



# LME Closing Prices – Benchmark Methodology

# 1 Introduction

The London Metal Exchange (“LME”) is a world centre for the trading of industrial metals and provides pricing, risk and terminal market services to the global physical metals industry. The LME publishes various prices that fall within the definition of ‘benchmark’ pursuant to the BMR.

This Benchmark Methodology is published pursuant to Annex II of the BMR in respect of the LME Closing Prices Benchmark Family.

## 2 General Information

### 2.1 Date of Original Publication

2 December 2019

### 2.2 Date of Last Update

18 March 2024

### 2.3 Review of Benchmark Methodology

This Benchmark Methodology is subject to periodic review by the LME Pricing and Valuations Committee. Reviews shall be completed at least annually.

Proposed changes to the Benchmark Methodology (whether resulting from the annual review process or otherwise) shall be handled in accordance with the **Benchmark Changes and Cessation Procedure**. The **Benchmark Changes and Cessation Procedure** sets out how, and the circumstances in which, the LME will seek market participant views in relation to a proposed change. Proposed changes shall be considered by the LME Pricing and Valuations Committee.

### 2.4 Key Definitions

This Benchmark Methodology should be read in conjunction with the **Benchmark Administration – Definitions** document (“**Definitions**”) available on the LME Website. Any capitalised terms not specifically defined in the Benchmark Methodology shall have the meaning given to them in the Definitions.

In this Benchmark Methodology, the following specific definitions shall apply:

“ <b>Closing Prices BC Methodology</b> ”	means the methodology set out in Appendix 1 by which the Closing Prices shall be determined where business continuity procedures are invoked (see paragraph 4.9).
“ <b>IRP</b> ”	indicator reference price.
“ <b>MVR Threshold</b> ”	means the minimum volume required to be transacted in the applicable Pricing Window for a VWAP to be considered.



<b>“MVVR”</b>	the Minimum Visible Volume Requirements which represent the traded volume or visible volume placed on bids/offers per Contract to be considered by the Quotations Committee to assist in prioritising relevant input data when considering price moves or with conflicting spreads across forward months.
<b>“Pricing Waterfall”</b>	means the process described in section 4.1.2.
<b>“Pricing Window”</b>	means the defined period of time on the Business Day for the relevant metal, including the Anchor Pricing Window and Spread Pricing Window, as applicable.
<b>“Prompt Date”</b>	means the Business Day on which the relevant LME contract is to be settled, which in turn will depend on the tradeable date that has been traded and that has resulted in the LME contract.
<b>“Spread Pricing Cut-off”</b>	means the defined time on the Business Day for the relevant metal for which bids/offers must be placed and transactions concluded to be taken into account for the purposes of determining the spread information.
<b>“TWAP”</b>	time-weighted-average-price.

## 3 Benchmarks

### 3.1 Constituent Benchmarks

The Benchmark Family comprises certain Closing Prices as identified in the **LME List of Benchmarks** published on the LME Website. As at the date of the last update to this Benchmark Methodology, Closing Prices are determined in relation to a number of Prompt Dates relating to the following:

- (a) LME Aluminium;
- (b) LME Aluminium Alloy;
- (c) LME Aluminium US Premium;
- (d) LME Aluminium West-Europe Premium;
- (e) LME Aluminium East-Asia Premium;
- (f) LME Aluminium South-East Asia Premium;
- (g) LME Cobalt;
- (h) LME Copper;
- (i) LME NASAAC;
- (j) LME Nickel;
- (k) LME Lead;
- (l) LME Tin; and
- (m) LME Zinc.

The Prompt Dates for each of the above that are Benchmarks are identified in the LME List of Benchmarks published on the LME Website. Note that not all Prompt Dates for which Closing Prices are determined are Benchmarks.



## 4 Benchmark Methodology

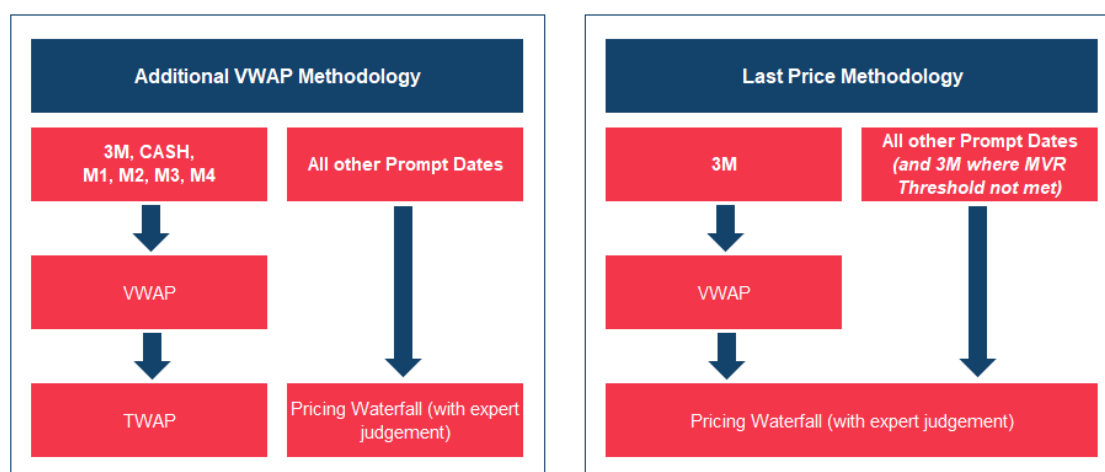
### 4.1 Criteria and Procedures used to determine the Benchmarks

This Benchmark Methodology is used each Business Day to calculate the Closing Prices.

For each of the metals listed above, the applicable contract specifications that govern factors such as the quality of the metal to be delivered, can be found in the LME Rulebook.

The Closing Prices are based on trading activity on LMEselect including trades, bids and offers. The times at which business can be conducted on LME's Execution Venues (including the operating hours of LMEselect) are set out on the LME Website and the periods for which activity is taken into account in determining the Closing Prices is set out in this Benchmark Methodology.

The Closing Prices are determined by the Quotations Committee using two separate methods; namely the Additional VWAP Methodology and the Last Price Methodology. The metals and Prompt Dates that utilise each methodology is determined taking into consideration factors such as sufficiency of liquidity. This determination is subject to periodic review by the LME.



The Closing Prices are determined by the Quotations Committee through a combination of:

- determining a value for the 3 Month (3M) Closing Price (and any other Prompt Dates which the Quotations Committee decide should be allocated a value);
- establishing a breakdown of the spread between different Prompt Dates;
- calculating a value for other Prompt Dates through analysis of the spreads between Prompt Dates, including last valuations; and
- using a process of interpolation to calculate a value for outstanding Prompt Dates as appropriate.

### 4.1.1 Additional VWAP Methodology

The Additional VWAP Methodology is used to calculate the Closing Prices for the metals and Prompt Dates set out in Table 1 below.

TABLE 1

Metal	Anchor Contracts (Outright)				Non-Anchor Contracts (Spreads)			
	Prompt Dates	Anchor Pricing Window	MVR Threshold (Lots)	Rounding (\$/mt)	Prompt Dates	Spread Pricing Window	MVR Threshold (Lots)	Rounding (\$/mt)*
NI	3 Month (3M)	16:15:00.000 - 16:19:59.999	5	1	Cash, M1, M2, M3, M4	16:10:00.000 - 16:14:59.999	5	0.01
AH	3 Month (3M)	16:25:00.000 - 16:29:59.999	5	0.5	Cash, M1, M2, M3, M4	16:20:00.000 - 16:24:59.999	5	0.01
ZS	3 Month (3M)	16:35:00.000 - 16:39:59.999	5	0.5	Cash, M1, M2, M3, M4	16:30:00.000 - 16:34:59.999	5	0.01
CA	3 Month (3M)	16:45:00.000 - 16:49:59.999	5	0.5	Cash, M1, M2, M3, M4	16:40:00.000 - 16:44:59.999	5	0.01
PB	3 Month (3M)	16:55:00.000 - 16:59:59.999	5	0.5	Cash, M1, M2, M3, M4	16:50:00.000 - 16:54:59.999	5	0.01

The approach to pricing the front of the curve using the Additional VWAP Methodology is to:

- 1) Establish the Anchor Contract(s) using a VWAP calculation;
- 2) In a defined order, establish the Non-Anchor Contracts as follows:
  - i. price each third Wednesday monthly contract using the spreads<sup>1</sup> between that month and all other contracts that have already been priced. The 3 Month (3M) outright is calculated first, then M3 is established on the basis of the M3-3M spread, then M2 is established on the basis of both the M2-3M and M2-M3 spreads etc;
  - ii. price the Cash contract on the basis of the spread between Cash and the nearest monthly contract, ie Cash-M1.

The Anchor Contracts and Non-Anchor Contracts are established over a separate Pricing Window for each metal (with the respective Spread Pricing Window immediately preceding the Anchor Pricing Window) to allow for market participants to separately focus on outright trading and spread trading. No outright trades for Prompt Dates other than Anchor Contracts will be included in the calculation as otherwise the outright prices for the monthly contracts may not align to the Anchor Contract (outright) price (as they were taken from different Pricing Windows).

#### Anchor Contracts

The determination of Closing Prices for each Anchor Contract set out in Table 1 are determined as follows:

- a) If the total volume of trades in the Anchor Contract during the Anchor Pricing Window is equal to or above the MVR Threshold, the Closing Price will be the VWAP of outright trades in the Anchor Contract during the Anchor Pricing Window.

<sup>1</sup> A calendar spread is often referred to as a "carry" on the LME market.



- b) If the total volume of trades in the Anchor Contract during the Anchor Pricing Window is below the MVR Threshold, the Closing Price will be the TWAP of the IRP for the Anchor Contract during the Anchor Pricing Window.

The Closing Price will then be rounded up or down, as applicable, in accordance with the rounding protocol set out in Table 1.

### **Non-Anchor Contracts**

The Closing Prices for the Non-Anchor Contracts set out in Table 1 are determined in a defined order. Details of the ordering and of the VWAP and TWAP Instruments used in their calculation are set out in Table 2.

The prices are determined as follows:

- a) If the total volume traded in the relevant VWAP Instruments during the Spread Pricing Window is equal to or above the MVR Threshold, the Closing Price will be a VWAP price. The VWAP is calculated using trades across all relevant VWAP Instruments during the Spread Pricing Window, where the price used in the VWAP calculation is the traded spread price, applied to the already established price for the other leg<sup>2</sup>;
- b) If the total volume of trades in the relevant VWAP Instruments during the Spread Pricing Window is below the MVR Threshold, the Closing Price will be the TWAP of the IRP of the TWAP Instrument during the Spread Pricing Window, applied to the already established price for the other leg.

The Closing Price will then be rounded up or down, as applicable, in accordance with the rounding protocol set out in Table 1.

In determining whether the MVR Threshold is met for Non-Anchor Contracts where there are multiple VWAP Instruments, the MVR Threshold will be compared to the sum of the traded volumes across all VWAP Instruments for the respective Non-Anchor Contracts.

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<sup>2</sup> Rounding is performed at the final stage of each prompt level's calculation, and not at individual component spread VWAPs level. The rounded value is used in any subsequent calculations that rely on priced prompts.



**Ordering**

TABLE 2

Non-Anchor Contracts				
Ordering	Prompt Date	Contract	VWAP Instruments	TWAP Instruments
1	M3	3rd 3rd Wednesday	M3-3M	M3-3M
2	M2	2nd 3rd Wednesday	M2-3M M2-M3	M2-M3
3	M4	4th 3rd Wednesday	M2-M4 M3-M4 3M-M4	M3-M4
4	M1	1st 3rd Wednesday	M1-M2 M1-M3 M1-3M M1-M4	M1-M2
5	Cash	Cash	Cash-M1	Cash-M1

The ordering in Table 2 assumes that the 3 Month (3M) Prompt Date falls between M3 and M4 (which is the most common occurrence). Where this is not the case, the same instrument is used, but in its reversed form i.e., 3M-M3 or M4-3M.

Where the Cash contract is a 3rd Wednesday, then for the purpose of this calculation it will be priced as the Cash contract (with the next contract being M1).

Where the 3 Month (3M) contract is a 3rd Wednesday, the ordering remains the same, but the related “M” contract is already known at the relevant step in the pricing methodology.

**Indicator Reference Price (IRP)**

Where the volume of the contract being priced does not meet the MVR Threshold (aggregating the input instruments) during the relevant Pricing Window, then a TWAP of a defined IRP is used.

The IRP reflects the last trade (or previous day’s Closing Price if there are no trades), dragged higher or lower by a respective better bid or better offer (during the Spread Pricing Window).

The IRP will use only one spread which will be the M3-3M spread when pricing M3, then for all other instruments it will be the spread from the instrument to the nearest already priced monthly instrument (e.g for M4 the IRP will use M3-M4, for M2 the IRP will use M2-M3). The TWAP Instruments are set out in Table 2.

The TWAP calculation is performed at a millisecond (ms) granularity. Where there are multiple bids, offers or trades in one ms, the TWAP calculation uses the last bid, offer or trade point for that distinct ms.



The IRP is established as follows:

- If trades have occurred during current day:
  - If [Current Bid<sup>3</sup> > Last Trade] Then [IRP = Current Bid]
  - If [Current Offer < Last Trade] Then [IRP = Current Offer]
  - Otherwise [IRP = Last Trade]
- If no trades during current day:
  - If [Current Bid > Previous Close] Then [IRP = Current Bid]
  - If [Current Offer < Previous Close] Then [IRP = Current Offer]
  - Otherwise [IRP = Previous Close]

In the event that a Previous Close value is not available, which can occur if the 3 Month (3M) date was not tradeable on the previous day, a linear interpolation is performed between the nearest available priced dates either side of the required date.

Calendar days are used as the basis of interpolation if the two points are in Contango, otherwise Business days are used.

### **Arrangements for all other Prompt Dates**

The establishment of prices for all other Prompt Dates that are published as part of the Closing Prices forward curve for the metals listed in Table 1 will not utilise the Additional VWAP Methodology. Rather, they will be determined using the Pricing Waterfall set out in the Last Price Methodology.

The determination of Closing Prices for these other Prompt Dates, including both the daily prompt dates and the longer dated monthly contracts, will always follow the completion of the Closing Prices established under the Additional VWAP Methodology. As such, prices established utilising the Additional VWAP Methodology will not be changed on the basis of data considered within the Last Price Methodology.

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<sup>3</sup> Bids and offers during the relevant TWAP period.





### 4.1.2 Last Price Methodology

The Last Price Methodology consists of two components:

- 1) VWAP – used to establish the 3 Month Closing Price for all Metal Futures and Month 1 for Aluminium Premium Contracts that are not determined using the Additional VWAP Methodology.
- 2) Pricing Waterfall – used to establish the following:
  - i. the 3 Month Closing Price for Metal Futures and Month 1 for Aluminium Premium Contracts established using the Last Price Methodology where the MVR is not met;
  - ii. all other Prompt Dates for which Closing Prices are established for the metals set out in Table 3 established using the Last Price Methodology; and
  - iii. all other Prompt Dates for which Closing Prices are established for the metals set out in Table 1 which are not determined using the Additional VWAP Methodology.

The Last Price Methodology is used to calculate the Closing Prices for the metals set out in Table 3 below.

TABLE 3

Metal	3 Month (VWAP)			Spreads	
	Pricing Window	MVR Threshold (Lots)	Rounding (\$/mt)**	Spread Pricing Cut-off	MVVR (Lots)
CO	15:50:00.000 - 15:54:59.999	5	0.5	15:54:59.999	5
Aluminium Premiums (M1)	15:55:00.000 - 15:59:59.999	5	0.5	15:59:59.999	5
AA	15:55:00.000 - 15:59:59.999	5	0.5	15:59:59.999	5
NA	15:55:00.000 - 15:59:59.999	5	0.5	15:59:59.999	5
SN	16:05:00.000 - 16:09:59.999	5	1	16:04:59.999	10
NI*	16:15:00.000 - 16:19:59.999	5	1	16:14:59.999	25
AH*	16:25:00.000 - 16:29:59.999	5	0.5	16:24:59.999	100
ZS*	16:35:00.000 - 16:39:59.999	5	0.5	16:34:59.999	25
CA*	16:45:00.000 - 16:49:59.999	5	0.5	16:44:59.999	50
PB*	16:55:00.000 - 16:59:59.999	5	0.5	16:54:59.999	25

\* 3 Month Closing Price (and other Prompt Dates set out in Table 1) are established using the Additional VWAP Methodology

\*\* All other outright prompts will be valued to the nearest \$0.01/mt



## **Arrangements for the 3 Month Closing Prices for Metal Futures and Month 1 for Aluminium Premium Contracts**

### **VWAP**

These prices are determined using a VWAP from transactions on LMEselect during the Pricing Window and where the MVR Threshold is met.

The VWAP will then be rounded up or down, as applicable, in accordance with the rounding protocol set out in Table 3. For information on the determination of all other Prompt Dates (for which Closing Prices are published) see the section entitled *Arrangements for all other Prompts Dates* below.

Where the relevant MVR Threshold is not met, the Quotations Committee shall determine the Closing Price for the affected Prompt Date using the Pricing Waterfall below.

### **Pricing Waterfall**

- a) it shall be the last traded price on LMEselect during the Pricing Window if the last traded price is within, or at, the bid/offer<sup>4</sup> on the close of the relevant Pricing Window;
- b) if the last traded price on LMEselect during the Pricing Window is outside of the bid/offer on the close of the Pricing Window, then the bid/offer closest to the last traded price will be used;
- c) if the relevant Metal Future or Aluminium Premium Contract is untraded on LMEselect during the Pricing Window, but has traded on LMEselect prior to the Pricing Window and/or where a bid/offer is available at the close of the Pricing Window, the price will be determined using the last trade (or last valuation where untraded) in conjunction with the available bid/offer information to determine the price;
- d) if the relevant Metal Future or Aluminium Premium Contract is untraded on LMEselect during or prior to the Pricing Window and there is no bid and/or offer available on the close of the Pricing Window, the price will be determined using available spread information and the last valuation.

Where:

- a) the LME does not have access to sufficient input data necessary to determine the Closing Price; or
- b) a linear approach to the Pricing Waterfall would result in an inaccurate price (in the Quotation Committee's Expert Judgement) or a price determined outside the daily price limits,

the LME may set the Closing Prices at a price at its absolute discretion, using Expert Judgement which includes, but not limited to, referencing data sources and available spread trading information, including but not limited to inter-office activity and prevailing market prices. In these circumstances, the considerations for Expert Judgement set out in the section entitled *Arrangements for all other Prompts Dates* may apply.

The Closing Price will then be rounded up or down, as applicable, in accordance with the rounding protocol set out in Table 3.

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<sup>4</sup> The terms "bid" and "offer" at all times refers to best bid and best offer active in the market at the close of the Pricing Window or Spread Pricing Cut-off.



### **Arrangements for all other Prompt Dates**

The establishment of prices for all other Prompt Dates (a number of which are Benchmarks) that are published as part of the Closing Prices forward curve will not utilise VWAPs. Rather, they are determined using the 3 Month outright Closing Price established, in conjunction with any available spread information. In establishing the spread information, the Pricing Waterfall will be applied with reference to spread orders and transactions placed or transacted before the Spread Pricing Cut-off<sup>5</sup>.

Where the Pricing Waterfall is not deemed appropriate, the Quotations Committee may use Expert Judgement in establishing the spread information and for the determination of Closing Prices for the Prompt Dates addressed by this section. Where Expert Judgement is used, the following considerations may apply:

- a) The most active months will form the basis for the forward prices. For the purposes of the determination of the forward months for the Closing Prices, the Quotations Committee will give regard to all spread trading activity that has occurred throughout the day in that metal prior to the Spread Pricing Cut-off. However, it will give particular regard to trading activity and orders placed towards and on the Spread Pricing Cut-off, particularly where significant volumes have traded and/or where there is established order depth, in the Quotation Committee's view, to represent a fair reflection of prevailing market prices.
- b) Where trades or orders placed do not equate with each other across the forward months resulting in conflicting spreads, the Quotations Committee may use Expert Judgement to adjust the price curve. Such adjustments, which may include disregarding trades and orders as appropriate, will be made having taken into account all relevant trading activity including, but not limited to:
  - i. volume traded or volume placed on bids/offers, with particular regard to activity towards the Spread Pricing Cut-off. The LME may reference the MVVR to assist the Quotations Committee to prioritise relevant input data when considering price moves or with conflicting spreads across forward months;
  - ii. the length of time bids/offers have been visible in the LMEselect order book, with bids/offers that were entered first given priority. This may be used in conjunction with the MVVR;
  - iii. where an instrument does not have any orders in LMEselect, in the window five minutes prior to the Spread Pricing Cut-off, any subsequent orders in that instrument during those five minutes which create pricing conflicts may have a lower priority for consideration;
  - iv. reviewing any orders that are placed in the last minute prior to the Spread Pricing Cut-off that may be disregarded; and
  - v. the manner in which any price has incrementally moved, with particular regard to activity towards the Spread Pricing Cut-off.
- c) Any trades and/or orders that are deemed to be out of line with prevailing market prices for the forward months will be disregarded by the Quotations Committee at its absolute discretion.

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<sup>5</sup> The Spread Pricing Cut-off for each metal is set out in Table 3. Only bids/offers placed and transactions concluded up to and including the Spread Pricing Cut-off on that day will be taken into account for the purposes of determining the spread information.



- d) For the purposes of determining the forward months for the Closing Prices, the Quotations Committee may validate order and trading activity in LMEselect against other data sources and available spread trading information, including but not limited to inter-office activity and prevailing market prices.

#### 4.1.3 Provisional prices and objections

When the provisional Closing Prices have been established, they will be published on the wallboards surrounding the Ring displayed in green and placed on the LME SFTP server. At the same time, the provisional Closing Prices will be disseminated to LME licenced data vendors with an appropriate flag to show the status of these prices as provisional. The provisional prices will be determined and published by the Quotations Committee, as soon as is practical after each metal's Pricing Window has ended (or at a revised time communicated by the LME). Once the provisional prices have been published, Category 1, 2 and 4 Members may then submit objections to the LME in relation to the provisional prices during the Objection Window which shall apply until 17:30 London time (but can be extended subject to the discretion of the Quotations Committee).

Objections must be submitted in writing to the Quotations Committee to [closingprices@lme.com](mailto:closingprices@lme.com). The LME shall be under no obligation to consider objections which are received by the LME outside the Objection Window. No amendment to the provisional price shall be made during the Objection Window but will be reflected as an updated provisional price at the end of the Objection Window where an objection is upheld. The Quotations Committee shall be permitted to exercise its discretion to determine the appropriate course of action.

#### 4.1.4 Publication of Closing Prices

The Closing Prices shall be published on the wallboards surrounding the Ring as close to 17:50 London time as practicable. These prices will be displayed in red. The Closing Prices will also be published contemporaneously to the wider market through LME licensed data vendors and the provisional Closing Prices placed on the LME SFTP server will become the Closing Prices. Where, however, the LME has received an objection to a provisional price during the Objection Window and is therefore unable to publish the Closing Price by approximately 17:50 London time, the LME shall publish the Closing Price as soon as practicable following the Quotations Committee's consideration of the objection.

#### 4.1.5 MVR Thresholds and MVVRs

The MVR Thresholds and MVVR applicable for establishing the Closing Prices are set out under each methodology.

All LMEselect trades in outright or spreads, as applicable, for the relevant Prompt Date and metal that occur during the relevant Pricing Window will be considered for the purposes of the MVR Threshold and VWAP calculation, unless the LME excludes any trade it deems erroneous, such determination being at the LME's absolute discretion.

Under the Additional VWAP Methodology, for Non-Anchor Contracts where there are multiple VWAP Instruments, the MVR Threshold will be compared to the sum of the traded volumes across all VWAP Instruments for the respective Non-Anchor Contract.



The MVR Thresholds, MVVRs and rounding protocols are subject to change from time to time following ongoing review of market activity and approval by the Pricing and Valuations Committee.

## 4.2 Relative Importance of Benchmark Criteria

The Closing Prices are typically determined using as input data, trading activity from LMEselect including transactions and bid/offer spread information.

Where VWAPs are used, the methodology will calculate the average price of trades over the five-minute Pricing Window according to the volume of contracts traded. Therefore, the LME Closing Price will represent all of the trades that take place during the Pricing Window, subject to section 4.6.

The Closing Price determined using the Last Price Methodology, including the 3 Month Prompt Date where the relevant MVR Threshold is not met, is typically the last traded price if it falls within the last bid/offer spread. Where applicable, if the last traded price does not fall within the bid/offer on the close of the relevant period, then priority shall be given to the last bid and offer price quoted. However, the LME reserves the right to prioritise other inputs at their discretion and to not consider the last trades, bids or offers quoted where failure to do so would lead to a misleading or unreflective Closing Price at the LME's discretion and Expert Judgement.

## 4.3 Unit of Publication and Rounding

Each of the Closing Prices shall be published in USD per metric tonne.

Each of the Closing Prices is linked to and based upon the trading activity for the Underlying Metal on LMEselect (for more information, see the Benchmark Statement for the Closing Prices). Each concluded contract is capable of being physically delivered in accordance with the specifications set out in the LME Rulebook. In the physical commodity trading market, contracts for the purchase and sale of base metals are generally priced on the basis of a US dollar per metric tonne pricing structure. The LME aims at all times to ensure that its products most accurately reflect market realities and so has determined that US dollars per metric tonne is the most appropriate reference unit for its Closing Prices.

The values determined for each of the Closing Prices will be rounded as per the rounding protocol set out under each methodology.

## 4.4 Expert Judgement

The Closing Prices Benchmark Methodology and supporting policies and procedures that underpin the determination of Closing Prices, are structured with the intent of minimising, as far as feasible whilst ensuring that Closing Price determinations are reflective, the need for Expert Judgement or discretion.

As part of the LME's BMR control framework and governance arrangements, the Pricing and Valuations Committee periodically receives data and trend analysis on the frequency, nature of, and extent to which, Expert Judgement is used in relation to Benchmark determinations.



## 4.5 Assessors

The Quotations Committee is responsible for determining the Closing Prices. Quotations Committee members are subject to extensive competence and training requirements. Amongst other things, these requirements are designed to ensure the consistency of Benchmark determinations where Expert Judgement is applied. Quotations Committee members are also subject to periodic performance reviews.

The Closing Prices are determined by the Quotations Committee who ensure that published prices are subject to a “4-eyes” process.

## 4.6 Exclusion of Transaction Data

The LME monitors activity undertaken on its markets using a range of tools, aimed at identifying potentially erroneous input data. Such input data could include, for example (on a non-exhaustive basis) transaction prices or bids and offers that represent significant and unexplained price moves, as well as potentially manipulative behaviours that may be intended to influence a Benchmark determination. Where such behaviours or circumstances are identified, the LME may exclude the relevant data from the input data set that is used to determine the relevant Benchmark.

Any decision to exclude transaction data would be made in accordance with the procedures and controls set out in paragraph 4.5 above.

## 4.7 Pricing Disputes

Pursuant to paragraph 17 of Annex II of the BMR, users of the constituent Benchmarks may dispute a daily pricing determination. Considering the right of some users to object to a provisional price during the Objections Window (see paragraph 4.1.1), users who had that right may not dispute a daily pricing determination unless:

- (a) the subject matter of the dispute relates to a matter that occurred after the Objections Window, for example:
  - a. the dispute relates to the way in which an objection the user made during the Objections Window was handled by the LME; or
  - b. the dispute relates to a change that was made to the provisional price before the final price was published; or
- (b) the dispute has been raised on behalf of an underlying client who did not itself have the right to object to provisionally determined prices during the Objections Window for that benchmark.

For the avoidance of doubt, where a user did not have the right to object during the Objections Window, they shall not be prohibited from disputing a daily pricing determination.

Any such dispute must be submitted to the LME in writing to [closingprices@lme.com](mailto:closingprices@lme.com) and must be received within thirty (30) minutes of publication via the LME's market data channels of the Closing Price that is the subject of the dispute. The user must include sufficient information to enable the LME to properly consider the dispute, including (but not limited to) the specific Closing Price that is the subject of the dispute, and the reason for the dispute.



## 4.8 Disruption Events

A Disruption Event in any Prompt Date which Closing Prices are determined for a metal, shall typically apply to all Prompt Dates for which Closing Prices are determined for that metal. However, the LME may apply Expert Judgement to make its determination. Where the LME has determined that a Disruption Event has occurred, the LME will inform the market as soon as possible following its determination.

Where a Disruption Event has been declared, the LME may instead publish prices that shall not formally constitute Closing Prices. A Closing Price that is determined to be subject to a Disruption Event will be referred to in relevant LME communications as a “Disrupted Closing Price” in order to make the status of these prices clear. The LME will also continue to publish Disrupted Closing Prices on its market data feeds.

The LME may set the Disrupted Closing Price at a price at its absolute discretion using Expert Judgement, however, the Disrupted Closing Price will typically be determined as follows:

### **Disruption Event due to daily price limits**

#### Arrangements for the 3 Month Closing Prices for Metal Futures and Month 1 for Aluminium Premium Contracts

On a given Business Day, where a daily price limit is hit at any time during the Pricing Window by way of a trade taking place at a daily price limit, a bid being placed at an upper limit, or an offer being placed at a lower limit, the Closing Price will be determined at that daily price limit for that metal.

#### Arrangements for all other Prompt Dates

On a given Business Day, where a daily price limit would be implied to be reached for any Prompt Date in that metal by a combination of an outright and a spread, the Closing Price for that Prompt Date will be adjusted to its nearest daily price limit.

### **Disruption Event due to suspension of trading**

Where a Disruption Event has occurred due to the suspension of trading of a base metal on any Business Day (unless the suspension takes effect after the LME has determined the Closing Prices for that Business Day and the LME considers the Closing Price(s) to be reflective), the Closing Prices for each Prompt Date for that metal shall be determined using the last valuation and amended for any date adjustment if appropriate.

Further information relating to Disruption Events can be found on the LME Website.

## 4.9 Business Continuity Procedures

In the event the LME is unable to determine the Closing Prices using the methodology as set out above, for example in the event trading on LMEselect is suspended or there is insufficient information available to the Quotations Committee, the LME may invoke business continuity procedures and establish the Closing Prices for one or more metals using the Closing Prices BC Methodology as set out in Appendix 1.



Where business continuity procedures have been invoked, the LME will endeavour to continue establishing the Closing Prices for each base Metal Future and each Aluminium Premium Contract at the prescribed times. Where this is not possible, the LME will communicate revised times for determining the Closing Prices for any relevant Metal Future or Aluminium Premium Contract as soon as is practically possible. Any Closing Price established before the LME's business continuity procedures are invoked may stand, subject to the discretion of the Quotations Committee.

## 5 Document Change History

Version	Date
1.0	02/12/2019
1.1	15/01/2021
1.2	06/09/2021
2.0	20/05/2022
3.0	22/01/2024
3.1	18/03/2024





# Appendix 1

## Closing Prices BC Methodology

To ensure continuity in the publication of the Closing Prices, this Closing Prices BC Methodology shall be used for the determination of the Closing Prices in the event trading on LMEselect is suspended or there is insufficient information available to the Quotations Committee.

If a system outage results in LMEselect being unavailable prior to the Pricing Window, the LME may reasonably delay the establishment of the Closing Prices while seeking a resolution to the outage. If there is a system outage during the Pricing Window, the LME shall determine whether to delay the establishment of the remaining Closing Prices taking into account the time of outage, any available data and if the MVR Thresholds have been met.

If the LME is unable to establish the Closing Prices basis LMEselect activity, the LME may set the Closing Prices at its absolute discretion, which may include reverting to the Last Price Methodology for all metals, referencing the Pricing Waterfall, Expert Judgement and by reference to all appropriate available data sources. These data sources shall include, without limitation, previously established LME prices and trading information available from LMEselect prior to the outage (where these are deemed to remain reflective of current market conditions), available spread trading information, data originating from other LME trading venues, and alternative data sources that reference prevailing market prices.

The LME will communicate as appropriate ahead of the Pricing Window to confirm business continuity procedures have been invoked with any revised times and relevant information for the establishment of the Closing Prices for any relevant Metal Future or Aluminium Premium Contract as soon as is practically possible.



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