## Price indicators calculation procedure

## Closing price (LEGALCLOSEPRICE)

- It is not reviewed within the trading day;
- It is calculated by the end of the main trading session. Trades executed during the additional trading session are not considered and have no impact on the closing price;
- It is published within one hour after the end of the main trading session;
- If the closing price has not been calculated by the end of the main trading session, it is not set equal to the closing price of the previous trading day.

### **Regulatory framework:**

- Subsection 1.24 of the Securities Closing Prices Methodology, Part I of the Moscow Exchange Trading Rules for the Equity & Bond and Deposit Markets;
- Subsection 4.2 of Appendix 2 to Regulation No 437-P.

## How the closing price is determined

The closing price is either the closing auction price or the last trade price of the main trading session, depending on the security. If the closing auction price is not available (price parameters of the orders did not match in the auction), the closing price is the last trade price of the main trading session.

The closing price is published in the MOEX SEM21 report:

SEM21\_001 - the closing price at the end of the main session;

SEM21\_00T – the closing price at the end of the main trading session and the trading day. Main trading session price = the trading day price.

## Important note

- The closing price and the last trade price do not match if the auction took place for stocks, DRs, OFZs and Eurobonds (settled in USD);
- The MICEX Trade SE terminal also provides the Last Day Closing Price which is used for research and information purposes as it is not set out in the regulations.

## Admitted quote (ADMITTEDQUOTE)

- It is not reviewed within the trading day;
- It is calculated by the end of the main trading session;
- It is published within one hour after the end of the main trading session;
- If it has not been calculated by the end of the main trading session, it is not set equal to the closing price of the previous trading day.

#### **Regulatory framework:**

- The Bank of Russia's Regulation No 3758-U "On Determining the Value of Net Assets of Investment Funds Including on the Procedure of Calculating the Average Annual Value of Net Assets of the Unit Investment Fund and Net Assets of the Joint-Stock Investment Fund, Calculated Value of Investment Unit Investment Funds, Value of the Property Transferred as Payment for Investment Units" dated 25 August 2015;
- Paragraph 3 of Appendix 2 to Guidance No 437-P;
- Notice of the admitted quote calculation procedure;
- Notice of trading modes not considered to calculate the market price, current price, closing price and admitted quote of a security.

#### How the admitted quote is calculated

Admitted quote = Closing price<sup>1</sup>

	 	 Closing auction price
Admitted quote	 Closing price	
		Last current price

<sup>1</sup> – beginning 1 January 2016; before 1 January 2016, the admitted quote was determined according to the FFMS Order No 05-21/pz-n dated 15 June 2005.

The admitted quote values are shown in exchange report SEM21:

- report SEM21\_001 contains data for the end of the main session.

- report SEM21\_00T contains data for the main trading and for the trading day. The value for the main session = the value for the trading day.

#### Important note

The MICEX Trade SE provides also the value of the Officially Admitted Quote of the Last Day. This measure is for research and information purposes as it is not set out in the regulation.

#### Market price 2 (MARKETPRICE2)

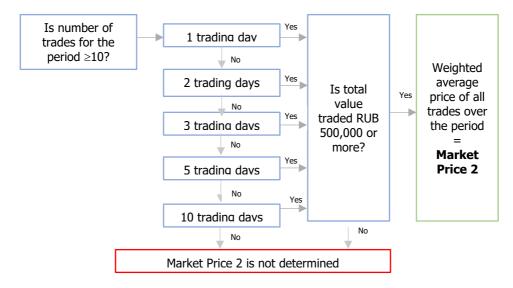
#### Market price (2):

- It is not reviewed within the trading day;
- It is calculated at the end of the main trading session. Trades executed in the after-hours session are not considered and have no impact on the Market Price (2);
- It is published within an hour after the end of the main trading session;
- If it has not been calculated at the end of the main trading session, it is not set equal to the Market Price 2 of the previous trading day.

# **Regulatory framework:**

- The Federal Financial Markets Service Order No.06-155/pz-n "On the Endorsement of the Procedure of Estimation of the Market Cost of Assets and the Cost of Net Assets Used to Invest Resources of Accumulated Pensions" dated 26 December 2006;
- The Federal Financial Markets Service Order No.07-29/pz-n "On the Endorsement of the Procedure of Estimation of the Market Cost of Assets and the Cost of Net Assets Used to Invest Savings for Housing Provision for Servicemen" dated 27 March 2007;
- Paragraph 32, Annex 2 to Regulation No 437-P;
- Notice of trading modes not considered to calculate the market price, current price, closing price and admitted quote of a security.

**Market Price 2 calculation algorithm** 



- Market Price 2 is set at the end of the main trading session;
- If ten or more trades were executed in the security during the main trading session, the market price is set to be the weighted average price of trades executed during the main trading session;
- If less than ten or even no trades were executed in the security during the main trading session, the market price is set to be the weighted average price of trades executed during the main trading sessions on the last two days, if the ten or more trades were executed on these days;
- If less than ten trades (or no trades) were executed during the main trading sessions on the last two days, the market price is set to be the weighted average price of trades executed during the main sessions on the last three trading days provided that there were at least ten trades;
- If less than ten trades (or no trades) were executed during the main trading sessions on the last three days, the market price is set to be the weighted average price of one security in trades executed during the main sessions on the last five trading days provided that there were at least ten trades;
- If less than ten trades (or no trades) were executed during the main trading sessions on the last five trading days, the market price is set to be the weighted average price of one security in trades executed during the main sessions on the last ten trading days provided that there were at least ten trades;
- The total value of trades used to calculate Market Price 2 must be at least RUB 500,000.

## Therefore, Market Price 2 IS NOT CALCULATED in the following cases:

- Ten or more trades were executed during one of the periods indicated above (main trading sessions on 1, 2, 3, 5 or 10 trading days), but their total value is less than RUB 500,000;
- Less than ten trades were executed during the main sessions of the last ten trading days.

## Market Price 2 is shown in MOEX's SEM21 report:

- SEM21\_001 report shows data as of the end of the main session;
- SEM21\_00T report shows data for the main session and the trading day. The main session's value = trading day's value

#### Important note

Market Price 2 does not include trades of the pre-trading period (but it covers the post-trading period) as paragraph 4.3 of Appendix 2, Provision No 437-P excludes prices of contracts executed in trading modes in which trading members see only their own orders submitted in that trading mode".

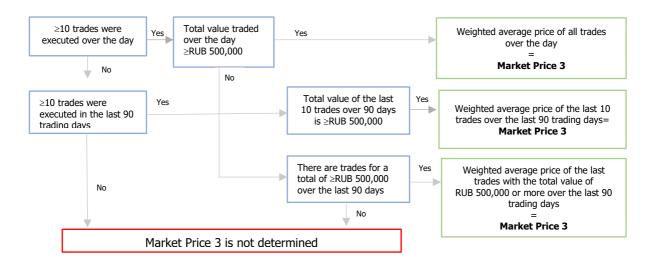
## Market Price 3 (MARKETPRICE3)

- It is not reviewed within the trading day;
- It is calculated at the end of the main trading session. Trades executed in the after-hours session are not considered and have no impact on the Market Price 2;
- It is published within an hour after the end of the main trading session;
- If it has not been calculated at the end of the main trading session, it is not set equal to the Market Price 3 of the previous trading day.

#### **Regulatory framework:**

- FFMS Order No. 10-65/pz-n On Approval of Rules of Determination of the Estimated Price and Market Price for Securities and Maximum Variation of the Market Price for Securities for the Purposes of Chapter 23 of Tax Code of Russian Federation dated 9 November 2010;
- Paragraph 3 of Appendix 2 to Provision No. 437-P;
- Notice of trading modes not considered to calculate the market price, current price, closing price and admitted quote of a security.

#### Market Price 3 calculation algorithm



Market Price 3 is calculated at the end of the trading day as follows:

- If ten or more trades for least RUB 500,000 were executed in the security during the main trading session, the market price is set to be the weighted average price of trades executed during the main trading session;
- If less than ten or even no trades were executed in the security during the main trading session, the market price is set to be the weighted average price of the security in the last ten trades executed during the main trading sessions on the last 90 trading days, provided that their total value was at least RUB 500,000;
- If value of the last ten trades (where less than ten trades were executed in the main session) executed in the main session on the last 90 trading days, or value of all trades executed in the main session (where more than ten trades were executed in the main session) was less than RUB 500,000, the market price is the weighted average price of one security in trades executed in the main session on the last 90 trading days so that the total value of trades reached at least RUB 500,000 upon the execution of the last trade;
- If less than ten trades (or no trades) were executed during the main trading sessions on the last 90 trading days, or the total value of trades in that period was less than RUB 500,000, the market price is not calculated.

Therefore, Market Price 3 IS NOT CALCULATED in the following cases:

- Less than ten (or none) trades were executed in the main session in the last 90 days;
- Total value of trades executed in the main sessions of the last 90 trading days was les than RUB 500,000.

Market Price 3 is shown in MOEX's SEM21 report:

- SEM21\_001 report shows data as of the end of the main session;
- SEM21\_00T report shows data for the main session and the trading day. The main session's value = trading day's value

#### Important note

- The MICEX Trade SE terminal also provides the Market Price 3 of the Previous Day (Last Day Market Price) which is used for research and information purposes as it is not set out in the regulations;
- Market Price 3 does not include trades of the pre-trading period (but it covers the post-trading period) as paragraph 4.3 of Appendix 2, Provision No 437-P excludes prices of contracts executed in trading modes in which trading members see only their own orders submitted in that trading mode.

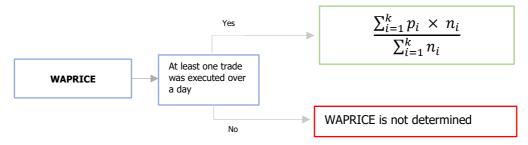
## Weighted Average Price (WAPRICE)

- WAPRICE is reviewed and published at the end both the main and evening trading sessions;
- Three WAPRICE can be set in a day;
  - WAPRICE of the main session is based on trades executed in that session;
  - WAPRICE of the evening trading session (for securities admitted to the evening trading) is based on trades executed in that session;
  - WAPRICE of the trading day is based on trades executed in the main and evening trading sessions (it may differ from the WAPRICE of the main trading sessions for securities admitted to evening trading).
- If WAPRICE was not calculated at the end of the trading day, it is not set to be WAPRICE of the previous trading day.

## **Regulatory framework:**

- Paragraph 2 of Appendix 2, Provision No. 437-P;
- Notice of trading modes considered in calculation of Weighted Average Price

## WAPRICE calculation algorithm



Where  $p_i$  – the price of the i<sup>th</sup> trade;  $n_i$  – the value of the i<sup>th</sup> trade (in units of the security)

## Example:

Three trades were executed: three shares at RUB 1, three shares at RUB 3 and six shares at RUB 4.

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Then, WAPRICE = \frac{RUB \ 1*3+RUB \ 3*3+RUB \ 4*6}{3+3+6} = RUB 3
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WAPRICE values are shown in MOEX's SEM21 report:

- SEM21\_001 includes data as of the end of the main trading session;
  - SEM21\_00T includes the following three values of WAPRICE:
    - As of the end of the main trading session;
    - As of the end of the evening session;
    - As of the end of the trading day.

#### Important note

• The MICEX Trade SE terminal also provides Weighted Average Price for the previous day (Previous WA price) which is used for research and information purposes as it is not set out in the regulations;

## Current Price (CURRENTPRICE)

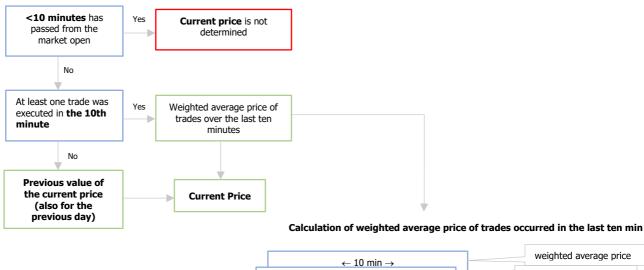
- Current Price = the weighted average price of trades over the last ten minutes;
- Calculated from the end of the 10<sup>th</sup> minute from the market open;
- Current Price for securities admitted to evening trading is reviewed during the main and evening trading sessions at least once a minute. Current Price for securities not admitted to evening trading

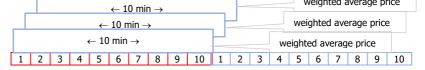
is reviewed at least once a minute during the main trading session and fixed upon the end of the session (without being reviewed during the evening session).

## **Regulatory framework:**

- Paragraph 1.23 of the Security Current Price Methodology, Part I of the Moscow Exchange Trading Rules for the Equity & Bond and Deposit Markets;
- Paragraph 4.1 of Appendix 2 to Provision 437-P;
- Notice of trading modes not considered to calculate the market price, current price, closing price and admitted quote of a security.

## **Current Price calculation algorithm**





- Current Price is calculated once a minute beginning the 10<sup>th</sup> minute from the market open;
- Determined by the last ten minutes of the trading session;
- If at least one trade was executed in the 10<sup>th</sup> minute, Current Price = the weighted average price of trades over the last ten minutes;
- If no trades were executed in the 10<sup>th</sup> minute, Current Price = the last available Current Price (regardless of whether any trades occurred in the first 9 minutes of the ten, or not).

#### Therefore, **Current Price IS NOT CALCULATED** in the following cases:

- In the first ten minutes of the trading day;
- No trades were executed in a security since its flotation.

Current Prices are published on the Moscow Exchange website following the end of the main and evening sessions as well as the trading day.

#### Important note

*Current Price does not include trades of the pre-trading period (but it covers the post-trading period) as paragraph 4.3 of Appendix 2, Provision No 437-P excludes prices of contracts executed in trading modes in which trading members see only their own orders submitted in that trading mode.* 

#### Max Price (HIGH)

- HIGH is reviewed following every trade occurred;
- It is not calculated if no trades were made throughout the trading session;
- Three HIGH can be set in a day;
  - HIGH of the main session is based on trades executed in that session;
  - HIGH of the evening trading session (for securities admitted to the evening trading) is based on trades executed in that session;
  - HIGH of the trading day is based on trades executed in the main and evening trading sessions (it may differ from HIGH of the main trading session for securities admitted to evening trading).
- If no trades occurred in a day, HIGH is not set to be previous day's HIGH;
- HIGH is calculated for every board individually;
- As for the order book consisting of the opening auction (pre-trading period), trading period and the closing auction (post-trade period), HIGH is calculated for all periods of the order book.

## **Regulatory framework:**

• Paragraph 1.2 of Appendix 4 to Provision 437-P.

HIGH values are shown in MOEX's SEM21 report:

- SEM21\_001 includes data as of the end of the main trading session;
- SEM21\_00T includes the following three values of HIGH:
  - As of the end of the main trading session;
  - As of the end of the evening session;
  - As of the end of the trading day.

## Min Price (LOW)

- LOW is reviewed following every trade occurred;
- It is not calculated if no trades were made throughout the trading session;
- Three LOW can be set in a day:
  - LOW of the main session is based on trades executed in that session;
  - LOW of the evening trading session (for securities admitted to the evening trading) is based on trades executed in that session;
  - LOW of the trading day is based on trades executed in the main and evening trading sessions (it may differ from LOW of the main trading session for securities admitted to evening trading).
- If no trades occurred in a day, LOW is not set to be previous day's LOW;
- LOW is calculated for every board individually;
- As for the order book consisting of the opening auction (pre-trading period), trading period and the closing auction (post-trade period), LOW is calculated for all periods of the order book.

#### **Regulatory framework:**

• Paragraph 1.2 of Appendix 4 to Provision 437-P.

LOW values are shown in MOEX's SEM21 report:

- SEM21\_001 includes data as of the end of the main trading session;
- SEM21\_00T includes the following three values of HIGH:
  - As of the end of the main trading session;
  - As of the end of the evening session;
  - As of the end of the trading day.