[TRADING METRICS METHODOLOGY]

The Metalshub Trading Metrics provided by Metis service are solely based on real data from real transactions and trading activities from the digital Metalshub platform. The information is collected automatically without any manual work. This methodology minimises the risk of information manipulation.

The raw data generated on the platform include all parameters of the transaction/negotiation, including the quantity, full chemical specification, payment terms, packaging, and transportation cost. It also includes information on every round of negotiations (counter-proposals), including the mentioned above data for each of those rounds.

Every index from Trading metrics is based solely on the consumers listings (Request for Quotation), excluding intra-trade listings and "request for bids" listings.

All Trading metrics are provided on monthly basis.

The confidentiality of Metalshub users' price data is of utmost importance to Metis. We will never share individual data points and even employees of Metalshub only have restricted access to raw data.

Metis provides the following trading metrics for the specific commodities:

Demand – the total volume of certain material requested by the consumers on Metalshub during the reported month compared to the average volume over the last 12 months.

Example:

Previous month	Volume
Month 1	400
Month 2	600

Month 3	*550*
Month 4	*320*
Month 5	*700*
Month 6	*600*
Month 7	*450*
Month 8	*613*
Month 9	*530*
Month 10	*400*
Month 11	*600*
Month 12	*650*
Average	*534,41*

In the reporting month, the requested volume was 445. Then, the Demand trading metrics for the reporting month will be calculated as a percentage of the average of the last 12 months.

Demand = 445/534.41 = 0.83, or 17% lower than the average of the last 12 months.

Rounds of negotiations – the average number of proposals and counter-proposals submitted by seller and buyer within the negotiations, per listing.

Example: During the reporting period, there were 2 listings (requests for quotations) from European consumers on Metalshub. Listing 1 received 5 negotiations. Listing 2 received 3 negotiations. Under each negotiation of listing 1, the seller and buyer submitted 3 proposals until the negotiation was either accepted or rejected. Under negotiation 1 of the listing 2 there were 3 rounds of proposals, under negotiation 2 – 2 rounds. Under negotiation 3 – 1 round.

Then, the average number of negotiations for Listing 1 is 3*5/5 = 3. The average number of negotiations for Listing 2 is (3+2+1)/3 = 2

The total Round of negotiations metric is (3+2)/2 = 2.5

Listing 1					Listing 2		
Negotiation 1	Negotiation 2	Negotiation 3	Negotiation 4	Negotiation 5	Negotiation 1	Negotiation 2	Negotiation 3

3 proposals	3 proposals	3 proposals	3 proposals	3 proposals	3 proposals	2 proposals	1 proposal

Winner Price Reduction – the average amount of price reduction of the winners of every listing from their initial price, in percentage terms.

Example: there were 5 listings during the reporting period. Every listing's winner reduced his initial price during rounds of negotiations before the final (winning) price was achieved.

Listing	Winner's initial price	Winner's final price	Winner's price reduction
Listing 1	200	195	-3%
Listing 2	230	215	-7%
Listing 3	190	185	-3%
Listing 4	190	189	-1%
Listing 5	192	187	-3%

The Winner Price Reduction metrics over the month is the average of all price reductions of every listing's winners. (3+7+3+1+3)/5 = 3.4%

Volatility – an index for indicating the average price volatility for a specific commodity traded on Metalshub during a month. The index is calculated as a standard deviation of price values of all price data points from the weighted average index.

Example: