancellation and new order placement with different parameters) (“MoveOrder”);
- modification of pair of orders (made as concurrent pair of orders cancellation and new pair of orders placement with different parameters) (“DelUserOrders”).

The ineffective transaction fee is calculated on each trading day as a total for all clearing registers with the same Taxpayer ID (INN) (or a code substituting it) (later - the Registers) for the Moscow Exchange Derivatives Market.

The ineffective transaction fee is not charged if the number of transactions for all of the Firm’s Registers does not exceed the specified threshold. The threshold is set by the MB Technologies LLC (hereinafter, “Technical Center”) and is published on the Moscow Exchange website.

The ineffective transaction fee is calculated according to the formula:

$$TranFee = 0,1 \times \max(\sum k - \sum (f \times l); 0)$$

where:

| | |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <i>TranFee</i> | ineffective transactions fee calculated during the current trading day (in RUB); |
| <i>k</i> | the grade for transactions made for the Firm’s Registers (the grade is determined by transaction type in accordance with Table 1); |
| <i>f</i> | the amount of exchange and clearing fees to be paid for trades made for all of the Firm’s Registers during the current trading day; |
| <i>l</i> | the grade for trades made for the Firm’s Registers (the grade is determined by trade type in accordance with Table 1). |

Transactions are considered ineffective if the following condition is met:

$$\sum k - \sum (f * l) > 0$$

Table 1

The trade or transaction type is determined by a combination of the attributes 1-3:

| Transaction or trade type | | | Transaction grade | Trade grade |
|---------------------------|-------------|-------------|-------------------|-------------------|
| Attribute 1 | Attribute 2 | Attribute 3 | | |
| 0 | 0 | 0 | <i>k_1</i> | <i>l_1</i> |
| 0 | 0 | 1 | <i>k_2</i> | <i>l_2</i> |
| 0 | 1 | 0 | <i>k_3</i> | <i>l_3</i> |
| 0 | 1 | 1 | <i>k_4</i> | <i>l_4</i> |
| 1 | 0 | 0 | <i>k_5</i> | <i>l_5</i> |
| 1 | 0 | 1 | <i>k_6</i> | <i>l_6</i> |
| 1 | 1 | 0 | <i>k_7</i> | <i>l_7</i> |
| 1 | 1 | 1 | <i>k_8</i> | <i>l_8</i> |

Attribute 1-3 values are determined as follows:

Attribute 1: 1 – transaction or trade made for the Firm’s Register stated in the market maker agreement for a given instrument; 0 - transaction or trade made for the Firm’s Register not stated in the market maker agreement for a given instrument.

Attribute 2: 0 – futures contract (also Calendar Spread orders for Transactions); 1 – option.

Attribute 3: 1 – low liquid instrument, 0 – other instrument. Liquidity is determined by the list of low liquid instruments set by the Moscow Exchange and published on the Moscow Exchange website.

Grades values for transactions and trades ((k_1-k_8 and l_1-l_8) are set by the Technical Center, and are published on the Moscow Exchange website.

The ineffective transactions fee is deducted from the Firm’s Registers balance in proportion to the number of Transactions made per each Firm’s Register.

II. Erroneous Transaction fee

A transaction is considered as Erroneous Transaction if it was assigned one of the Error Codes defined in paragraph 1 and 2.

The Erroneous Transaction fee is calculated per each trading login for the period starting from the first second of the current calendar day evening clearing session and until the next calendar day evening clearing session, exclusive (hereinafter, the “Calculation Period”).

The Erroneous Transactions fee defined in paragraph 1 and 2 is charged to the clearing account linked to the trading login.

1. Flood Control Transaction Fee

An order placement transaction (“Add Order”), order cancellation transaction (“DelOrder”), order modification transaction (made as concurrent order cancellation and new order placement with different parameters) (“MoveOrder”), modification of pair of orders (made as concurrent pair of orders cancellation and new pair of orders placement with different parameters) (“DelUserOrders”) are considered as Flood Control Transaction if they were assigned by the “9999” Error Code, which means “Too many transactions sent from this login”.

Flood Control Transaction Fee is calculated for the Calculation Period according to the following formula:

$$TranFlood_{FEE} = \min(\Sigma TranFlood_{SEC}, CapFlood_{MAX})$$

Flood Control Transaction fee is charged if the following condition is met

$$TranFlood_{FEE} > CapFlood_{MIN}$$

Parameters:

| | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TranFlood | Flood Control Transactions fee calculated during the Calculation Period (in RUB); |
| CapFlood_M | a cap for the maximum fee value settled by the Technical Center and published on the Moscow Exchange website; |
| CapFlood_m | the minimum limit of the fee settled by the Technical Center and published on the Moscow Exchange website; |
| TranFlood | Flood Control Transactions fee calculated per second according to the following formula: |
| $TranFlood_{SEC} = \begin{cases} \text{round}(\min(\max(Q_{FL}, \text{round}(\frac{Q_{FL}^2}{\langle A \rangle}; 2)), \langle B \rangle) * \langle C \rangle; 2) \rightarrow \text{if } Q_{FL} \geq 5\% * 30 * Capacity_i \\ 0 \rightarrow \text{if } Q_{FL} < 5\% * 30 * Capacity_i \end{cases}$ | |
| где: | |
| Q_{FL} | amount of the Flood Control errors per second; |
| Capacity_i | the trading login throughput determined according to the procedure stated in Appendix 3 to the Information Technology Services Terms by the MB Technologies LLC (Clauses 3.1 – 3.3)* and used in the i-th second. |
| ⟨ A ⟩, ⟨ B ⟩, ⟨ C ⟩ | Parameters for Flood Control Transaction fee’s calculation settled by the Technical Center and published on the Moscow Exchange website. |

| | |
|--------------|--------------------------------------------------------|
| round | mathematical rounding down to the specified precision; |
|--------------|--------------------------------------------------------|

* - the Basic login allows Trading members to perform transactions with highest frequency (performance rate) calculated as the product of the following: 1) login's performance unit of 30 transactions/sec, and 2) number of performance units indicated by the Trading member in the Connection Scheme Form. For the purpose of this clause, a transaction means any command produced to manage orders in accordance with the Plaza II FORTS API specification, and number of performing units must be only a positive integer.

For the 2 (two) first Calculation Periods during the calendar month when the Flood Control Transaction Fee exceeds the parameter **CapFlood_{MAX}**, the Flood Control Transaction Fee is calculated but not charged. The Calculation Period refers to the calendar month, in which that Calculation Period ends.

2. Fee for Erroneous Transactions other than Flood Control Transaction

An order placement transaction ("Add Order"), order cancellation transaction ("DelOrder"), order modification transaction (made as concurrent order cancellation and new order placement with different parameters) ("MoveOrder"), modification of pair of orders (made as concurrent pair of orders cancellation and new pair of orders placement with different parameters) ("DelUserOrders") are considered as Erroneous Transaction (other than Flood Control Transaction) if they were assigned by the one of the Error Codes stated in Table 2 (hereinafter, "Erroneous Transaction").

Erroneous transaction fee is calculated according to the following formula:

$$TranFee_2 = \min(Cap_{MAX}; \max(2 \times \sum X_i; 1 \times \sum X_i^2))$$

Erroneous transactions fee is charged if the following condition is met:

$$TranFee_2 > Cap_{MIN}$$

Parameters:

| | | |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TranFee₂ | erroneous transactions fee calculated during the Calculation period (in RUB); | |
| Cap_{MAX} | a cap for the maximum value of the fee. The cap is set by the Technical Center and published on the Moscow Exchange website; | |
| Cap_{MIN} | the minimum limit of the fee set by the Technical Center and published on the Moscow Exchange website; | |
| X_i | a per-second value truncated to integer and determined as follows: | |
| | $X_i = RoundDown\left(\frac{Q_i}{L_i}; 0\right)$ where: | |
| | Q_i | amount of all grades for the i-th second (the grades are determined in accordance with Table 2); |
| | RoundDown | mathematical rounding down to the specified precision; |
| | L_i | limit of specific login determined as follows and rounded to integer: |
| | | $L_i = 10 \times \sqrt{2 \times Capacity_i}$ where: |
| | Capacity_i | the trading login throughput determined according to the procedure stated in Appendix 3 to the Information Technology Services Terms by the MB Technologies |

| | | | |
|--|--|--|-------------------------------------------------------|
| | | | LLC (Clauses 3.1 – 3.3)* and used in the i-th second. |
|--|--|--|-------------------------------------------------------|

* - the Basic login allows Trading members to perform transactions with highest frequency (performance rate) calculated as the product of the following: 1) login's performance unit of 30 transactions/sec, and 2) number of performance units indicated by the Trading member in the Connection Scheme Form. For the purpose of this clause, a transaction means any command produced to manage orders in accordance with the Plaza II FORTS API specification, and number of performing units must be only a positive integer.

Table 2:

| Transaction type* | Execution result | Error Code* | Grade Q |
|-------------------|-------------------------------------|-------------|---------|
| AddOrder | Cross trade | (31) | Q1 |
| | Insufficient client account balance | (332) | Q2 |
| | Insufficient broker account balance | (333) | Q3 |
| | FOK order is not filled | (4103) | Q4 |
| | Session inactive | (3) | Q5 |
| DelOrder | Order not found | (14) | Q6 |
| | Session inactive | (3) | Q7 |
| MoveOrder | Cross trade | (31) | Q8 |
| | Order not found | (50) | Q9 |
| | Insufficient client account balance | (332) | Q10 |
| | Insufficient broker account balance | (333) | Q11 |
| | Session inactive | (3) | Q12 |
| DelUserOrders | Order is filled, nothing to delete | (0) | Q13 |
| | Session inactive | (3) | Q14 |

*as per Plazall FORTS API description.

Grades Q1-Q10 values are set by the Technical Center and are published on the Moscow Exchange website (please, see paragraph IV "Ineffective and erroneous transaction fees calculation parameters" below).

III. Disabling trading logins

Once the Block threshold for specific login reaches specific value, the Technical Center notifies the trading participant about the risk of login disabling. The threshold is set by the Technical Center and is published on the Moscow Exchange website. Trading participants are obliged to provide emergency contact information to the Moscow Exchange and keep it up to date.

The Technical Center reserves the right to disable the trading login before the end of the next trading day if the following condition is met:

$$\max \left(2 \times \sum x_i; 1 \times \sum x_i^2 \right) > \mathbf{Block}$$

where:

Block – the threshold value for the Calculation period. This threshold is set by the Technical Center upon agreement with the Information Technology Committee of the Moscow Exchange and is published on the Moscow Exchange website;

other parameters are similar to those used in the formula for calculating erroneous transactions fee.

Once the trading login is disabled, the trading participant's authorized representative should contact the Technical Center support team at +7(495)287-7691 or help@moex.com. The Technical Center will enable the trading login within 30 minutes after the issue which caused login disabling is fixed. If the trading login is disabled for the second time during the trading day, it can be enabled no earlier than at the beginning of the next trading day.

IV. Ineffective and erroneous transaction fees calculation parameters

I. Ineffective Transaction fee parameters

1.1. Parameters for Ineffective Transaction fee's calculation

The threshold is 2,000 transactions.

Grades assigned to transactions and trades are as follows:

| Transaction or trade type | | | Transaction grade | Trade grade |
|---------------------------|-------------|-------------|-------------------|-------------|
| Attribute 1 | Attribute 2 | Attribute 3 | | |
| 0 | 0 | 0 | 1 | 40 |
| 0 | 0 | 1 | 1 | 40 |
| 0 | 1 | 0 | 0 | 0 |
| 0 | 1 | 1 | 0 | 0 |
| 1 | 0 | 0 | 0,5 | 100 |
| 1 | 0 | 1 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 |
| 1 | 1 | 1 | 0 | 0 |

Attribute 1: 1 – Transaction or Trade has been executed with indication of a Section specified in the market maker agreement for this instrument; 0 – Transaction or Trade has been executed with indication of a Section, not specified in the market maker agreement for this instrument.

Attribute 2: 0 – futures contract (calendar spread orders also – with transactions); 1 – options.

Attribute 3: 1 – low liquid instruments, 0 – other.

II. Erroneous Transaction fee parameters

2.1. Parameters for Flood Control Transactions fee's calculation

Maximum fee value (CapFlood_{MAX}) is set to RUB 45,000

Minimum fee value (CapFlood_{MIN}) is set to RUB 1,000

<A> parameter = 50

 parameter = 250

<C> parameter = 3

2.2. Parameters for Erroneous Transactions other than Flood Control Transaction

Maximum fee value (Cap_{MAX}) is set to RUB 30,000

Minimum fee value (Cap_{MIN}) is set to RUB 1,000

Transaction grades are as follows:

| Transaction type* | Execution result | Error Code | Grade Q |
|-------------------|----------------------------------------|------------|---------|
| AddOrder | Cross trade | (31) | 10 |
| | Insufficient client account balance | (332) | 20 |
| | Insufficient broker account balance | (333) | 20 |
| | FOK order is not filled | (4103) | 5 |
| | Session inactive | (3) | 20 |
| DelOrder | Order not found | (14) | 10 |
| | Session inactive | (3) | 20 |
| MoveOrder | Cross trade | (31) | 10 |
| | Order not found | (50) | 10 |
| | Insufficient client account balance | (332) | 20 |
| | Insufficient broker account balance | (333) | 20 |
| | Session inactive | (3) | 20 |
| DelUserOrders | Operation completed, nothing to delete | (0) | 10 |
| | Session inactive | (3) | 20 |

The Technical Center reserves the right to disable the logins if the Block threshold during the Calculation Period exceeds 30,000. Once the Block threshold during the Calculation Period reaches 25,000, the Technical Center sends out automatic notifications (when possible) about the risk of trading login disabling.