



To: All members and other interested parties

Ref: 21/158

Classification: Trading General

Date: 26 August 2021

Subject: **PRICING DOCUMENTATION UPDATES FOLLOWING LME NOTICES 21/111 AND 21/153**

Summary

1. This Notice informs Members and other interested parties about certain administrative, non-material updates that the LME is making to pricing-related documents (including UK Benchmarks Regulation documents and business continuity methodology documents) following the changes announced in LME Notices 21/111 and 21/153 in relation to the Official Prices, Closing Prices and Unofficial Closing Prices.

Defined Terms

2. Terms not otherwise defined in this Notice shall have the meaning ascribed to them in the rules and regulations of the LME ("**Rulebook**") or the Benchmark Administration – Definitions document ("**Definitions**") available on the LME website, as applicable, and in each case as amended from time to time.

Background

3. The LME issued a Discussion Paper on Market Structure (the "**Discussion Paper**") in January 2021 (LME Notice 21/011) which, amongst other things, consulted on whether the LME should move permanently to electronic determination of the Closing Prices, Unofficial Closing Prices and Official Prices. In light of Discussion Paper feedback, the LME took the decision that the Closing Prices and Unofficial Prices should move permanently to electronic determination and that the transition to electronic pricing would take place on the basis of the LME's current business continuity methodology.
4. In light of the decision that Closing Prices will be determined electronically, the LME consulted (in LME Notice 21/112) on a "split" pricing approach whereby the Official Prices would return to being Ring-determined on the reopening of the Ring ("**Official Prices Consultation**"). In light of feedback to the Official Prices Consultation, the LME took the decision to return Official Prices to the Ring on its re-opening following the temporary Covid-19 related suspension.
5. In order to give effect to the decisions referred to in paragraph 3 and paragraph 4, updates shall be made to the pricing-related documents listed below:
 - (a) **Benchmark Defined Terms** – Appendix 1A (redline) and 1B (clean);
 - (b) **Official Prices Benchmark Statement** – Appendix 2A (redline) and 2B (clean);
 - (c) **Official Prices Benchmark Methodology** – Appendix 3A (redline) and 3B (clean);
 - (d) **Closing Prices Benchmark Statement** – Appendix 4A (redline) and 4B (clean);
 - (e) **Closing Prices Benchmark Methodology** – Appendix 5A (redline) and 5B (clean); and
 - (f) **Policy for establishing (a) the Official Prices on LMEselect in the event the Ring is not available or disrupted; and (b) the Cash-Settled Future Daily Settlement Price for Cash-Settled**



Futures in the event that trading is disrupted on LMEselect during the relevant Pricing Period (the “BCP Policy”) – Appendix 6A (redline) and 6B (clean)¹.

6. The amendments to each of these documents are set out in the Appendices to this Notice (in clean and in redline comparing against the version that is currently in force), as indicated above.

Closing Prices updates

7. As set out above, the LME has already concluded its consultation in relation to whether the Closing Prices should be determined electronically, and published its decision accordingly. The Closing Prices-related changes that are being made to these documents are administrative in nature and non-material, and therefore do not require consultation. The LME has not at this stage fully reflected the permanent move of Closing Prices to electronic determination across its suite of pricing documents. As set out in paragraph 13 of Discussion Paper outcomes Notice (LME Notice 21/111), and in order to minimise market disruption, the LME intends to undertake a further update of its Closing Prices Benchmark Methodology (including the Closing Prices methodology set out in the BCP Policy (the “**Closing Prices BC Methodology**”)) and its Benchmark Statement as appropriate later in 2021, following any outcomes of the further consultation that the LME intends to undertake in relation to Closing Price electronic methodology enhancements during Q4 2021.
8. In addition, detail has been added to the BCP Policy to reflect how the Closing Prices will be determined in the event that the LME has cause to invoke its business continuity procedures in relation to LMEselect.

Housekeeping updates

9. The LME has also taken this opportunity to make a number of further administrative, non-material changes resulting from its most recent periodic review of its benchmark methodology documents and benchmark statements, as well as making a small number of non-material Brexit-related changes.
10. In relation to certain of these changes, the LME has sought to include additional detail on existing aspects of the relevant pricing processes. The changes to these documents (as set out in the Appendices to this Notice) are not material. They are being made to provide further transparency and/or clarification in relation to these aspects of the relevant methodology. For example, in relation to the methodology currently used for the determination of the Official Prices where insufficient information is available from Ring activity, the LME has incorporated additional detail to aid market participants’ understanding.

Unofficial Closing Prices

11. In addition, the LME has updated its website to include details of the pricing methodology that is applied in respect of Unofficial Closing Prices.

Effective date

12. The changes referred to in paragraphs 5 to 9 above shall take effect on 6 September 2021. Redline and clean versions of each of the relevant documents are set out in the Appendices to this Notice.

General

13. If Members or other interested parties have any questions or requests for further clarification regarding this Notice, please contact Trading Operations at tradingoperations@lme.com.

James Macdonald
Head of Trading Operations

cc: Board directors
Ring Dealers Committee
User Committee

¹ Previously set out in LME Notice 21/041, and which is repealed by the version set out at Appendix 6B of this Notice.



Benchmark Administration – Definitions

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. LME publishes various prices that fall within the definition of “benchmark” pursuant to the [European Benchmarks Regulation \(Regulation \(EU\) 2016/1011\)](#) and as “onshored” into UK law and amended by [The Benchmarks \(Amendment and Transitional Provision\)\(EU Exit\) Regulations 2019 \(“BMR”\)](#). [UK Benchmarks Regulation \(“BMR”\)](#)¹.

This document sets out the key definitions and terms used in connection with benchmarks that are administered by the LME, in its capacity as Administrator. As defined below these terms are common across all of the benchmarks administered by the LME. They are not exhaustive, and should be read in conjunction with the benchmark-specific terms that are defined within each LME benchmark statement and each benchmark methodology, as applicable.

2 Definitions

Term	Definition
Administrator	The London Metal Exchange (or any successor or assignee), acting as the “administrator” of a Benchmark, as such term is defined in article 3(1)(6) of the BMR. References to “administered” and “administration” shall be construed accordingly.
Aluminium Premiums	Collective term for Aluminium US Premium, Aluminium West-Europe Premium, Aluminium East-Asia Premium and Aluminium South-East Asia Premium.
Benchmark	An index that is categorised as a “benchmark” under article 3(1)(3) of the BMR, and which is administered by the Administrator.
Benchmark Changes and Cessation Procedure	The procedure pursuant to which the LME shall consult on proposed changes to, and cessations of, a Benchmark.
Benchmark Family	A “family of benchmarks” as defined under article 3(1)(4) of the BMR, meaning a group of benchmarks provided by the same administrator and determined from input data of the same nature which provides specific measures of the same or similar market or economic reality.
Benchmark Methodology	The benchmark methodology required by Annex II of the BMR and which describes the process that will be used to determine each Benchmark. A separate Benchmark

¹ As defined more fully in section 2.



	Methodology is provided for each Benchmark Family and shall be published on the LME’s BMR Website.
Benchmark Statement	The benchmark statement required by article 27(1) of the BMR, which sets out key information for each Benchmark. A separate Benchmark Statement is provided for each Benchmark Family and shall be published on the LME’s BMR Website.
BMR	Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and amending Directives 2008/48/EC and 2014/17/EC and Regulation (EU) No 596/2014 and as “onshored” into UK law and amended by The Benchmarks (Amendment and Transitional Provision)(EU Exit) Regulations 2019 , <u>together with Commission Delegated Regulations supplementing that Regulation (including, without limitation, Commission Delegated Regulations (EU) Nos 2018/65, 2018/1643 and 2020/1816), in each case to the extent that such have been incorporated in UK law pursuant to the European Union (Withdrawal) Act 2018 and as modified by UK Statutory Instruments, following the UK’s exit from the European Union</u>
BMR Website	The section of the LME Website that provides BMR-related content and materials (including, amongst other things, Benchmark Statements and Benchmark Methodologies) as updated from time to time and which currently has the website address https://www.lme.com/en-GB/About/Regulation/European-Benchmarks-Regulation . https://www.lme.com/About/Market-Regulation/Benchmark-Regulation .
Business Day	Any day (except Saturday, Sunday and any public holiday in the UK, and any day that the LME declares not to be a Business Day).
Cash	Shall have the meaning set out in the LME Rulebook.
Category 1 Member	Shall have the meaning set out in the LME Rulebook.
Category 2 Member	Shall have the meaning set out in the LME Rulebook.
Category 3 Member	Shall have the meaning set out in the LME Rulebook.
Category 4 Member	Shall have the meaning set out in the LME Rulebook.



Closing Prices	The end of day value determined for certain Prompt Dates for each of the metals <u>physically deliverable metal futures</u> that are tradeable in <u>on</u> the Ring <u>LME's venues</u> , as detailed further in the Closing Prices Benchmark Methodology.
commodity benchmark	A “commodity benchmark” as defined under article 3(1)(23) of the BMR.
Contract Specifications	The economic characteristics of each Contract, as set out in the LME Rulebook.
Contract	Shall have the meaning set out in the LME Rulebook.
contribution of input data	The provision of input data by a third party, where such input data is not readily available to the Administrator, or to another person for the purposes of passing to the Administrator, that is required in connection with the determination of a Benchmark, and is provided for that purpose, as defined in article 3(1)(8) of the BMR.
Dealer	Shall have the meaning set out in the LME Rulebook.
<u>Electronic Pricing Commencement Determination</u>	<u>A determination made by the LME at any time following the occurrence of a Ring Price Liquidity Event and subject to Regulation 5.5 and 5.5A of Part 3 of the LME Rulebook, that one or more Official Prices shall move permanently to electronic determination, basis the business continuity methodology for Official Prices that is in force when the Electronic Pricing Commencement Determination is made.</u>
Execution Venue	The LME Ring, inter-office market or electronic trading platform, LMEselect, as applicable in the context.
Executive Risk Committee or ERIC	The LME committee whose role is to advise the LME and LME Clear Executive Committees on key risk management elements and to assist the Chief Risk Officer in ensuring all risks across the business are captured and appropriately managed.
Expert Judgement	The exercise of discretion and any determination made by the Administrator with respect to the use of data in determining a Benchmark by using a standard of judgement, which shall consist of (1) acting in good faith and in a commercially reasonable manner; (2) to the extent practicable, reflecting the commercial objective of the Benchmark and market practice; and (3) to the extent practicable, promoting consistency in the exercise of discretion and the making of determinations in respect of both the Benchmark. For the avoidance of doubt, the term “using a standard of judgement” shall exclude any actions



	taken by LME personnel in the determination of a Benchmark where such actions are taken pursuant to a documented process.
index	An “index” within the meaning of article 3(1)(1) of the BMR.
input data	Data in respect of the value of one or more underlying assets, or prices, including estimated prices, quotes, committed quotes or other values, used by the Administrator to determine a benchmark, as defined in article 3(1)(14) of the BMR.
ISIN	International Securities Identification Number.
Kerb	Trading that occurs on the Ring after the end of the morning and afternoon Ring sessions.
LME	The London Metal Exchange.
LME Clear	LME Clear Limited, the clearing house appointed by the LME to clear Contracts.
LME Future	A Metal Future or Premium Contract, as such terms are defined in the LME Rulebook.
LMEprecious Future	A physically settled LMEprecious futures contract, as defined in the LME Rulebook.
LMEselect	A system provided by the LME to enable the anonymous electronic trading of contracts by LME participants.
LME Rulebook	The Rules and Regulations of the London Metal Exchange as updated from time to time and which can be found on the LME Website.
LME Warehouse	A warehouse used to store LME approved brands of metal, which themselves are used as the underlying assets for physically-settled contracts traded on the LME.
LME Website	The website of the LME as updated from time to time and which currently has the website address https://www.lme.com/ .
Lot	Shall have the meaning set out in the LME Rulebook.
material change	A significant or fundamental change to a Benchmark Methodology, which the Administrator, in its sole discretion, has determined would cause the relevant Benchmark to no longer be consistent with its primary objective and/or cause

	the underlying commodity referenced by the relevant Benchmark to no longer be represented by the Benchmark in the manner originally intended.
Member	Shall have the meaning set out in the LME Rulebook.
Monthly Average Future (MAF)	Monthly average futures contracts that are tradable <u>tradeable</u> on the LME’s execution venues.
NASAAC	North American Special Aluminium Alloy Contract.
Objection Window	<p>The period during which certain users may object to provisional prices for the following Benchmark Families:</p> <ul style="list-style-type: none"> • Official Prices • Closing Prices • Cash-Settled Futures Daily Settlement Prices <p>Please see the relevant Benchmark Methodology for further details.</p>
Official Prices	Reference prices determined for certain Prompt Dates for each of the metals <u>physically deliverable metal futures</u> tradeable in <u>on</u> the Ring <u>LME’s venues</u> , as detailed further in the Official Prices Benchmark Methodology.
Official Settlement Prices	The Official Price offer for the Cash Prompt Date, as detailed further in the Official Prices Benchmark Methodology.
Pricing and Valuations Committee	A sub-committee of the Executive Risk Committee of the LME which is responsible for advising on key pricing risks and issues.
Prompt Date	Shall have the meaning set out in the LME Rulebook, unless otherwise defined within a Benchmark Statement or Benchmark Methodology.
Quotations Committee	A sub-set of Trading Operations personnel who are responsible for determining Ring-derived Closing Prices and Official Prices.
regulated data	“regulated-data” within the meaning of article 3(1)(24) of the BMR.
Ring	An LME open-outcry trading venue, with “Ring session” referring to the period on the Ring during which specified metals may be traded. The time and duration of Ring sessions are set out on the LME Website from time to time.



<u>Ring Price Liquidity Event</u>	<u>Those criteria, set out by the Exchange by Notice from time to time, that if triggered would permit the LME to exercise its powers to issue an Electronic Pricing Commencement Determination. As at the date of this version of the Definitions, the Ring Price Liquidity Events are set out in LME Notice 21/153.</u>
SFTP	Secure File Transfer Protocol.
Traded Average Price Option (or TAPO)	Exchange traded and cleared contracts which settle financially based on the average of the daily LME Official Settlement Prices for the relevant month.
Trading Operations	The LME team responsible for day to day pricing activities at the LME.
trading period	A window during which trading of a certain Contract takes place.
Underlying Metal	Means: <ul style="list-style-type: none"> a) (a)—in relation to the benchmarks comprising the Official Prices, Closing Prices, Notional Average Prices and Monthly Average Settlement Prices Benchmark Families, the relevant physical metal identified in the applicable Contract Specification in Part 6 of the LME Rulebook; and (b) b) in relation to the benchmarks comprising the Cash-Settled Futures Benchmark Family, the relevant metal identified in the applicable Contract Specification name in Part 6C or 6D of the LME Rulebook.
VWAP	Volume weighted average price.

3 Document Change History

Version	Date
1.0	02/12/2019
1.1	15/01/2021
<u>1.2</u>	<u>06/09/2021</u>



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Benchmark Administration – Definitions

1 Introduction

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This document sets out the key definitions and terms used in connection with benchmarks that are administered by the LME, in its capacity as Administrator. As defined below these terms are common across all of the benchmarks administered by the LME. They are not exhaustive, and should be read in conjunction with the benchmark-specific terms that are defined within each LME benchmark statement and each benchmark methodology, as applicable.

2 Definitions

Term	Definition
Administrator	The London Metal Exchange (or any successor or assignee), acting as the “administrator” of a Benchmark, as such term is defined in article 3(1)(6) of the BMR. References to “administered” and “administration” shall be construed accordingly.
Aluminium Premiums	Collective term for Aluminium US Premium, Aluminium West-Europe Premium, Aluminium East-Asia Premium and Aluminium South-East Asia Premium.
Benchmark	An index that is categorised as a “benchmark” under article 3(1)(3) of the BMR, and which is administered by the Administrator.
Benchmark Changes and Cessation Procedure	The procedure pursuant to which the LME shall consult on proposed changes to, and cessations of, a Benchmark.
Benchmark Family	A “family of benchmarks” as defined under article 3(1)(4) of the BMR, meaning a group of benchmarks provided by the same administrator and determined from input data of the same nature which provides specific measures of the same or similar market or economic reality.
Benchmark Methodology	The benchmark methodology required by the BMR and which describes the process that will be used to determine each Benchmark. A separate Benchmark Methodology is provided for each Benchmark Family and shall be published on the LME’s BMR Website.

¹ As defined more fully in section 2.



Benchmark Statement	The benchmark statement required by article 27(1) of the BMR, which sets out key information for each Benchmark. A separate Benchmark Statement is provided for each Benchmark Family and shall be published on the LME's BMR Website.
BMR	Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds, together with Commission Delegated Regulations supplementing that Regulation (including, without limitation, Commission Delegated Regulations (EU) Nos 2018/65, 2018/1643 and 2020/1816), in each case to the extent that such have been incorporated in UK law pursuant to the European Union (Withdrawal) Act 2018 and as modified by UK Statutory Instruments, following the UK's exit from the European Union
BMR Website	The section of the LME Website that provides BMR-related content and materials (including, amongst other things, Benchmark Statements and Benchmark Methodologies) as updated from time to time and which currently has the website address https://www.lme.com/About/Market-Regulation/Benchmark-Regulation .
Business Day	Any day (except Saturday, Sunday and any public holiday in the UK, and any day that the LME declares not to be a Business Day).
Cash	Shall have the meaning set out in the LME Rulebook.
Category 1 Member	Shall have the meaning set out in the LME Rulebook.
Category 2 Member	Shall have the meaning set out in the LME Rulebook.
Category 3 Member	Shall have the meaning set out in the LME Rulebook.
Category 4 Member	Shall have the meaning set out in the LME Rulebook.
Closing Prices	The end of day value determined for certain Prompt Dates for each of the physically deliverable metal futures that are tradeable on the LME's venues, as detailed further in the Closing Prices Benchmark Methodology.
commodity benchmark	A "commodity benchmark" as defined under article 3(1)(23) of the BMR.
Contract Specifications	The economic characteristics of each Contract, as set out in the LME Rulebook.



Contract	Shall have the meaning set out in the LME Rulebook.
contribution of input data	The provision of input data by a third party, where such input data is not readily available to the Administrator, or to another person for the purposes of passing to the Administrator, that is required in connection with the determination of a Benchmark, and is provided for that purpose, as defined in article 3(1)(8) of the BMR.
Dealer	Shall have the meaning set out in the LME Rulebook.
Electronic Pricing Commencement Determination	A determination made by the LME at any time following the occurrence of a Ring Price Liquidity Event and subject to Regulation 5.5 and 5.5A of Part 3 of the LME Rulebook, that one or more Official Prices shall move permanently to electronic determination, basis the business continuity methodology for Official Prices that is in force when the Electronic Pricing Commencement Determination is made.
Execution Venue	The LME Ring, inter-office market or electronic trading platform, LMEselect, as applicable in the context.
Executive Risk Committee or ERIC	The LME committee whose role is to advise the LME and LME Clear Executive Committees on key risk management elements and to assist the Chief Risk Officer in ensuring all risks across the business are captured and appropriately managed.
Expert Judgement	The exercise of discretion and any determination made by the Administrator with respect to the use of data in determining a Benchmark by using a standard of judgement, which shall consist of (1) acting in good faith and in a commercially reasonable manner; (2) to the extent practicable, reflecting the commercial objective of the Benchmark and market practice; and (3) to the extent practicable, promoting consistency in the exercise of discretion and the making of determinations in respect of the Benchmark. For the avoidance of doubt, the term “using a standard of judgement” shall exclude any actions taken by LME personnel in the determination of a Benchmark where such actions are taken pursuant to a documented process.
index	An “index” within the meaning of article 3(1)(1) of the BMR.
input data	Data in respect of the value of one or more underlying assets, or prices, including estimated prices, quotes, committed quotes or other values, used by the Administrator to determine a benchmark, as defined in article 3(1)(14) of the BMR.



ISIN	International Securities Identification Number.
Kerb	Trading that occurs on the Ring after the end of the morning and afternoon Ring sessions.
LME	The London Metal Exchange.
LME Clear	LME Clear Limited, the clearing house appointed by the LME to clear Contracts.
LME Future	A Metal Future or Premium Contract, as such terms are defined in the LME Rulebook.
LMEprecious Future	A physically settled LMEprecious futures contract, as defined in the LME Rulebook.
LMEselect	A system provided by the LME to enable the anonymous electronic trading of contracts by LME participants.
LME Rulebook	The Rules and Regulations of the London Metal Exchange as updated from time to time and which can be found on the LME Website.
LME Warehouse	A warehouse used to store LME approved brands of metal, which themselves are used as the underlying assets for physically-settled contracts traded on the LME.
LME Website	The website of the LME as updated from time to time and which currently has the website address https://www.lme.com/ .
Lot	Shall have the meaning set out in the LME Rulebook.
material change	A significant or fundamental change to a Benchmark Methodology, which the Administrator, in its sole discretion, has determined would cause the relevant Benchmark to no longer be consistent with its primary objective and/or cause the underlying commodity referenced by the relevant Benchmark to no longer be represented by the Benchmark in the manner originally intended.
Member	Shall have the meaning set out in the LME Rulebook.
Monthly Average Future (MAF)	Monthly average futures contracts that are tradeable on the LME's execution venues.
NASAAC	North American Special Aluminium Alloy Contract.



Objection Window	<p>The period during which certain users may object to provisional prices for the following Benchmark Families:</p> <ul style="list-style-type: none"> • Official Prices • Closing Prices • Cash-Settled Futures Daily Settlement Prices <p>Please see the relevant Benchmark Methodology for further details.</p>
Official Prices	Reference prices determined for certain Prompt Dates for each of the physically deliverable metal futures tradeable on the LME's venues, as detailed further in the Official Prices Benchmark Methodology.
Official Settlement Prices	The Official Price offer for the Cash Prompt Date, as detailed further in the Official Prices Benchmark Methodology.
Pricing and Valuations Committee	A sub-committee of the Executive Risk Committee of the LME which is responsible for advising on key pricing risks and issues.
Prompt Date	Shall have the meaning set out in the LME Rulebook, unless otherwise defined within a Benchmark Statement or Benchmark Methodology.
Quotations Committee	A sub-set of Trading Operations personnel who are responsible for determining Closing Prices and Official Prices.
regulated data	“regulated-data” within the meaning of article 3(1)(24) of the BMR.
Ring	An LME open-outcry trading venue, with “Ring session” referring to the period on the Ring during which specified metals may be traded. The time and duration of Ring sessions are set out on the LME Website from time to time.
Ring Price Liquidity Event	Those criteria, set out by the Exchange by Notice from time to time, that if triggered would permit the LME to exercise its powers to issue an Electronic Pricing Commencement Determination. As at the date of this version of the Definitions, the Ring Price Liquidity Events are set out in LME Notice 21/153.
SFTP	Secure File Transfer Protocol.



Traded Average Price Option or TAPO	Exchange traded and cleared contracts which settle financially based on the average of the daily LME Official Settlement Prices for the relevant month.
Trading Operations	The LME team responsible for day to day pricing activities at the LME.
trading period	A window during which trading of a certain Contract takes place.
Underlying Metal	Means: <ul style="list-style-type: none"> a) in relation to the benchmarks comprising the Official Prices, Closing Prices, Notional Average Prices and Monthly Average Settlement Prices Benchmark Families, the relevant physical metal identified in the applicable Contract Specification in Part 6 of the LME Rulebook; and b) in relation to the benchmarks comprising the Cash-Settled Futures Benchmark Family, the relevant metal identified in the applicable Contract Specification name in Part 6C or 6D of the LME Rulebook.
VWAP	Volume weighted average price.

3 Document Change History

Version	Date
1.0	02/12/2019
1.1	15/01/2021
1.2	06/09/2021



Disclaimer

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LME Official Prices – Benchmark Statement

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 Statement is published pursuant to Article 27 of the BMR in respect of the LME Official Prices Benchmark Family.

2 General Information

2.1 Date of Original Publication

2 December 2019

2.2 Date of Last Update

~~15 January~~ [6 September](#) 2021

2.3 Review of Benchmark Statement

This Benchmark Statement is subject to periodic review by the LME Pricing and Valuations Committee. Reviews shall be completed at least annually. Additionally, this Benchmark Statement will be reviewed and updated whenever there are material changes to the information set out in it, or in the corresponding Benchmark Methodology.

2.4 Key Definitions

This section of this Benchmark Statement should be read in conjunction with the **Benchmark Administration – Definitions** document (“**Definitions**”) available on the LME’s BMR Website. Any capitalised terms not defined in this section of the Benchmark Statement shall have the meaning given to them in the Definitions.

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

“**Prompt Date**” 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.

3 Benchmarks

3.1 Constituent Benchmarks

The Benchmark Family comprises Official Prices [for the following metals as identified in the LME List of Benchmarks published on the LME Website. As at the date of the last update to this Benchmark Statement, the Benchmarks were as follows:](#)

- (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 Official Prices set out above that are Benchmarks are listed on the LME's BMR Website. Note that all Prompt Dates for which Official Prices are determined are Benchmarks.

The LME also publishes an Official Settlement Price for each of the Official Prices, as a subset of the Official Prices comprising this Benchmark Family.

3.2 ISINs

ISIN codes have not been assigned to the Official Prices.

4 Regulatory Information

4.1 Classification

The Official Prices each qualify as a “commodity benchmark” pursuant to Article 19 of the BMR. This categorisation is based on the underlying assets falling within the definition of a “commodity” (as referred to in Article 3(1)(23) of the BMR).

Each of the Official Prices utilises input data available to the LME, primarily including trading activity data. However, the Official Prices are not categorised as “regulated data” Benchmarks, nor are the Official Prices determined using contributions.

Annex II of the BMR applies to this Benchmark Family, as the Official Prices comprise Benchmarks that fall within the BMR “commodity benchmark” definition (within Title III of the BMR), and do not contain any critical, or other, benchmarks that would bring any of the composite Benchmarks within scope of Title II of the BMR.

In accordance with Regulation (EU) 2019/2089, it is confirmed that the Benchmarks referred to in this Benchmark Statement are not intended to pursue Environmental, Social and Governance (ESG) objectives, including decarbonisation and/or the objectives of the Paris Agreement.

4.2 Rationale for the Benchmark(s)

~~The application of bid and offered prices in~~ The assessment of trading activity on LME's Execution Venues during the period which constitutes Ring 2 (“R2”) (supported by making reference to all other available data sources where there is insufficient Ringinput data) is considered to be the most appropriate pricing methodology for these Benchmarks because



trading activity during the relevant five minute trading window represents the net balance of global risk (both on the buy and sell side) being offset in the LME market. R2 is the key pricing point for LME users and, in particular, physical participants who use the bid/offer mechanism for pricing OTC physical contracts and settlement. ~~As~~

In the context of Official Prices determined from Ring activity, as bids and offers may have been placed but not yet resulted in a concluded trade at the end of the trading window, the Ring bid/offer methodology is considered to be the most reflective approach to pricing rather than (for example) relying on concluded trades as input data.

4.3 Market Reality Measured

The Official Prices are a global reference for physical contracts for the sale and purchase of certain metals. The Cash Seller's Official Prices are also used to settle physically deliverable Futures Contracts traded on the LME (and in this context are referred to as the Official Settlement Prices).

The Official Prices reflect the USD value of one metric tonne of the relevant metal for the relevant Prompt Date, where the metal must comply with the requirements of the applicable LME contract specification set out in the LME Rulebook. Metals are tradeable on the LME's Execution Venues, with the Official Prices reflecting trading activity ~~on the Ring~~ during specified periods. ~~For all metals except Cobalt, the relevant period falls within R2. For Cobalt, the specified period falls within Ring 1 ("R1"). In this way, the Official Prices take and taking~~ into account supply and demand ~~in the Ring~~ at that point in time. The specified periods in which metals are traded (and which activity is taken into account in determining the Official Prices) is set out on the LME Website – **Trading Times and Dates**.

The Official Settlement Price ~~is for each metal shall be~~ the ~~last~~ offer price ~~for each of the~~ Cash Prompt Date that is ~~quoted during R2 (or, in relation to Cobalt, during R1)~~¹. determined as the Official Price².

4.4 Geographical Boundaries

The LME contracts resulting from trading ~~in~~^{on} the ~~Ring~~ LME's Execution Venues are capable of being settled by being physically delivered into any LME Warehouse. As such, the Benchmark may be subject to distortions based on factors impacting the ability of a party to an LME Contract to physically deliver, or to accept physical delivery, of the Underlying Metal. These factors may include, for example, the underlying regional supply and demand dynamics including (but not limited to) changes in trade policy and government action.

4.5 Other Information

The population of participants active in trading on the LME's Execution Venues is difficult to determine definitively as trading may take place both directly on the LME's Execution Venues (by Members) as well as indirectly (by the wider market participant population, through

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² As there is no Cash Prompt Date for Aluminium Premiums, the Official Settlement Price for Aluminium Premiums is the last offer price for the third Wednesday in Month 1 Prompt Date, as quoted during R2.



Members). Only Category 1 Members are capable of trading in the Ring, however (for their own account and on behalf of their clients). An up-to-date list of members of the LME by category can be found [at https://www.lme.com/en-GB/Trading/Access-the-market/Find-a-member-on-the LME Website](https://www.lme.com/en-GB/Trading/Access-the-market/Find-a-member-on-the-LME-Website).

Market information about LME Futures, including market and exchange open interest, is published on the LME Website on a daily basis.

5 Benchmark Methodology

5.1 Criteria and Procedures used to determine the Benchmarks

[This Benchmark Statement should be read in conjunction with the corresponding Benchmark Methodology for this Benchmark Family which can be found on the LME's BMR LME Website. The Benchmark Methodology sets out information including, but not limited to, when and how the Benchmarks are determined and elements such as Expert Judgement, Assessors and Minimum Volume Thresholds.](#)

5.2 Expert Judgement

The LME Quotations Committee is permitted to exercise Expert Judgement in the determination of the constituent Benchmarks. The Official Prices Benchmark Methodology and supporting internal policies and procedures that underpin the determination of Official Prices, are structured with the intent of minimising, as far as feasible whilst ensuring that Official Price determinations are reflective, the need for Expert Judgement.

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.

5.3 Assessors

The Quotations Committee is responsible for Benchmark determinations. 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 LME Official Prices are determined by the Quotations Committee Chairman in conjunction with other members of the Quotations Committee, [thereby ensuring that published prices are subject to a "4-eyes" process. Once the Official Prices are agreed by the Chairman and published as 'provisional', a member of the Quotations Committee will complete a 4-eyed check to agree the prices prior to publication of the final Official Prices.](#)

5.4 Procedures for Dealing with Errors in Input Data

The LME has a number of controls in place to prevent inaccurate pricing data being published to the market. These arrangements include, but are not limited to, pre-publication review and pricing objection windows during which Members may submit objections in relation to



provisionally-determined prices. Further information on the applicable objections periods is set out in the Official Prices Benchmark Methodology.

Users of the constituent Benchmarks (who do not have the right to object to provisionally determined prices) may dispute a Benchmark after final publication. Final publication times and corresponding dispute periods are detailed in the Official Prices Benchmark Methodology.

In the event that the LME becomes aware that an incorrect price has been published to the market as final, the LME will follow its standard procedure assessing the potential impact of the error and, where appropriate, for notifying the market (and market data vendors) of the error and correcting the published price accordingly.

6 Limitations of the Benchmarks

Some of the metals that are tradeable ~~in the Ring~~ on LME's Execution Venues are less liquid than others. Consequently, relatively limited data may be available to the Quotations Committee for these metals, on which to determine an Official Price. However, the LME has sought to take steps to support robust and reliable Benchmark determination through the implementation of various measures including (but not limited to):

- (a) permitting the Quotations Committee to use Expert Judgement (or relevant data from ~~outside the Ring~~ alternative LME Execution Venues) where appropriate; and
- (b) designing the Benchmark methodology to accommodate circumstances in which there is limited input data (for example, by ~~operating a "price banding" policy~~ applying expert judgement to facilitate unreflective bids and offers to be excluded from Benchmark determinations).

It is not possible to foresee all circumstances in which one or more of the Benchmarks may become unreliable, but a non-exhaustive list may include (depending on the circumstances):

- (a) an exceptional market event (e.g. an extreme volatility event or unforeseen event in the physical market);
- (b) where a trading halt is called on the LME;
- (c) insufficient input data (i.e. no bid, offers or ~~offer prices on the LME Ring~~ transactions) to determine a price (notwithstanding the contingencies the LME has put in place); and
- (d) significant divergence between the Benchmark and the relevant OTC price(s).

The LME has implemented measures aimed at addressing unexpected market events and also supporting the continued provision of the Benchmarks during these events including, for example, implementing a fast markets policy which would apply in circumstances of significant volatility. Furthermore section 4.1 of the Benchmark Methodology sets out how the Official Price shall be determined where there is insufficient input data.

7 Changes to, and Cessation of, a Benchmark

It is possible that certain factors, including factors beyond the control of the LME, may necessitate changes to, or the cessation of, one or more of the Benchmarks within this Benchmark Family.



A change to, or cessation of, a Benchmark may have an impact on financial contracts or financial instruments (in each case as defined within the BMR) that reference that Benchmark.

Details of the LME Benchmark Changes and Cessation Procedure, which details the LME’s arrangements for consulting on proposed changes and cessations (where applicable), can be found on the LME’s BMR Website.

7.1 Ring Price Liquidity Events

The LME also notes that it has the right to transition one or more Official Price Benchmarks permanently to electronic determination without consultation if a Ring Price Liquidity Event occurs.

8 ESG Factors³

EXPLANATION OF HOW ESG FACTORS ARE REFLECTED IN THE BENCHMARK STATEMENT

SECTION 1 – CONSIDERATION OF ESG FACTORS

Item 1. Name of the benchmark administrator	The London Metal Exchange
Item 2. Type of benchmark or family of benchmarks.	Commodity Benchmarks
Item 3. Name of the benchmark or family of benchmarks.	Official Prices
Item 4. Are there in the portfolio of the benchmark administrator any EU Climate Transition Benchmarks, EU Paris-aligned Benchmarks, benchmarks that pursue ESG objectives or benchmarks that take into account ESG factors?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Item 5. Does the benchmark or family of benchmarks pursue ESG objectives?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

³ For these purposes, “ESG Factors” means as envisaged by the requirements of Commission Delegated Regulation (EU) 2020/1816 (as onshored into UK law) and in particular how it relates to EU-UK Climate Transition and EU-UK Paris-Aligned Benchmarks. For the avoidance of doubt, and in accordance with Regulation (EU) 2019/2089 (as onshored into UK law), the LME has confirmed that the Benchmarks referred to in this Benchmark Statement are not intended to pursue ESG objectives, including decarbonisation and on/or the objectives of the Paris Agreement. Additionally, references within this section 8 to EU legislation should be understood to refer to the corresponding onshored UK version(s).



Item 6. Where the response to Item 5 is positive, provide the details (score) in relation to the ESG factors listed in Annex II for each family of benchmarks at aggregated level. The ESG factors shall be disclosed at an aggregated weighted average value at the level of the family of benchmarks.

(a) List of combined ESG factors:	Details on each factor: Not applicable.
(b) List of environmental factors:	Details on each factor: Not applicable.
(c) List of social factors:	Details on each factor: Not applicable.
(d) List of governance factors:	Details on each factor: Not applicable.

Item 7. Where the response to Item 5 is positive, provide below the details (score) for each benchmark, in relation to the ESG factors listed in Annex II, depending on the relevant underlying asset concerned. Alternatively, all of this information may be provided in the form of a hyperlink to a website of the benchmark administrator included in the benchmark statement. The information on the website shall be easily available and accessible. Benchmark administrators shall ensure that information published on their website remains available for five years. The score of the ESG factors shall not be disclosed for each constituent of the benchmark, but shall be disclosed at an aggregated weighted average value of the benchmark.

(a) List of combined ESG factors:	Details on each factor: Not applicable.
(b) List of environmental factors:	Details on each factor: Not applicable.
(c) List of social factors:	Details on each factor: Not applicable.
(d) List of governance factors:	Details on each factor: Not applicable.
Hyperlink to the information on ESG factors for each benchmark:	Not applicable.

Item 8. Data and standards used

(a) Description of data sources used to provide information on the ESG factors in the benchmark statement.	Not applicable.
(b) Reference standards.	Not applicable.

SECTION 2 – ADDITIONAL DISCLOSURE REQUIREMENTS FOR EU CLIMATE TRANSITION AND EU PARIS-ALIGNED BENCHMARKS

Item 9. Where a benchmark is labelled as ‘EU Climate Transition Benchmark’ or ‘EU Paris-aligned Benchmark’, benchmark administrators shall also disclose the following information:



(a) Forward-looking year-on-year decarbonisation trajectory;	Not applicable.
(b) Degree to which the IPCC decarbonisation trajectory (1,5°C with no or limited overshoot) has been achieved on average per year since creation;	Not applicable.
(c) overlap between those benchmarks and their investable universe, as defined in Article 1, point (e), of Commission Delegated Regulation (EU) 2020/1818), using the active share at asset level.	Not applicable.

SECTION 3 –DISCLOSURE OF THE ALIGNMENT WITH THE OBJECTIVES OF THE PARIS AGREEMENT

Item 10. By the date of application of this Regulation, for significant equity and bond benchmarks, EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks, benchmark administrators shall also disclose the following information. By 31 December 2021, benchmark administrators shall, for each benchmark or, where applicable, each family of benchmarks, disclose the following information:

(a) Does the benchmark align with the target of reducing carbon emissions or the attainment of the objectives of the Paris Agreement;	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
(b) The temperature scenario, in accordance with international standards, used for the alignment with the target of reducing GHG emissions or attaining of the objectives of the Paris Agreement;	Not applicable.
(c) The name of the provider of the temperature scenario used for the alignment with the target of reducing GHG emissions or the attainment of the objectives of the Paris Agreement;	Not applicable.
(d) The methodology used for the measurement of the alignment with the temperature scenario;	Not applicable.
(e) The hyperlink to the website of the temperature scenario used.	Not applicable.
Date on which information has last been updated and reason for the update:	15 January 2021. Implementation of the requirements of Commission Delegated Regulation (EU) 2020/1816.

9 Document Change History

Version	Date
1.0	02/12/2019
1.1	19/02/2020
1.2	15/01/2021



Version	Date
1.3	06/09/2021

Disclaimer

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All information contained within this document (the “Information”) is provided for reference purposes only. While the LME endeavours to ensure the accuracy, reliability and completeness of the Information, neither the LME, nor any of its affiliates makes any warranty or representation, express or implied, or accepts any responsibility or liability for, the accuracy, completeness, reliability or suitability of the Information for any particular purpose. The LME accepts no liability whatsoever to any person for any loss or damage arising from any inaccuracy or omission in the Information or from any consequence, decision, action or non-action based on or in reliance upon the Information. This document constitutes the benchmark statement pursuant to Article 27 of the BMR. It is provided by the LME for the purpose of describing those aspects of the constituent Benchmarks as required by the BMR. Further information regarding the LME, its Benchmarks and this benchmark statement are available from the LME on request. This benchmark statement is subject to amendment from time to time.

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LME Official Prices – Benchmark Statement

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 Statement is published pursuant to Article 27 of the BMR in respect of the LME Official Prices Benchmark Family.

2 General Information

2.1 Date of Original Publication

2 December 2019

2.2 Date of Last Update

6 September 2021

2.3 Review of Benchmark Statement

This Benchmark Statement is subject to periodic review by the LME Pricing and Valuations Committee. Reviews shall be completed at least annually. Additionally, this Benchmark Statement will be reviewed and updated whenever there are material changes to the information set out in it, or in the corresponding Benchmark Methodology.

2.4 Key Definitions

This section of this Benchmark Statement should be read in conjunction with the **Benchmark Administration – Definitions** document (“**Definitions**”) available on the LME’s BMR Website. Any capitalised terms not defined in this section of the Benchmark Statement shall have the meaning given to them in the Definitions.

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

“**Prompt Date**” 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.

3 Benchmarks

3.1 Constituent Benchmarks

The Benchmark Family comprises Official 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 Statement, the Benchmarks were as follows :

- (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 Official Prices set out above that are Benchmarks are listed on the LME's BMR Website. Note that all Prompt Dates for which Official Prices are determined are Benchmarks.

The LME also publishes an Official Settlement Price for each of the Official Prices, as a subset of the Official Prices comprising this Benchmark Family.

3.2 ISINs

ISIN codes have not been assigned to the Official Prices.

4 Regulatory Information

4.1 Classification

The Official Prices each qualify as a “commodity benchmark” pursuant to Article 19 of the BMR. This categorisation is based on the underlying assets falling within the definition of a “commodity” (as referred to in Article 3(1)(23) of the BMR).

Each of the Official Prices utilises input data available to the LME, primarily including trading activity data. However, the Official Prices are not categorised as “regulated data” Benchmarks, nor are the Official Prices determined using contributions.

Annex II of the BMR applies to this Benchmark Family, as the Official Prices comprise Benchmarks that fall within the BMR “commodity benchmark” definition (within Title III of the BMR), and do not contain any critical, or other, benchmarks that would bring any of the composite Benchmarks within scope of Title II of the BMR.

In accordance with Regulation (EU) 2019/2089, it is confirmed that the Benchmarks referred to in this Benchmark Statement are not intended to pursue Environmental, Social and Governance (ESG) objectives, including decarbonisation and/or the objectives of the Paris Agreement.

4.2 Rationale for the Benchmark(s)

The assessment of trading activity on LME's Execution Venues during the period which constitutes Ring 2 (“R2”) (supported by making reference to all other available data sources where there is insufficient input data) is considered to be the most appropriate pricing methodology for these Benchmarks because trading activity during the relevant five minute



trading window represents the net balance of global risk (both on the buy and sell side) being offset in the LME market. R2 is the key pricing point for LME users and, in particular, physical participants who use the bid/offer mechanism for pricing OTC physical contracts and settlement.

In the context of Official Prices determined from Ring activity, as bids and offers may have been placed but not yet resulted in a concluded trade at the end of the trading window, the Ring bid/offer methodology is considered to be the most reflective approach to pricing rather than (for example) relying on concluded trades as input data.

4.3 Market Reality Measured

The Official Prices are a global reference for physical contracts for the sale and purchase of certain metals. The Cash Seller's Official Prices are also used to settle physically deliverable Futures Contracts traded on the LME (and in this context are referred to as the Official Settlement Prices).

The Official Prices reflect the USD value of one metric tonne of the relevant metal for the relevant Prompt Date, where the metal must comply with the requirements of the applicable LME contract specification set out in the LME Rulebook. Metals are tradeable on the LME's Execution Venues, with the Official Prices reflecting trading activity during specified periods and taking into account supply and demand at that point in time. The specified periods in which metals are traded (and which activity is taken into account in determining the Official Prices) is set out on the LME Website – **Trading Times and Dates**.

The Official Settlement Price for each metal shall be the offer price of the Cash Prompt Date that is determined as the Official Price¹.

4.4 Geographical Boundaries

The LME contracts resulting from trading on the LME's Execution Venues are capable of being settled by being physically delivered into any LME Warehouse. As such, the Benchmark may be subject to distortions based on factors impacting the ability of a party to an LME Contract to physically deliver, or to accept physical delivery, of the Underlying Metal. These factors may include, for example, the underlying regional supply and demand dynamics including (but not limited to) changes in trade policy and government action.

4.5 Other Information

The population of participants active in trading on the LME's Execution Venues is difficult to determine definitively as trading may take place both directly on the LME's Execution Venues (by Members) as well as indirectly (by the wider market participant population, through Members). Only Category 1 Members are capable of trading in the Ring, however (for their own account and on behalf of their clients). An up-to-date list of members of the LME by category can be found on the LME Website.

¹ As there is no Cash Prompt Date for Aluminium Premiums, the Official Settlement Price for Aluminium Premiums is the last offer price for the third Wednesday in Month 1 Prompt Date, as quoted during R2.



Market information about LME Futures, including market and exchange open interest, is published on the LME Website on a daily basis.

5 Benchmark Methodology

5.1 Criteria and Procedures used to determine the Benchmarks

This Benchmark Statement should be read in conjunction with the corresponding Benchmark Methodology which can be found on the LME Website. The Benchmark Methodology sets out information including, but not limited to, when and how the Benchmarks are determined and elements such as Expert Judgement, Assessors and Minimum Volume Thresholds.

5.2 Expert Judgement

The LME Quotations Committee is permitted to exercise Expert Judgement in the determination of the constituent Benchmarks. The Official Prices Benchmark Methodology and supporting internal policies and procedures that underpin the determination of Official Prices, are structured with the intent of minimising, as far as feasible whilst ensuring that Official Price determinations are reflective, the need for Expert Judgement.

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.

5.3 Assessors

The Quotations Committee is responsible for Benchmark determinations. 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 LME Official Prices are determined by the Quotations Committee Chairman in conjunction with other members of the Quotations Committee. Once the Official Prices are agreed by the Chairman and published as 'provisional', a member of the Quotations Committee will complete a 4-eyed check to agree the prices prior to publication of the final Official Prices.

5.4 Procedures for Dealing with Errors in Input Data

The LME has a number of controls in place to prevent inaccurate pricing data being published to the market. These arrangements include, but are not limited to, pre-publication review and pricing objection windows during which Members may submit objections in relation to provisionally-determined prices. Further information on the applicable objections periods is set out in the Official Prices Benchmark Methodology.

Users of the constituent Benchmarks (who do not have the right to object to provisionally determined prices) may dispute a Benchmark after final publication. Final publication times and corresponding dispute periods are detailed in the Official Prices Benchmark Methodology.



In the event that the LME becomes aware that an incorrect price has been published to the market as final, the LME will follow its standard procedure assessing the potential impact of the error and, where appropriate, for notifying the market (and market data vendors) of the error and correcting the published price accordingly.

6 Limitations of the Benchmarks

Some of the metals that are tradeable on LME's Execution Venues are less liquid than others. Consequently, relatively limited data may be available to the Quotations Committee for these metals, on which to determine an Official Price. However, the LME has sought to take steps to support robust and reliable Benchmark determination through the implementation of various measures including (but not limited to):

- (a) permitting the Quotations Committee to use Expert Judgement (or relevant data from alternative LME Execution Venues) where appropriate; and
- (b) designing the Benchmark methodology to accommodate circumstances in which there is limited input data (for example, by applying expert judgement to facilitate unreflective bids and offers to be excluded from Benchmark determinations).

It is not possible to foresee all circumstances in which one or more of the Benchmarks may become unreliable, but a non-exhaustive list may include (depending on the circumstances):

- (a) an exceptional market event (e.g. an extreme volatility event or unforeseen event in the physical market);
- (b) where a trading halt is called on the LME;
- (c) insufficient input data (i.e. no bid, offers or transactions) to determine a price (notwithstanding the contingencies the LME has put in place); and
- (d) significant divergence between the Benchmark and the relevant OTC price(s).

The LME has implemented measures aimed at addressing unexpected market events and also supporting the continued provision of the Benchmarks during these events including, for example, implementing a fast markets policy which would apply in circumstances of significant volatility. Furthermore section 4.1 of the Benchmark Methodology sets out how the Official Price shall be determined where there is insufficient input data.

7 Changes to, and Cessation of, a Benchmark

It is possible that certain factors, including factors beyond the control of the LME, may necessitate changes to, or the cessation of, one or more of the Benchmarks within this Benchmark Family.

A change to, or cessation of, a Benchmark may have an impact on financial contracts or financial instruments (in each case as defined within the BMR) that reference that Benchmark.

Details of the LME Benchmark Changes and Cessation Procedure, which details the LME's arrangements for consulting on proposed changes and cessations (where applicable), can be found on the LME's BMR Website.



7.1 Ring Price Liquidity Events

The LME also notes that it has the right to transition one or more Official Price Benchmarks permanently to electronic determination without consultation if a Ring Price Liquidity Event occurs.

8 ESG Factors²

EXPLANATION OF HOW ESG FACTORS ARE REFLECTED IN THE BENCHMARK STATEMENT

SECTION 1 – CONSIDERATION OF ESG FACTORS

Item 1. Name of the benchmark administrator	The London Metal Exchange
Item 2. Type of benchmark or family of benchmarks.	Commodity Benchmarks
Item 3. Name of the benchmark or family of benchmarks.	Official Prices
Item 4. Are there in the portfolio of the benchmark administrator any EU Climate Transition Benchmarks, EU Paris-aligned Benchmarks, benchmarks that pursue ESG objectives or benchmarks that take into account ESG factors?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Item 5. Does the benchmark or family of benchmarks pursue ESG objectives?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Item 6. Where the response to Item 5 is positive, provide the details (score) in relation to the ESG factors listed in Annex II for each family of benchmarks at aggregated level. The ESG factors shall be disclosed at an aggregated weighted average value at the level of the family of benchmarks.	
(a) List of combined ESG factors:	Details on each factor: Not applicable.
(b) List of environmental factors:	Details on each factor: Not applicable.

² For these purposes, “ESG Factors” means as envisaged by the requirements of Commission Delegated Regulation (EU) 2020/1816 (as onshored into UK law) and in particular how it relates to UK Climate Transition and UK Paris-Aligned Benchmarks. For the avoidance of doubt, and in accordance with Regulation (EU) 2019/2089 (as onshored into UK law), the LME has confirmed that the Benchmarks referred to in this Benchmark Statement are not intended to pursue ESG objectives, including decarbonisation and on/or the objectives of the Paris Agreement. Additionally, references within this section 8 to EU legislation should be understood to refer to the corresponding onshored UK version(s).



(c) List of social factors:	Details on each factor: Not applicable.
(d) List of governance factors:	Details on each factor: Not applicable.

Item 7. Where the response to Item 5 is positive, provide below the details (score) for each benchmark, in relation to the ESG factors listed in Annex II, depending on the relevant underlying asset concerned. Alternatively, all of this information may be provided in the form of a hyperlink to a website of the benchmark administrator included in the benchmark statement. The information on the website shall be easily available and accessible. Benchmark administrators shall ensure that information published on their website remains available for five years. The score of the ESG factors shall not be disclosed for each constituent of the benchmark, but shall be disclosed at an aggregated weighted average value of the benchmark.

(a) List of combined ESG factors:	Details on each factor: Not applicable.
(b) List of environmental factors:	Details on each factor: Not applicable.
(c) List of social factors:	Details on each factor: Not applicable.
(d) List of governance factors:	Details on each factor: Not applicable.
Hyperlink to the information on ESG factors for each benchmark:	Not applicable.

Item 8. Data and standards used

(a) Description of data sources used to provide information on the ESG factors in the benchmark statement.	Not applicable.
(b) Reference standards.	Not applicable.

SECTION 2 – ADDITIONAL DISCLOSURE REQUIREMENTS FOR EU CLIMATE TRANSITION AND EU PARIS-ALIGNED BENCHMARKS

Item 9. Where a benchmark is labelled as ‘EU Climate Transition Benchmark’ or ‘EU Paris-aligned Benchmark’, benchmark administrators shall also disclose the following information:

(a) Forward-looking year-on-year decarbonisation trajectory;	Not applicable.
(b) Degree to which the IPCC decarbonisation trajectory (1,5°C with no or limited overshoot) has been achieved on average per year since creation;	Not applicable.
(c) overlap between those benchmarks and their investable universe, as	Not applicable.



defined in Article 1, point (e), of Commission Delegated Regulation (EU) 2020/1818), using the active share at asset level.

SECTION 3 –DISCLOSURE OF THE ALIGNMENT WITH THE OBJECTIVES OF THE PARIS AGREEMENT

Item 10. By the date of application of this Regulation, for significant equity and bond benchmarks, EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks, benchmark administrators shall also disclose the following information. By 31 December 2021, benchmark administrators shall, for each benchmark or, where applicable, each family of benchmarks, disclose the following information:

(a) Does the benchmark align with the target of reducing carbon emissions or the attainment of the objectives of the Paris Agreement;	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
(b) The temperature scenario, in accordance with international standards, used for the alignment with the target of reducing GHG emissions or attaining of the objectives of the Paris Agreement;	Not applicable.
(c) The name of the provider of the temperature scenario used for the alignment with the target of reducing GHG emissions or the attainment of the objectives of the Paris Agreement;	Not applicable.
(d) The methodology used for the measurement of the alignment with the temperature scenario;	Not applicable.
(e) The hyperlink to the website of the temperature scenario used.	Not applicable.
Date on which information has last been updated and reason for the update:	15 January 2021. Implementation of the requirements of Commission Delegated Regulation (EU) 2020/1816.



9 Document Change History

Version	Date
1.0	02/12/2019
1.1	19/02/2020
1.2	15/01/2021
1.3	06/09/2021



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LME Official 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 Official Prices Benchmark Family.

2 General Information

2.1 Date of Original Publication

2 December 2019

2.2 Date of Last Update

~~15 January~~ 6 September 2021

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’s BMR 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:

“Prompt Date” 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

“Official Prices BC Methodology” means the methodology set out in Appendix 1 by which the Official Prices shall be determined where business continuity procedures are invoked (see paragraph 4.8)



3 Benchmarks

3.1 Constituent Benchmarks

The Benchmark Family comprises Official Prices ~~for~~as identified in the following metals: [LME List of Benchmarks](#) published on the LME Website. As at the date of the last update to this [Benchmark Methodology](#), the Benchmarks were as follows:

- (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 Official Prices set out above that are Benchmarks are listed on the LME's BMR Website. Note that all Prompt Dates for which Official Prices are determined are Benchmarks.

The LME also publishes an Official Settlement Price for each of the [Official Prices](#) metals listed above, as a subset of the Official Prices comprising this Benchmark Family.

4 Benchmark Methodology

4.1 Criteria and Procedures used to determine the Benchmarks

This Benchmark Methodology is used each Business Day to calculate the Official Price for the relevant Prompt Dates. Each Official Price constitutes a Benchmark. LME publishes a bid and offer Official Price for each relevant Prompt Date.

~~Subject to paragraph 4.1.2, the Official Price for each relevant Prompt Date shall be the last bid and offer price quoted during Ring 2 ("R2") (except Cobalt, in relation to which Official Prices are determined on the basis of Ring 1 ("R1") activity).~~ 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 Official Settlement Price ~~is for each metal shall be~~ the last offer price ~~for each of the~~ Cash Prompt Date that is ~~quoted during R2 (or, in relation to Cobalt, during R1)~~¹ determined as the Official Price².

4.1.1 General Methodology

~~As set out on the LME website, the LME facilitates two trading sessions during each Business Day; one in the morning and one in the afternoon.~~ The specified periods in which metals are traded (and which activity is taken into account in determining the Official Prices) is set out on the LME Website – **Trading Times and Dates.**

~~Subject to paragraph 4.1.2, the~~ The Official Price for each relevant Prompt Date ~~is typically shall be determined basis~~ the last bid and offer price quoted during Ring 2 (“R2 for each metal and for each relevant Prompt Date (except”) (or in the case of Cobalt ~~which is priced on the basis,~~ Ring 1 (“R1”)) where sufficient information is available and at all times at the LME’s absolute discretion in consideration of the ~~last bid and offer price quoted during R1)~~ points set out below, including paragraph 4.1.2.

For each metal (or in the case of Aluminium, each category of Aluminium), the Quotations Committee shall allocate Committee members to oversee trading in each Prompt Date. At the close of the trading period for each metal, each member of the Quotations Committee who has participated in the Ring session will electronically submit their view of the last bid and offer price quoted for the relevant Prompt Date.

Following the submissions, the Chairman of the Quotations Committee (or their designate) shall, in accordance with the LME’s pricing procedures:

- (a) consider their own view (and the views of other members of the Quotations Committee) of the last bid and offer price quoted for each Prompt Date;
- (b) apply Expert Judgement, where appropriate, to the consideration of whether the last bid and offered price quoted for the relevant Prompt Date (if relevant) is an accurate reflection of the prevailing market price; ~~and~~
- (c) consider the Bid/Offer Spread Adjustment (as set out in paragraph 4.1.2); and
- (d) consider other information available, including but not limited to, spread trading information and last valuations.

for the purpose of determining a provisional price.

~~In certain circumstances,~~ Where sufficient information is not available from Ring activity to determine the Chairman of the Quotations Committee may use provisional price for each relevant Prompt Date as set out above, provisional prices ~~from~~ shall be determined as follows:

For Cash and 3 Months for Metal Futures

¹ ~~As there is no Cash Prompt Date for Aluminium Premiums, the Official Settlement Price for Aluminium Premiums is the last offer price for the third Wednesday in Month 1 Prompt Date, as quoted during R2.~~

² As there is no Cash Prompt Date for Aluminium Premiums, the Official Settlement Price for Aluminium Premiums shall be the offer price for the third Wednesday in Month 1 Prompt Date determined as the Official Price.



For the 3 Month Prompt Date, the provisional price shall be determined basis the Cash Prompt Date and the Cash to 3 Month spread quoted in the Ring, where available. Where the Cash Prompt Date and/or the Cash to 3 Month spread is unquoted in the Ring, the provisional price shall be determined using available trading information from the LME's electronic trading platform, for example in conjunction with last night's valuation.

For the ~~scenario~~ Cash Prompt Date, the provisional price shall be determined basis the 3 Month Prompt Date and the Cash to 3 Month spread quoted in the Ring, where ~~there~~ available. Where the 3 Month Prompt Date and/or the Cash to 3 Month spread is ~~insufficient~~ unquoted in the Ring, the provisional price shall be determined using available trading information from the LME's electronic trading platform in conjunction with last night's valuation.

For Month 1 for Aluminium Premium Contracts

For Month 1 for Aluminium Premium Contracts, the provisional price shall be determined basis last night's valuation.

For all other Prompt Dates

The provisional price for all other Prompt Dates that are published as part of the Official Prices shall be determined using as its input data ~~from~~, the ~~Ring to calculate~~ provisional price for the 3 Month Prompt Date ~~price, but there is sufficient input data from~~ established on the ~~Ring for the Cash Prompt Date price~~ basis of the methodology above, in conjunction with any available spread information.

Five minutes after the end of the relevant trading period, the LME shall publish a provisional price on the wallboards surrounding the Ring. These prices shall be clearly identified in green. The provisional price will also be published contemporaneously to the wider market through data vendors. The provisional price shall remain displayed on the wallboards for five minutes, during which time Dealers may submit objections verbally to the Chairman of the Quotations Committee in relation to the provisional price (the Objection Window). The LME shall be under no obligation to consider objections that are received by the LME outside the Objection Window. No amendment to the provisional price shall be made during the Objection Window.

Five minutes following the publication of the provisional price, the Official Price shall be published on the wallboards surrounding the Ring. This price will be displayed in red. The Official Prices will also be published contemporaneously to the wider market through data vendors. Where, however, the LME has received an objection to a provisional price during the Objection Window and is therefore unable to publish the Official Price five minutes following the publication of the provisional price, the LME shall publish the Official Price as soon as practicable following the Quotations Committee's consideration of the objection.

The Quotations Committee will use digital video and audio technology to support its consideration of objections received during the Objection Window, and shall be permitted to exercise its discretion to determine the appropriate course of action.

~~The LME may from time to time specify that the Official Prices for certain metals may be calculated using bids and offers quoted on LMEselect, rather than on the basis of activity in the Ring, for example in a situation where Ring trading cannot take place.~~

The timings for publication of provisional and final Official Prices are as follows:

Metal	Provisional Prices	Final Prices
-------	--------------------	--------------



	(London time)	(London time)
Cobalt	12:30	12:35
Copper	12:40	12:45
Aluminium Alloy and NASAAC	12:45	12:50
Tin	12:50	12:55
Lead	12:55	13:00
Zinc	13:00	13:05
Aluminium	13:05	13:10
Nickel	13:10	13:15
Aluminium Premiums	13:15	13:20

4.1.2 Bid/Offer Spread Adjustment

When determining the Official Prices, the Chairman of the Quotations Committee may use Expert Judgement where appropriate, to ensure that the bid/offer spread of any Official Price is reflective of prevailing market prices, irrespective of the spread of the last bid and offer price quoted during R2 (or R1 for Cobalt). For example, it is possible that immediately prior to the end of the relevant trading period, the bid/offer spread is wider and therefore not reflective of the other orders generally executed during the relevant trading period.

4.1.3 Minimum Volume Thresholds

There is no minimum volume threshold for the determination of the Official Prices. The Official Price is ~~determined from the last bid/offer price during R2, and is not~~ not based on transactions (except to the extent that transactions may be referenced from the LME's electronic trading platform where sufficient information is not available from Ring activity or used in the bid/offer spread adjustment as set out in paragraph 4.1.2).

~~Where there is a lack of input data, i.e. no bid or offer prices, the Quotations Committee will exercise discretion and may use or have regard to various sources of data including (but not limited to) previous Official Price(s) published by the LME. The sources of data used depend on the metal and are at the Chairman of the Quotations Committee's discretion.~~

4.2 Relative Importance of Benchmark Criteria

~~The~~ Where sufficient information is available, the Official Price is determined basis the last bid and offer price quoted during R2 (except in the case of Cobalt, which is R1) and so when determining the Official Prices, 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 bid or offer price quoted where failure to do so would lead to a misleading or unreflective Official Price at the LME's discretion and Expert Judgement.



4.3 Unit of Publication and Rounding

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

Each of the Official Prices is linked to and based upon the trading activity for the Underlying Metal in the Ring (for more information, see the Benchmark Statement for the Official Prices). In the Ring, 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 Official Prices.

The values determined for each of the Official Prices will be rounded to one tick, being a “minimum price movement”. The “minimum price movement” for each metal is set out in the Contract Specification on the LME website.

At approximately 13:10 London time on each day that the Official Prices are published, the LME shall also make available USD/EUR, USD/GBP and USD/JPY FX rates using the snapshot rate published by Reuters at 13:00 London time, to assist Members and clients to perform currency conversions. For the avoidance of doubt, these FX rates are not LME administered rates.

4.4 Expert Judgement

The Official Prices Benchmark Methodology and supporting policies and procedures that underpin the determination of Official Prices are structured with the intent of minimising, as far as feasible whilst ensuring that Official 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 Benchmark determinations. 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 Official Prices are determined by the Quotations Committee Chairman in conjunction with other members of the Quotations Committee, ~~thereby ensuring that published prices are subject to a “4-eyes” process.~~ Once the Official Prices are agreed by the Chairman and published as ‘provisional’, a member of the Quotations Committee will complete a 4-eyed check to agree the prices prior to publication of the final Official Prices.

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.

4.6.1 Ring Price Banding

The LME is under an obligation to maintain a fair and orderly market on its trading venues. To support the LME's oversight, the LME has implemented ring price banding for illiquid base metals traded on the Ring. These price bands are designed to maintain and protect the integrity of the Official Prices by providing price parameters to help prevent extreme price movements when there is a minimal number of market participants active in relation to the relevant metal.

The Quotations Committee is responsible for determining which metals are subject to these price bands. Metals that are subject to these price bands are communicated to Members by Notice from time to time (the "**Ring Price Band Contracts**").

Therefore, when considering whether or not a bid or offer for a Ring Price Band Contract quoted at the close is reflective, the Quotations Committee shall be bound by the ring price banding.

The ring price banding works as follows:

From time to time, the Quotations Committee will determine an anchor price for each Ring Price Band Contract (the "**Anchor Price**"). The Anchor Price will be determined by the Quotations Committee using the most up to date information available from all three of the LME's trading venues, and not just the Ring. An Anchor Price can be adjusted at the Quotations Committee's discretion, including on an intra-day basis. The Quotations Committee will then determine a ring price band (the "**Band**") for each of the Ring Price Band Contracts, which effectively forms an upper and lower limit on the pricing of the relevant Ring Price Band Contract, and which seeks to prevent significant price fluctuations caused by a small number of bids or offers having an unreflective impact on the Official Prices due to its illiquid character.

Subject to the Pricing Committee's general right to use Expert Judgement, where the last bid or offer immediately prior to the close of a Ring Price Band Contract is outside of the Bands (the "**Bid/Offer Price**"), the Official Price shall only be set at that Bid/Offer Price when the quantity of Lots offered by the Dealer at that Bid/Offer Price is equal to, or greater than, 10. If the Dealer's bid or offer at the Bid/Offer Price is for fewer than 10 Lots, the Official Price shall be set at the relevant value at the appropriate end of the Band.

Illustrative Case-Study

The Anchor Price for the three-month Copper contract is set at US\$5,000 with a Band of US\$500. This creates an upper limit of US\$5,500 and a lower limit of US\$4,500.

- If a Dealer bids or offers US\$4,400 or US\$5,600 on the three-month Cash Copper contract without disclosing the tonnage they wish to buy or sell, the Official Price would be limited to US\$4,500 or US\$5,500 (i.e. the limit of the Band).



- If a Dealer bids or offers US\$4,400 or US\$5,600 on the three-month Cash Copper contract and the Dealer is bidding for, or offering, less than 10 Lots, the Official Price would be limited to US\$4,500 or US\$5,500 (i.e. the limit of the Band).
- If a Dealer bids or offers US\$4,400 or US\$5,600 on the three-month Cash Copper contract and the Dealer is bidding for, or offering, 10 Lots or more, then the quoted price can be considered by the Quotations Committee for the purpose of setting the Official Price (i.e. the Band does not apply).

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 and must be received within thirty (30) minutes of publication via the LME's market data channels of the Official 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 Official Price that is the subject of the dispute, and the reason for the dispute.

4.8 Business Continuity Procedures

The LME may calculate Official Prices for one or more metals using the Official Prices BC Methodology, rather than on the basis of activity in the Ring, in the event that the Ring is not available, or Ring activity is disrupted by an emergency situation. The LME will endeavour to continue establishing the Official Prices for each base Metal Future and each Aluminium Premium Contract at the prescribed times. Where this is not possible, or if Ring trading is disrupted while the Ring is in operation, the LME will communicate revised times for determining the Official Prices for any relevant Metal Future or Aluminium Premium Contract as soon as is practically possible. Any Official Price established in the Ring before the LME's business continuity procedures are invoked may stand, subject to the discretion of the Quotations Committee.



4.9 Ring Price Liquidity Event

The LME also notes that it has the right to transition one or more Official Price Benchmarks permanently to electronic determination without consultation if a Ring Price Liquidity Event occurs.

5 Document Change History

Version	Date
1.0	02/12/2019
1.1	15/01/2021

<u>1.2</u>	<u>06/09/2021</u>
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APPENDIX 1
OFFICIAL PRICES BC METHODOLOGY

The methodology for the establishment of the Official Prices in the event that the Ring is not available or Ring activity is disrupted, is set out in the POLICY FOR ESTABLISHING (A) OFFICIAL AND CLOSING PRICES ON LMESELECT IN THE EVENT THAT THE RING IS NOT AVAILABLE OR TRADING IS DISRUPTED AND (B) CASH-SETTLED FUTURE DAILY SETTLEMENT PRICE FOR CASH-SETTLED FUTURES IN THE EVENT THAT TRADING ON LMESELECT IS DISRUPTED DURING THE RELEVANT VWAP WINDOW, published on the LME website and as amended from time to time.



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LME Official 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 Official Prices Benchmark Family.

2 General Information

2.1 Date of Original Publication

2 December 2019

2.2 Date of Last Update

6 September 2021

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’s BMR 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:

“Prompt Date”	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
“Official Prices BC Methodology”	means the methodology set out in Appendix 1 by which the Official Prices shall be determined where business continuity procedures are invoked (see paragraph 4.8)



3 Benchmarks

3.1 Constituent Benchmarks

The Benchmark Family comprises Official 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, the Benchmarks were as follows:

- (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 Official Prices set out above that are Benchmarks are listed on the LME's BMR Website. Note that all Prompt Dates for which Official Prices are determined are Benchmarks.

The LME also publishes an Official Settlement Price for each of the metals listed above, as a subset of the Official Prices comprising this Benchmark Family.

4 Benchmark Methodology

4.1 Criteria and Procedures used to determine the Benchmarks

This Benchmark Methodology is used each Business Day to calculate the Official Price for the relevant Prompt Dates. Each Official Price constitutes a Benchmark. LME publishes a bid and offer Official Price for each relevant Prompt Date.

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 Official Settlement Price for each metal shall be the offer price of the Cash Prompt Date that is determined as the Official Price¹.

4.1.1 General Methodology

The specified periods in which metals are traded (and which activity is taken into account in determining the Official Prices) is set out on the LME Website – **Trading Times and Dates**.

¹ As there is no Cash Prompt Date for Aluminium Premiums, the Official Settlement Price for Aluminium Premiums shall be the offer price for the third Wednesday in Month 1 Prompt Date determined as the Official Price.



The Official Price for each relevant Prompt Date shall be determined basis the last bid and offer price quoted during Ring 2 (“R2”) (or in the case of Cobalt, Ring 1 (“R1”)) where sufficient information is available and at all times at the LME’s absolute discretion in consideration of the points set out below, including paragraph 4.1.2.

For each metal (or in the case of Aluminium, each category of Aluminium), the Quotations Committee shall allocate Committee members to oversee trading in each Prompt Date. At the close of the trading period for each metal, each member of the Quotations Committee who has participated in the Ring session will electronically submit their view of the last bid and offer price quoted for the relevant Prompt Date.

Following the submissions, the Chairman of the Quotations Committee (or their designate) shall, in accordance with the LME’s pricing procedures:

- (a) consider their own view (and the views of other members of the Quotations Committee) of the last bid and offer price quoted for each Prompt Date;
- (b) apply Expert Judgement, where appropriate, to the consideration of whether the last bid and offered price quoted for the relevant Prompt Date (if relevant) is an accurate reflection of the prevailing market price;
- (c) consider the Bid/Offer Spread Adjustment (as set out in paragraph 4.1.2); and
- (d) consider other information available, including but not limited to, spread trading information and last valuations,

for the purpose of determining a provisional price.

Where sufficient information is not available from Ring activity to determine the provisional price for each relevant Prompt Date as set out above, provisional prices shall be determined as follows:

For Cash and 3 Months for Metal Futures

For the 3 Month Prompt Date, the provisional price shall be determined basis the Cash Prompt Date and the Cash to 3 Month spread quoted in the Ring, where available. Where the Cash Prompt Date and/or the Cash to 3 Month spread is unquoted in the Ring, the provisional price shall be determined using available trading information from the LME’s electronic trading platform in conjunction with last night’s valuation.

For the Cash Prompt Date, the provisional price shall be determined basis the 3 Month Prompt Date and the Cash to 3 Month spread quoted in the Ring, where available. Where the 3 Month Prompt Date and/or the Cash to 3 Month spread is unquoted in the Ring, the provisional price shall be determined using available trading information from the LME’s electronic trading platform in conjunction with last night’s valuation.

For Month 1 for Aluminium Premium Contracts

For Month 1 for Aluminium Premium Contracts, the provisional price shall be determined basis last night’s valuation.

For all other Prompt Dates

The provisional price for all other Prompt Dates that are published as part of the Official Prices shall be determined using as its input data, the provisional price for the 3 Month Prompt Date established on the basis of the methodology above, in conjunction with any available spread information.



Five minutes after the end of the relevant trading period, the LME shall publish a provisional price on the wallboards surrounding the Ring. These prices shall be clearly identified in green. The provisional price will also be published contemporaneously to the wider market through data vendors. The provisional price shall remain displayed on the wallboards for five minutes, during which time Dealers may submit objections verbally to the Chairman of the Quotations Committee in relation to the provisional price (the Objection Window). The LME shall be under no obligation to consider objections that are received by the LME outside the Objection Window. No amendment to the provisional price shall be made during the Objection Window.

Five minutes following the publication of the provisional price, the Official Price shall be published on the wallboards surrounding the Ring. This price will be displayed in red. The Official Prices will also be published contemporaneously to the wider market through data vendors. Where, however, the LME has received an objection to a provisional price during the Objection Window and is therefore unable to publish the Official Price five minutes following the publication of the provisional price, the LME shall publish the Official Price as soon as practicable following the Quotations Committee's consideration of the objection.

The Quotations Committee will use digital video and audio technology to support its consideration of objections received during the Objection Window, and shall be permitted to exercise its discretion to determine the appropriate course of action.

The timings for publication of provisional and final Official Prices are as follows:

Metal	Provisional Prices (London time)	Final Prices (London time)
Cobalt	12:30	12:35
Copper	12:40	12:45
Aluminium Alloy and NASAAC	12:45	12:50
Tin	12:50	12:55
Lead	12:55	13:00
Zinc	13:00	13:05
Aluminium	13:05	13:10
Nickel	13:10	13:15
Aluminium Premiums	13:15	13:20

4.1.2 Bid/Offer Spread Adjustment

When determining the Official Prices, the Chairman of the Quotations Committee may use Expert Judgement where appropriate, to ensure that the bid/offer spread of any Official Price is reflective of prevailing market prices, irrespective of the spread of the last bid and offer price



quoted during R2 (or R1 for Cobalt). For example, it is possible that immediately prior to the end of the relevant trading period, the bid/offer spread is wider and therefore not reflective of the other orders generally executed during the relevant trading period.

4.1.3 Minimum Volume Thresholds

There is no minimum volume threshold for the determination of the Official Prices. The Official Price is not based on transactions (except to the extent that transactions may be referenced from the LME's electronic trading platform where sufficient information is not available from Ring activity or used in the bid/offer spread adjustment as set out in paragraph 4.1.2).

4.2 Relative Importance of Benchmark Criteria

Where sufficient information is available, the Official Price is determined basis the last bid and offer price quoted during R2 (except in the case of Cobalt, which is R1) and so when determining the Official Prices, 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 bid or offer price quoted where failure to do so would lead to a misleading or unreflective Official Price at the LME's discretion and Expert Judgement.

4.3 Unit of Publication and Rounding

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

Each of the Official Prices is linked to and based upon the trading activity for the Underlying Metal in the Ring (for more information, see the Benchmark Statement for the Official Prices). In the Ring, 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 Official Prices.

The values determined for each of the Official Prices will be rounded to one tick, being a "minimum price movement". The "minimum price movement" for each metal is set out in the Contract Specification on the LME website.

At approximately 13:10 London time on each day that the Official Prices are published, the LME shall also make available USD/EUR, USD/GBP and USD/JPY FX rates using the snapshot rate published by Reuters at 13:00 London time, to assist Members and clients to perform currency conversions. For the avoidance of doubt, these FX rates are not LME administered rates.

4.4 Expert Judgement

The Official Prices Benchmark Methodology and supporting policies and procedures that underpin the determination of Official Prices are structured with the intent of minimising, as far as feasible whilst ensuring that Official 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 Benchmark determinations. 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 Official Prices are determined by the Quotations Committee Chairman in conjunction with other members of the Quotations Committee. Once the Official Prices are agreed by the Chairman and published as 'provisional', a member of the Quotations Committee will complete a 4-eyed check to agree the prices prior to publication of the final Official Prices.

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.

4.6.1 Ring Price Banding

The LME is under an obligation to maintain a fair and orderly market on its trading venues. To support the LME's oversight, the LME has implemented ring price banding for illiquid base metals traded on the Ring. These price bands are designed to maintain and protect the integrity of the Official Prices by providing price parameters to help prevent extreme price movements when there is a minimal number of market participants active in relation to the relevant metal.

The Quotations Committee is responsible for determining which metals are subject to these price bands. Metals that are subject to these price bands are communicated to Members by Notice from time to time (the "**Ring Price Band Contracts**").

Therefore, when considering whether or not a bid or offer for a Ring Price Band Contract quoted at the close is reflective, the Quotations Committee shall be bound by the ring price banding.

The ring price banding works as follows:

From time to time, the Quotations Committee will determine an anchor price for each Ring Price Band Contract (the "**Anchor Price**"). The Anchor Price will be determined by the Quotations Committee using the most up to date information available from all three of the LME's trading venues, and not just the Ring. An Anchor Price can be adjusted at the Quotations Committee's



discretion, including on an intra-day basis. The Quotations Committee will then determine a ring price band (the “**Band**”) for each of the Ring Price Band Contracts, which effectively forms an upper and lower limit on the pricing of the relevant Ring Price Band Contract, and which seeks to prevent significant price fluctuations caused by a small number of bids or offers having an unreflective impact on the Official Prices due to its illiquid character.

Subject to the Pricing Committee’s general right to use Expert Judgement, where the last bid or offer immediately prior to the close of a Ring Price Band Contract is outside of the Bands (the “**Bid/Offer Price**”), the Official Price shall only be set at that Bid/Offer Price when the quantity of Lots offered by the Dealer at that Bid/Offer Price is equal to, or greater than, 10. If the Dealer’s bid or offer at the Bid/Offer Price is for fewer than 10 Lots, the Official Price shall be set at the relevant value at the appropriate end of the Band.

Illustrative Case-Study

The Anchor Price for the three-month Copper contract is set at US\$5,000 with a Band of US\$500. This creates an upper limit of US\$5,500 and a lower limit of US\$4,500.

- If a Dealer bids or offers US\$4,400 or US\$5,600 on the three-month Cash Copper contract without disclosing the tonnage they wish to buy or sell, the Official Price would be limited to US\$4,500 or US\$5,500 (i.e. the limit of the Band).
- If a Dealer bids or offers US\$4,400 or US\$5,600 on the three-month Cash Copper contract and the Dealer is bidding for, or offering, less than 10 Lots, the Official Price would be limited to US\$4,500 or US\$5,500 (i.e. the limit of the Band).
- If a Dealer bids or offers US\$4,400 or US\$5,600 on the three-month Cash Copper contract and the Dealer is bidding for, or offering, 10 Lots or more, then the quoted price can be considered by the Quotations Committee for the purpose of setting the Official Price (i.e. the Band does not apply).

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 and must be received within thirty (30) minutes of publication via the LME’s market data channels of the



Official 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 Official Price that is the subject of the dispute, and the reason for the dispute.

4.8 Business Continuity Procedures

The LME may calculate Official Prices for one or more metals using the Official Prices BC Methodology , rather than on the basis of activity in the Ring, in the event that the Ring is not available, or Ring activity is disrupted by an emergency situation. The LME will endeavour to continue establishing the Official Prices for each base Metal Future and each Aluminium Premium Contract at the prescribed times. Where this is not possible, or if Ring trading is disrupted while the Ring is in operation, the LME will communicate revised times for determining the Official Prices for any relevant Metal Future or Aluminium Premium Contract as soon as is practically possible. Any Official Price established in the Ring before the LME's business continuity procedures are invoked may stand, subject to the discretion of the Quotations Committee.

4.9 Ring Price Liquidity Event

The LME also notes that it has the right to transition one or more Official Price Benchmarks permanently to electronic determination without consultation if a Ring Price Liquidity Event occurs.

5 Document Change History

Version	Date
1.0	02/12/2019
1.1	15/01/2021
1.2	06/09/2021



APPENDIX 1 OFFICIAL PRICES BC METHODOLOGY

The methodology for the establishment of the Official Prices in the event that the Ring is not available or Ring activity is disrupted, is set out in the POLICY FOR ESTABLISHING (A) OFFICIAL AND CLOSING PRICES ON LMESELECT IN THE EVENT THAT THE RING IS NOT AVAILABLE OR TRADING IS DISRUPTED AND (B) CASH-SETTLED FUTURE DAILY SETTLEMENT PRICE FOR CASH-SETTLED FUTURES IN THE EVENT THAT TRADING ON LMESELECT IS DISRUPTED DURING THE RELEVANT VWAP WINDOW, published on the LME website and as amended from time to time.



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LME Closing Prices – Benchmark Statement

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 Statement is published pursuant to Article 27 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

~~15 January~~ [6 September](#) 2021

2.3 Review of Benchmark Statement

This Benchmark Statement is subject to periodic review by the LME Pricing and Valuations Committee. Reviews shall be completed at least annually. Additionally, this Benchmark Statement will be reviewed and updated whenever there are material changes to the information set out in it, or in the corresponding Benchmark Methodology.

2.4 Key Definitions

This section of this Benchmark Statement should be read in conjunction with the **Benchmark Administration – Definitions** document (“**Definitions**”) available on the LME’s BMR Website. Any capitalised terms not defined in this section of the Benchmark Statement shall have the meaning given to them in the Definitions.

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

“**Prompt Date**” 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.

3 Benchmarks

3.1 Constituent Benchmarks

The Benchmark Family comprises certain Closing Prices [for the following metals as identified in the LME List of Benchmarks published on the LME Website. As at the date of the last update to this Benchmark Statement, the Benchmarks were as follows:](#)

- (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 metals set out above that are Benchmarks are listed on the LME's BMR Website. Note that not all Prompt Dates for which Closing Prices are determined are Benchmarks.

3.2 ISINs

ISIN codes have not been assigned to the Closing Prices.

4 Regulatory Information

4.1 Classification

The Closing Prices each qualify as a “commodity benchmark” pursuant to Article 19 of the BMR. This categorisation is based on the underlying assets falling within the definition of a “commodity” (as referred to in Article 3(1)(23) of the BMR).

Each of the Closing Prices utilises input data available to the LME, primarily including trading activity data. However, the Closing Prices are not categorised as “regulated data” Benchmarks, nor are the Closing Prices determined using contributions.

Annex II of the BMR applies to this Benchmark Family, as the Closing Prices comprise Benchmarks that fall within the BMR “commodity benchmark” definition (within Title III of the BMR), and do not contain any critical, or other, benchmarks that would bring any of the composite Benchmarks within scope of Title II of the BMR.

In accordance with Regulation (EU) 2019/2089, it is confirmed that the Benchmarks referred to in this Benchmark Statement are not intended to pursue Environmental, Social and Governance (ESG) objectives, including decarbonisation and/or the objectives of the Paris Agreement.

4.2 Rationale for the Benchmark(s)

~~The application of trades, bid and offered prices in~~ The assessment of trading activity on LME's Execution Venues during the period which constitutes the second Kerb session (“K2”) (supported by making reference to all other available data sources where there is insufficient Ringinput data) is considered to be the most appropriate pricing methodology for these Benchmarks because of the significant volume of Carry business that is transacted at this time providing a detailed measure of the forward curve. ~~As bids and offers may have been placed but not yet resulted in a concluded trade at the end of the trading window, the specified methodology is considered to be the most reflective approach to pricing rather than (for example) relying solely on concluded trades as input data.~~



4.3 Market Reality Measured

The Closing Prices are used for the margining of the relevant LME Future by LME Clear and LME Members.

The Closing Prices reflect the USD value of one metric tonne of the relevant metal for the relevant Prompt Date, where the metal must comply with the requirements of the applicable LME contract specification set out in the LME Rulebook. Metals are tradeable on the LME's Execution Venues, with the Closing Prices reflecting trading activity ~~on the Ring~~ during K2. In this way, the Closing Prices take into account supply and demand ~~in the Ring~~ at that point in time. The specified periods in which metals are traded (and which activity is taken into account in determining the Closing Prices) is set out on the LME Website – **Trading Times and Dates**.

4.4 Geographical Boundaries

The LME contracts resulting from trading ~~in on the Ring~~ LME's Execution Venues are capable of being settled by being physically delivered into any LME Warehouse. As such, the Benchmark may be subject to distortions based on factors impacting the ability of a party to an LME Contract to physically deliver, or to accept physical delivery, of the Underlying Metal. These factors may include, for example, the underlying regional supply and demand dynamics including (but not limited to) changes in trade policy and government action.

4.5 Other Information

The population of participants active in trading on the LME's Execution Venues is difficult to determine definitively as trading may take place both directly on the LME's Execution Venues (by Members) as well as indirectly (by the wider market participant population, through Members). ~~However, only Category 1 Members are capable of trading in the Ring. (for their own account and on behalf of their clients).~~ An up-to-date list of members of the LME by category can be found at <https://www.lme.com/en-GB/Trading/Access-the-market/Find-a-member-on-the-LME-Website>.

Market information about LME Futures, including market and exchange open interest, is published on the LME Website on a daily basis.

5 Benchmark Methodology¹

5.1 Criteria and Procedures used to determine the Benchmarks

A Benchmark Methodology for this Benchmark Family can be found on the LME's BMR Website.

¹ Further to LME Notices 21/111 and 21/153, the Closing Prices will be determined electronically with effect from the reopening of the Ring following the Covid-19 related temporary suspension. This Benchmark Statement shall be updated in due course and in the interim, should be read in the context of the Closing Prices having moved permanently to electronic determination as the primary pricing methodology. Readers should have regard to the *Policy for Establishing (a) Official and Closing Prices on LMEselect in the Event that the Ring is not Available or Trading is Disrupted and (b) Cash-Settled Future Daily Settlement Prices for Cash-Settled Futures in the Event that Trading on LMEselect is Disrupted During the Relevant VWAP Window*, which with effect from 6 September 2021 shall represent the primary pricing methodology for the Closing Prices.



5.2 Expert Judgement

The LME Quotations Committee is permitted to exercise Expert Judgement in the determination of the constituent Benchmarks. The Closing Prices Benchmark Methodology and supporting internal 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.

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.

5.3 Assessors

The Quotations Committee is responsible for Benchmark determinations. 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 LME Closing Prices are determined by the Quotations Committee Chairman in conjunction with other members of the Quotations Committee, thereby ensuring that published prices are subject to a "4-eyes" process.

5.4 Procedures for Dealing with Errors in Input Data

The LME has a number of controls in place to prevent inaccurate pricing data being published to the market. These arrangements include, but are not limited to, pre-publication review and pricing objection windows during which Members may submit objections in relation to provisionally-determined prices. Further information on the applicable objections periods is set out in the Closing Prices Benchmark Methodology.

Users of the constituent Benchmarks (who do not have the right to object to provisionally determined prices) may dispute a Benchmark after final publication. Final publication times and corresponding dispute periods are detailed in the Closing Prices Benchmark Methodology.

In the event that the LME becomes aware that an incorrect price has been published to the market as final, the LME will follow its standard procedure assessing the potential impact of the error and, where appropriate, for notifying the market (and market data vendors) of the error and correcting the published price accordingly.

6 Limitations of the Benchmarks

Some of the metals that are tradeable [in the Ringon LME's Execution Venues](#) are less liquid than others. Consequently, relatively limited data may be available to the Quotations Committee for these metals, on which to determine a Closing Price. Further, there may be limited data available for certain Prompt Dates. However, the LME has sought to take steps to support robust and reliable Benchmark determination through the implementation of various measures including (but not limited to):



- (a) permitting the Quotations Committee to use Expert Judgement (or relevant data from [outside the Ring](#)~~alternative LME Execution Venues~~) where appropriate; and
- (b) designing the Benchmark methodology to accommodate circumstances in which there is limited [input](#) data (for example, by ~~operating a “price banding” policy~~[applying expert judgement](#) to facilitate unreflective bids and offers to be excluded from Benchmark determinations).

It is not possible to foresee all circumstances in which one or more of the Benchmarks may become unreliable, but a non-exhaustive list may include (depending on the circumstances):

- (a) an exceptional market event (e.g. an extreme volatility event or unforeseen event in the physical market);
- (b) where a trading halt is called on the LME;
- (c) insufficient input data (i.e. no bid, ~~offer~~[offers](#) or ~~trade prices on the LME Ring~~[transactions](#)) to determine a price (notwithstanding the contingencies the LME has put in place); and
- (d) significant divergence between the Benchmark and the relevant OTC price(s).

The LME has implemented measures aimed at addressing unexpected market events and also supporting the continued provision of the Benchmarks during these events including, for example, implementing a fast markets policy which would apply in circumstances of significant volatility. Furthermore section 4.1 of the Benchmark Methodology sets out how the Closing Price shall be determined where there is insufficient input data.

7 Changes to, and Cessation of, a Benchmark

It is possible that certain factors, including factors beyond the control of the LME, may necessitate changes to, or the cessation of, one or more of the Benchmarks within this Benchmark Family.

A change to, or cessation of, a Benchmark may have an impact on financial contracts or financial instruments (in each case as defined within the BMR) that reference that Benchmark.

Details of the LME Benchmark Changes and Cessation Procedure, which details the LME’s arrangements for consulting on proposed changes and cessations (where applicable), can be found on the LME’s BMR Website.

8 ESG Factors²

EXPLANATION OF HOW ESG FACTORS ARE REFLECTED IN THE BENCHMARK STATEMENT

SECTION 1 – CONSIDERATION OF ESG FACTORS

² For these purposes, “ESG Factors” means as envisaged by the requirements of Commission Delegated Regulation (EU) 2020/1816 ([as onshored into UK law](#)) and in particular how it relates to [UK EU](#) Climate Transition and [UK EU](#) Paris-Aligned Benchmarks. For the avoidance of doubt, and in accordance with Regulation (EU) 2019/2089 ([as onshored into UK law](#)), the LME has confirmed that the Benchmarks referred to in this Benchmark Statement are not intended to pursue ESG objectives, including decarbonisation and on/or the objectives of the Paris Agreement. [Additionally, references within this section 8 to EU legislation should be understood to refer to the corresponding onshored UK version\(s\).](#)



Item 1. Name of the benchmark administrator	The London Metal Exchange
Item 2. Type of benchmark or family of benchmarks.	Commodity Benchmarks
Item 3. Name of the benchmark or family of benchmarks.	Closing Prices
Item 4. Are there in the portfolio of the benchmark administrator any EU Climate Transition Benchmarks, EU Paris-aligned Benchmarks, benchmarks that pursue ESG objectives or benchmarks that take into account ESG factors?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Item 5. Does the benchmark or family of benchmarks pursue ESG objectives?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Item 6. Where the response to Item 5 is positive, provide the details (score) in relation to the ESG factors listed in Annex II for each family of benchmarks at aggregated level. The ESG factors shall be disclosed at an aggregated weighted average value at the level of the family of benchmarks.	
(a) List of combined ESG factors:	Details on each factor: Not applicable.
(b) List of environmental factors:	Details on each factor: Not applicable.
(c) List of social factors:	Details on each factor: Not applicable.
(d) List of governance factors:	Details on each factor: Not applicable.
Item 7. Where the response to Item 5 is positive, provide below the details (score) for each benchmark, in relation to the ESG factors listed in Annex II, depending on the relevant underlying asset concerned. Alternatively, all of this information may be provided in the form of a hyperlink to a website of the benchmark administrator included in the benchmark statement. The information on the website shall be easily available and accessible. Benchmark administrators shall ensure that information published on their website remains available for five years. The score of the ESG factors shall not be disclosed for each constituent of the benchmark, but shall be disclosed at an aggregated weighted average value of the benchmark.	
(a) List of combined ESG factors:	Details on each factor: Not applicable.
(b) List of environmental factors:	Details on each factor: Not applicable.
(c) List of social factors:	Details on each factor: Not applicable.
(d) List of governance factors:	Details on each factor: Not applicable.



Hyperlink to the information on ESG factors for each benchmark:	Not applicable.
Item 8. Data and standards used	
(a) Description of data sources used to provide information on the ESG factors in the benchmark statement.	Not applicable.
(b) Reference standards.	Not applicable.



**SECTION 2 – ADDITIONAL DISCLOSURE REQUIREMENTS FOR EU CLIMATE
TRANSITION AND EU PARIS-ALIGNED BENCHMARKS**

Item 9. Where a benchmark is labelled as ‘EU Climate Transition Benchmark’ or ‘EU Paris-aligned Benchmark’, benchmark administrators shall also disclose the following information:

(a) Forward-looking year-on-year decarbonisation trajectory;	Not applicable.
(b) Degree to which the IPCC decarbonisation trajectory (1,5°C with no or limited overshoot) has been achieved on average per year since creation;	Not applicable.
(c) overlap between those benchmarks and their investable universe, as defined in Article 1, point (e), of Commission Delegated Regulation (EU) 2020/1818), using the active share at asset level.	Not applicable.

**SECTION 3 –DISCLOSURE OF THE ALIGNMENT WITH THE OBJECTIVES OF THE PARIS
AGREEMENT**

Item 10. By the date of application of this Regulation, for significant equity and bond benchmarks, EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks, benchmark administrators shall also disclose the following information. By 31 December 2021, benchmark administrators shall, for each benchmark or, where applicable, each family of benchmarks, disclose the following information:

(a) Does the benchmark align with the target of reducing carbon emissions or the attainment of the objectives of the Paris Agreement;	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
(b) The temperature scenario, in accordance with international standards, used for the alignment with the target of reducing GHG emissions or attaining of the objectives of the Paris Agreement;	Not applicable.
(c) The name of the provider of the temperature scenario used for the alignment with the target of reducing GHG emissions or the attainment of the objectives of the Paris Agreement;	Not applicable.



(d) The methodology used for the measurement of the alignment with the temperature scenario;	Not applicable.
(e) The hyperlink to the website of the temperature scenario used.	Not applicable.
Date on which information has last been updated and reason for the update:	15 January 2021. Implementation of the requirements of Commission Delegated Regulation (EU) 2020/1816.

9 Document Change History

Version	Date
1.0	02/12/2019
1.1	19/02/2020
1.2	15/01/2021
1.3	06/09/2021

Disclaimer

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All information contained within this document (the “Information”) is provided for reference purposes only. While the LME endeavours to ensure the accuracy, reliability and completeness of the Information, neither the LME, nor any of its affiliates makes any warranty or representation, express or implied, or accepts any responsibility or liability for, the accuracy, completeness, reliability or suitability of the Information for any particular purpose. The LME accepts no liability whatsoever to any person for any loss or damage arising from any inaccuracy or omission in the Information or from any consequence, decision, action or non-action based on or in reliance upon the Information. This document constitutes the benchmark statement pursuant to Article 27 of the BMR. It is provided by the LME for the purpose of describing those aspects of the constituent Benchmarks as required by the BMR. Further information regarding the LME, its Benchmarks and this benchmark statement are available from the LME on request. This benchmark statement is subject to amendment from time to time.

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LME Closing Prices – Benchmark Statement

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 Statement is published pursuant to Article 27 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

6 September 2021

2.3 Review of Benchmark Statement

This Benchmark Statement is subject to periodic review by the LME Pricing and Valuations Committee. Reviews shall be completed at least annually. Additionally, this Benchmark Statement will be reviewed and updated whenever there are material changes to the information set out in it, or in the corresponding Benchmark Methodology.

2.4 Key Definitions

This section of this Benchmark Statement should be read in conjunction with the **Benchmark Administration – Definitions** document (“**Definitions**”) available on the LME’s BMR Website. Any capitalised terms not defined in this section of the Benchmark Statement shall have the meaning given to them in the Definitions.

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

“Prompt Date” 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.

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 Statement, the Benchmarks were as follows:

- (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 metals set out above that are Benchmarks are listed on the LME's BMR Website. Note that not all Prompt Dates for which Closing Prices are determined are Benchmarks.

3.2 ISINs

ISIN codes have not been assigned to the Closing Prices.

4 Regulatory Information

4.1 Classification

The Closing Prices each qualify as a “commodity benchmark” pursuant to Article 19 of the BMR. This categorisation is based on the underlying assets falling within the definition of a “commodity” (as referred to in Article 3(1)(23) of the BMR).

Each of the Closing Prices utilises input data available to the LME, primarily including trading activity data. However, the Closing Prices are not categorised as “regulated data” Benchmarks, nor are the Closing Prices determined using contributions.

Annex II of the BMR applies to this Benchmark Family, as the Closing Prices comprise Benchmarks that fall within the BMR “commodity benchmark” definition (within Title III of the BMR), and do not contain any critical, or other, benchmarks that would bring any of the composite Benchmarks within scope of Title II of the BMR.

In accordance with Regulation (EU) 2019/2089, it is confirmed that the Benchmarks referred to in this Benchmark Statement are not intended to pursue Environmental, Social and Governance (ESG) objectives, including decarbonisation and/or the objectives of the Paris Agreement.

4.2 Rationale for the Benchmark(s)

The assessment of trading activity on LME's Execution Venues during the period which constitutes the second Kerb session (“K2”) (supported by making reference to all other available data sources where there is insufficient input data) is considered to be the most appropriate pricing methodology for these Benchmarks because of the significant volume of Carry business that is transacted at this time providing a detailed measure of the forward curve.



4.3 Market Reality Measured

The Closing Prices are used for the margining of the relevant LME Future by LME Clear and LME Members.

The Closing Prices reflect the USD value of one metric tonne of the relevant metal for the relevant Prompt Date, where the metal must comply with the requirements of the applicable LME contract specification set out in the LME Rulebook. Metals are tradeable on the LME's Execution Venues, with the Closing Prices reflecting trading activity during K2. In this way, the Closing Prices take into account supply and demand at that point in time. The specified periods in which metals are traded (and which activity is taken into account in determining the Closing Prices) is set out on the LME Website – **Trading Times and Dates**.

4.4 Geographical Boundaries

The LME contracts resulting from trading on the LME's Execution Venues are capable of being settled by being physically delivered into any LME Warehouse. As such, the Benchmark may be subject to distortions based on factors impacting the ability of a party to an LME Contract to physically deliver, or to accept physical delivery, of the Underlying Metal. These factors may include, for example, the underlying regional supply and demand dynamics including (but not limited to) changes in trade policy and government action.

4.5 Other Information

The population of participants active in trading on the LME's Execution Venues is difficult to determine definitively as trading may take place both directly on the LME's Execution Venues (by Members) as well as indirectly (by the wider market participant population, through Members). An up-to-date list of members of the LME by category can be found on the LME Website.

Market information about LME Futures, including market and exchange open interest, is published on the LME Website on a daily basis.

5 Benchmark Methodology¹

5.1 Criteria and Procedures used to determine the Benchmarks

A Benchmark Methodology for this Benchmark Family can be found on the LME's BMR Website.

5.2 Expert Judgement

The LME Quotations Committee is permitted to exercise Expert Judgement in the determination of the constituent Benchmarks. The Closing Prices Benchmark Methodology and supporting internal policies and procedures that underpin the determination of Closing Prices, are structured

¹ Further to LME Notices 21/111 and 21/153, the Closing Prices will be determined electronically with effect from the reopening of the Ring following the Covid-19 related temporary suspension. This Benchmark Statement shall be updated in due course and in the interim, should be read in the context of the Closing Prices having moved permanently to electronic determination as the primary pricing methodology. Readers should have regard to the *Policy for Establishing (a) Official and Closing Prices on LMEselect in the Event that the Ring is not Available or Trading is Disrupted and (b) Cash-Settled Future Daily Settlement Prices for Cash-Settled Futures in the Event that Trading on LMEselect is Disrupted During the Relevant VWAP Window*, which with effect from 6 September 2021 shall represent the primary pricing methodology for the Closing Prices.



with the intent of minimising, as far as feasible whilst ensuring that Closing Price determinations are reflective, the need for Expert Judgement.

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.

5.3 Assessors

The Quotations Committee is responsible for Benchmark determinations. 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 LME Closing Prices are determined by the Quotations Committee Chairman in conjunction with other members of the Quotations Committee, thereby ensuring that published prices are subject to a "4-eyes" process.

5.4 Procedures for Dealing with Errors in Input Data

The LME has a number of controls in place to prevent inaccurate pricing data being published to the market. These arrangements include, but are not limited to, pre-publication review and pricing objection windows during which Members may submit objections in relation to provisionally-determined prices. Further information on the applicable objections periods is set out in the Closing Prices Benchmark Methodology.

Users of the constituent Benchmarks (who do not have the right to object to provisionally determined prices) may dispute a Benchmark after final publication. Final publication times and corresponding dispute periods are detailed in the Closing Prices Benchmark Methodology.

In the event that the LME becomes aware that an incorrect price has been published to the market as final, the LME will follow its standard procedure assessing the potential impact of the error and, where appropriate, for notifying the market (and market data vendors) of the error and correcting the published price accordingly.

6 Limitations of the Benchmarks

Some of the metals that are tradeable on LME's Execution Venues are less liquid than others. Consequently, relatively limited data may be available to the Quotations Committee for these metals, on which to determine a Closing Price. Further, there may be limited data available for certain Prompt Dates. However, the LME has sought to take steps to support robust and reliable Benchmark determination through the implementation of various measures including (but not limited to):

- (a) permitting the Quotations Committee to use Expert Judgement (or relevant data from alternative LME Execution Venues) where appropriate; and
- (b) designing the Benchmark methodology to accommodate circumstances in which there is limited input data (for example, by applying expert judgement to facilitate unreflective bids and offers to be excluded from Benchmark determinations).



It is not possible to foresee all circumstances in which one or more of the Benchmarks may become unreliable, but a non-exhaustive list may include (depending on the circumstances):

- (a) an exceptional market event (e.g. an extreme volatility event or unforeseen event in the physical market);
- (b) where a trading halt is called on the LME;
- (c) insufficient input data (i.e. no bid, offers or transactions) to determine a price (notwithstanding the contingencies the LME has put in place); and
- (d) significant divergence between the Benchmark and the relevant OTC price(s).

The LME has implemented measures aimed at addressing unexpected market events and also supporting the continued provision of the Benchmarks during these events including, for example, implementing a fast markets policy which would apply in circumstances of significant volatility. Furthermore section 4.1 of the Benchmark Methodology sets out how the Closing Price shall be determined where there is insufficient input data.

7 Changes to, and Cessation of, a Benchmark

It is possible that certain factors, including factors beyond the control of the LME, may necessitate changes to, or the cessation of, one or more of the Benchmarks within this Benchmark Family.

A change to, or cessation of, a Benchmark may have an impact on financial contracts or financial instruments (in each case as defined within the BMR) that reference that Benchmark.

Details of the LME Benchmark Changes and Cessation Procedure, which details the LME's arrangements for consulting on proposed changes and cessations (where applicable), can be found on the LME's BMR Website.

8 ESG Factors²

EXPLANATION OF HOW ESG FACTORS ARE REFLECTED IN THE BENCHMARK STATEMENT

SECTION 1 – CONSIDERATION OF ESG FACTORS

Item 1. Name of the benchmark administrator	The London Metal Exchange
Item 2. Type of benchmark or family of benchmarks.	Commodity Benchmarks

² For these purposes, "ESG Factors" means as envisaged by the requirements of Commission Delegated Regulation (EU) 2020/1816 (as onshored into UK law) and in particular how it relates to UK Climate Transition and UK Paris-Aligned Benchmarks. For the avoidance of doubt, and in accordance with Regulation (EU) 2019/2089 (as onshored into UK law), the LME has confirmed that the Benchmarks referred to in this Benchmark Statement are not intended to pursue ESG objectives, including decarbonisation and on/or the objectives of the Paris Agreement. Additionally, references within this section 8 to EU legislation should be understood to refer to the corresponding onshored UK version(s).



Item 3. Name of the benchmark or family of benchmarks.	Closing Prices
Item 4. Are there in the portfolio of the benchmark administrator any EU Climate Transition Benchmarks, EU Paris-aligned Benchmarks, benchmarks that pursue ESG objectives or benchmarks that take into account ESG factors?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Item 5. Does the benchmark or family of benchmarks pursue ESG objectives?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Item 6. Where the response to Item 5 is positive, provide the details (score) in relation to the ESG factors listed in Annex II for each family of benchmarks at aggregated level. The ESG factors shall be disclosed at an aggregated weighted average value at the level of the family of benchmarks.	
(a) List of combined ESG factors:	Details on each factor: Not applicable.
(b) List of environmental factors:	Details on each factor: Not applicable.
(c) List of social factors:	Details on each factor: Not applicable.
(d) List of governance factors:	Details on each factor: Not applicable.
Item 7. Where the response to Item 5 is positive, provide below the details (score) for each benchmark, in relation to the ESG factors listed in Annex II, depending on the relevant underlying asset concerned. Alternatively, all of this information may be provided in the form of a hyperlink to a website of the benchmark administrator included in the benchmark statement. The information on the website shall be easily available and accessible. Benchmark administrators shall ensure that information published on their website remains available for five years. The score of the ESG factors shall not be disclosed for each constituent of the benchmark, but shall be disclosed at an aggregated weighted average value of the benchmark.	
(a) List of combined ESG factors:	Details on each factor: Not applicable.
(b) List of environmental factors:	Details on each factor: Not applicable.
(c) List of social factors:	Details on each factor: Not applicable.
(d) List of governance factors:	Details on each factor: Not applicable.
Hyperlink to the information on ESG factors for each benchmark:	Not applicable.
Item 8. Data and standards used	
(a) Description of data sources used to provide information on the ESG factors in the benchmark statement.	Not applicable.



(b) Reference standards.	Not applicable.
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SECTION 2 – ADDITIONAL DISCLOSURE REQUIREMENTS FOR EU CLIMATE TRANSITION AND EU PARIS-ALIGNED BENCHMARKS

Item 9. Where a benchmark is labelled as ‘EU Climate Transition Benchmark’ or ‘EU Paris-aligned Benchmark’, benchmark administrators shall also disclose the following information:

(a) Forward-looking year-on-year decarbonisation trajectory;	Not applicable.
(b) Degree to which the IPCC decarbonisation trajectory (1,5°C with no or limited overshoot) has been achieved on average per year since creation;	Not applicable.
(c) overlap between those benchmarks and their investable universe, as defined in Article 1, point (e), of Commission Delegated Regulation (EU) 2020/1818), using the active share at asset level.	Not applicable.

SECTION 3 –DISCLOSURE OF THE ALIGNMENT WITH THE OBJECTIVES OF THE PARIS AGREEMENT

Item 10. By the date of application of this Regulation, for significant equity and bond benchmarks, EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks, benchmark administrators shall also disclose the following information. By 31 December 2021, benchmark administrators shall, for each benchmark or, where applicable, each family of benchmarks, disclose the following information:

(a) Does the benchmark align with the target of reducing carbon emissions or the attainment of the objectives of the Paris Agreement;	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
(b) The temperature scenario, in accordance with international standards, used for the alignment with the target of reducing GHG emissions or attaining of the objectives of the Paris Agreement;	Not applicable.
(c) The name of the provider of the temperature scenario used for the alignment with the target of reducing GHG emissions or the	Not applicable.



attainment of the objectives of the Paris Agreement;	
(d) The methodology used for the measurement of the alignment with the temperature scenario;	Not applicable.
(e) The hyperlink to the website of the temperature scenario used.	Not applicable.
Date on which information has last been updated and reason for the update:	15 January 2021. Implementation of the requirements of Commission Delegated Regulation (EU) 2020/1816.

9 Document Change History

Version	Date
1.0	02/12/2019
1.1	19/02/2020
1.2	15/01/2021
1.3	06/09/2021



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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

~~15 January~~ 6 September 2021

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’s BMR 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:

“**Prompt Date**” 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.

3 Benchmarks

3.1 Constituent Benchmarks

The Benchmark Family comprises certain Closing Prices for the following metals:



- (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 metals set out above that are Benchmarks are listed on the LME's BMR Website. Note that not all Prompt Dates for which Closing Prices are determined are Benchmarks.

4 Benchmark Methodology¹

4.1 Criteria and Procedures used to determine the Benchmarks

This Benchmark Methodology is used each Business Day to calculate the Closing Price for the relevant Prompt Dates. Each Closing Price constitutes a Benchmark.

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 determined by the Quotations Committee through a combination of:

- (a) determining a value for the three-month Closing Price (and any other Prompt Dates which the Quotations Committee decide should be allocated a value);
- (b) establishing a breakdown of the spread between different Prompt Dates;
- (c) calculating a value for other Prompt Dates through analysis of the spreads between Prompt Dates; and
- (d) using a process of interpolation to calculate a value for outstanding Prompt Dates as appropriate.

4.1.1 General Methodology

As set out on the LME website, the LME facilitates two trading sessions during each Business Day; one in the morning and one in the afternoon. The specified periods in which metals are

¹ Further to LME Notices 21/111 and 21/153, the Closing Prices will be determined electronically with effect from the reopening of the Ring following the Covid-19 related temporary suspension. This Benchmark Methodology shall be updated in due course and in the interim, should be read in the context of the Closing Prices having moved permanently to electronic determination as the primary pricing methodology. Readers should have regard to the *Policy for Establishing (a) Official and Closing Prices on LMEselect in the Event that the Ring is not Available or Trading is Disrupted and (b) Cash-Settled Future Daily Settlement Prices for Cash-Settled Futures in the Event that Trading on LMEselect is Disrupted During the Relevant VWAP Window*, which with effect from 6 September 2021 shall represent the primary pricing methodology for the Closing Prices.



traded (and which activity is taken into account in determining the Closing Prices) is set out on the LME Website – **Trading Times and Dates**.

In general, the three-month Closing Price is typically the last traded price in the second Kerb session (“K2”) if it falls within the parameter of the last bid/offer spread.

For each metal (or in the case of Aluminium, each category of Aluminium), the Quotations Committee shall allocate Committee members to oversee trading for the three-month Closing Price and any other Prompt Dates which the Quotations Committee decides should be allocated a value. At the close of the trading period for each metal, each member of the Quotations Committee who has participated in the Ring session will electronically submit their view of the prevailing representative value of the three-month Closing Price and any other Prompt Dates which the Quotations Committee decide should be allocated a value.

Following the submissions, the Chairman of the Quotations Committee (or their designate) shall:

- (a) consider their own view (and the views of other members of the Quotations Committee) of the representative value of the three-month Closing Price and any other Prompt Dates which the Quotations Committee has decided should be allocated a value;
- (b) apply Expert Judgement, where appropriate, to the consideration of whether the value for the relevant Prompt Date is an accurate reflection of the prevailing market price,

for the purpose of determining a provisional price.

The Quotations Committee shall then determine the spread between each other Prompt Date using their Expert Judgement, with reference to any trades, bids or offers made during the day’s trading activity, acting at all times with their discretion and Expert Judgement. Where appropriate or necessary, the LME will use an interpolation process to calculate values in between any Prompt Dates where a value was determined and which shall, where appropriate and at the Quotations Committee’s discretion and Expert Judgement, be based on the available spread values.

In certain circumstances, the Chairman of the Quotations Committee may use prices from LME’s electronic trading platform, for example in the scenario where there is insufficient input data from the Ring to calculate the 3 Month Prompt Date.

As soon as possible, but no later than 5 minutes after the end of the relevant trading period, the LME shall publish a provisional price for each relevant Prompt Date on the wallboards surrounding the Ring. These prices shall be clearly identified in green. The provisional prices will also be published contemporaneously to the wider market through data vendors. The provisional price shall remain displayed on the wallboards until 17:30 London time. During this time, only Category 1, 2 and 4 Members may submit objections to the LME in relation to the provisional prices (the Objection Window). Objections must be submitted in writing to closingprices@lme.com. The LME shall be under no obligation to consider objections which are made verbally, or that are received by the LME outside the Objection Window. No amendment to the provisional price shall be made during the Objection Window.

The Closing Prices shall be published on the wallboards surrounding the Ring at 17:50 London time. These prices will be displayed in red. The Closing Prices will also be published contemporaneously to the wider market through data vendors. 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 17:50 London time, the LME shall publish the Closing Price as soon as practicable following the Quotations Committee’s consideration of the objection.

The Quotations Committee will use digital video and audio technology to support its consideration of objections received during the Objection Window, and shall be permitted to exercise its discretion to determine the appropriate course of action.

The LME may from time to time specify that the Closing Prices for certain metals may be calculated using bids and offers quoted on LMEselect, rather than on the basis of activity in the Ring, for example in a situation where Ring trading cannot take place.

The timings for publication of provisional and final Closing Prices are as follows:

Metal	Provisional Prices (from) (London time)	Final Prices (London time)
Zinc	16:00	17:50
Tin	16:10	17:50
Lead	16:20	17:50
Cobalt	16:25	17:50
Aluminium	16:35	17:50
Aluminium Premiums, Aluminium Alloy, NASAAC	16:40	17:50
Copper	16:50	17:50
Nickel	17:00	17:50

4.1.2 Minimum Volume Thresholds

There is no minimum volume threshold for the determination of the Closing Prices. The Closing Price will always be set within the last bid/offer spread, if available, and therefore transactions of any size that are not reflective of the market price, i.e. outside the last bid/offer spread, at the end of K2 will not be used in the determination of the Closing Price.

Where there is a lack of input data, i.e. no bid, offer or trade prices, the Quotations Committee will exercise discretion and may use or have regard to various sources of data including (but not limited to) previous Closing Price(s) published by the LME. The sources of data used depend on the metal and are at the Chairman of the Quotations Committee’s discretion.

4.2 Relative Importance of Benchmark Criteria

The Closing Price is typically the last traded price in K2 if it falls within the last bid/offer spread. If the last traded price does not fall within the last bid/offer spread quoted during K2, 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 bid or offer price 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 in the Ring (for more information, see the Benchmark Statement for the Closing Prices). In the Ring, 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 to one tick, being a "minimum price movement". The "minimum price movement" for each metal is set out in the Contract Specification on the LME website.

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 Benchmark determinations. 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 Chairman in conjunction with other members of the Quotations Committee, thereby ensuring 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.

4.6.1 Ring Price Banding

The LME is under an obligation to maintain a fair and orderly market on its trading venues. To support the LME's oversight, the LME has implemented ring price banding for illiquid base metals traded on the Ring. These price bands are designed to maintain and protect the integrity of the Closing Prices by providing price parameters to help prevent extreme price movements when there is a minimal number of market participants active in relation to the relevant metal.

The Quotations Committee is responsible for determining which metals are subject to these price bands. Metals that are subject to these price bands are communicated to Members by Notice from time to time (the "**Ring Price Band Contracts**").

Therefore, when considering whether or not a bid or offer for a Ring Price Band Contract quoted at the close is reflective, the Quotations Committee shall be bound by the ring price banding.

The ring price banding works as follows:

From time to time, the Quotations Committee will determine an anchor price for each Ring Price Band Contract (the "**Anchor Price**"). The Anchor Price will be determined by the Quotations Committee using the most up to date information available from all three of the LME's trading venues, and not just the Ring. An Anchor Price can be adjusted at the Quotations Committee's discretion, including on an intra-day basis. The Quotations Committee will then determine a ring price band (the "**Band**") for each of the Ring Price Band Contracts, which effectively forms an upper and lower limit on the pricing of the relevant Ring Price Band Contract, and which seeks to prevent significant price fluctuations caused by a small number of bids or offers having an unreflective impact on the Closing Prices due to its illiquid character.

Subject to the Pricing Committee's general right to use Expert Judgement, where the last bid or offer immediately prior to the close of a Ring Price Band Contract is outside of the Bands (the "**Bid/Offer Price**"), the Closing Price shall only be set at that Bid/Offer Price when the quantity of Lots offered by the Dealer at that Bid/Offer Price is equal to, or greater than, 10. If the Dealer's bid or offer at the Bid/Offer Price is for fewer than 10 Lots, the Closing Price shall be set at the relevant value at the appropriate end of the Band.

Illustrative Case-Study

The Anchor Price for the three-month Copper contract is set at US\$5,000 with a Band of US\$500. This creates an upper limit of US\$5,500 and a lower limit of US\$4,500.

- If a Dealer bids or offers US\$4,400 or US\$5,600 on the three-month Cash Copper contract without disclosing the tonnage they wish to buy or sell, the Closing Price would be limited to US\$4,500 or US\$5,500 (i.e. the limit of the Band).



- If a Dealer bids or offers US\$4,400 or US\$5,600 on the three-month Cash Copper contract and the Dealer is bidding for, or offering, less than 10 Lots, the Closing Price would be limited to US\$4,500 or US\$5,500 (i.e. the limit of the Band).

If a Dealer bids or offers US\$4,400 or US\$5,600 on the three-month Cash Copper contract and the Dealer is bidding for, or offering, 10 Lots or more, then the quoted price can be considered by the Quotations Committee for the purpose of setting the Closing Price (i.e. the Band does not apply).

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 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.

5 Document Change History

Version	Date
1.0	02/12/2019
1.1	15/01/2021
<u>1.2</u>	<u>06/09/2021</u>



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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

6 September 2021

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’s BMR 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:

“**Prompt Date**” 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.

3 Benchmarks

3.1 Constituent Benchmarks

The Benchmark Family comprises certain Closing Prices for the following metals:



- (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 metals set out above that are Benchmarks are listed on the LME's BMR Website. Note that not all Prompt Dates for which Closing Prices are determined are Benchmarks.

4 Benchmark Methodology¹

4.1 Criteria and Procedures used to determine the Benchmarks

This Benchmark Methodology is used each Business Day to calculate the Closing Price for the relevant Prompt Dates. Each Closing Price constitutes a Benchmark.

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 determined by the Quotations Committee through a combination of:

- (a) determining a value for the three-month Closing Price (and any other Prompt Dates which the Quotations Committee decide should be allocated a value);
- (b) establishing a breakdown of the spread between different Prompt Dates;
- (c) calculating a value for other Prompt Dates through analysis of the spreads between Prompt Dates; and
- (d) using a process of interpolation to calculate a value for outstanding Prompt Dates as appropriate.

4.1.1 General Methodology

As set out on the LME website, the LME facilitates two trading sessions during each Business Day; one in the morning and one in the afternoon. The specified periods in which metals are

¹ Further to LME Notices 21/111 and 21/153, the Closing Prices will be determined electronically with effect from the reopening of the Ring following the Covid-19 related temporary suspension. This Benchmark Methodology shall be updated in due course and in the interim, should be read in the context of the Closing Prices having moved permanently to electronic determination as the primary pricing methodology. Readers should have regard to the *Policy for Establishing (a) Official and Closing Prices on LMEselect in the Event that the Ring is not Available or Trading is Disrupted and (b) Cash-Settled Future Daily Settlement Prices for Cash-Settled Futures in the Event that Trading on LMEselect is Disrupted During the Relevant VWAP Window*, which with effect from 6 September 2021 shall represent the primary pricing methodology for the Closing Prices.



traded (and which activity is taken into account in determining the Closing Prices) is set out on the LME Website – **Trading Times and Dates**.

In general, the three-month Closing Price is typically the last traded price in the second Kerb session (“K2”) if it falls within the parameter of the last bid/offer spread.

For each metal (or in the case of Aluminium, each category of Aluminium), the Quotations Committee shall allocate Committee members to oversee trading for the three-month Closing Price and any other Prompt Dates which the Quotations Committee decides should be allocated a value. At the close of the trading period for each metal, each member of the Quotations Committee who has participated in the Ring session will electronically submit their view of the prevailing representative value of the three-month Closing Price and any other Prompt Dates which the Quotations Committee decide should be allocated a value.

Following the submissions, the Chairman of the Quotations Committee (or their designate) shall:

- (a) consider their own view (and the views of other members of the Quotations Committee) of the representative value of the three-month Closing Price and any other Prompt Dates which the Quotations Committee has decided should be allocated a value;
- (b) apply Expert Judgement, where appropriate, to the consideration of whether the value for the relevant Prompt Date is an accurate reflection of the prevailing market price,

for the purpose of determining a provisional price.

The Quotations Committee shall then determine the spread between each other Prompt Date using their Expert Judgement, with reference to any trades, bids or offers made during the day’s trading activity, acting at all times with their discretion and Expert Judgement. Where appropriate or necessary, the LME will use an interpolation process to calculate values in between any Prompt Dates where a value was determined and which shall, where appropriate and at the Quotations Committee’s discretion and Expert Judgement, be based on the available spread values.

In certain circumstances, the Chairman of the Quotations Committee may use prices from LME’s electronic trading platform, for example in the scenario where there is insufficient input data from the Ring to calculate the 3 Month Prompt Date.

As soon as possible, but no later than 5 minutes after the end of the relevant trading period, the LME shall publish a provisional price for each relevant Prompt Date on the wallboards surrounding the Ring. These prices shall be clearly identified in green. The provisional prices will also be published contemporaneously to the wider market through data vendors. The provisional price shall remain displayed on the wallboards until 17:30 London time. During this time, only Category 1, 2 and 4 Members may submit objections to the LME in relation to the provisional prices (the Objection Window). Objections must be submitted in writing to closingprices@lme.com. The LME shall be under no obligation to consider objections which are made verbally, or that are received by the LME outside the Objection Window. No amendment to the provisional price shall be made during the Objection Window.

The Closing Prices shall be published on the wallboards surrounding the Ring at 17:50 London time. These prices will be displayed in red. The Closing Prices will also be published contemporaneously to the wider market through data vendors. 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 17:50 London time, the LME shall publish the Closing Price as soon as practicable following the Quotations Committee's consideration of the objection.

The Quotations Committee will use digital video and audio technology to support its consideration of objections received during the Objection Window, and shall be permitted to exercise its discretion to determine the appropriate course of action.

The LME may from time to time specify that the Closing Prices for certain metals may be calculated using bids and offers quoted on LMEselect, rather than on the basis of activity in the Ring, for example in a situation where Ring trading cannot take place.

The timings for publication of provisional and final Closing Prices are as follows:

Metal	Provisional Prices (from) (London time)	Final Prices (London time)
Zinc	16:00	17:50
Tin	16:10	17:50
Lead	16:20	17:50
Cobalt	16:25	17:50
Aluminium	16:35	17:50
Aluminium Premiums, Aluminium Alloy, NASAAC	16:40	17:50
Copper	16:50	17:50
Nickel	17:00	17:50

4.1.2 Minimum Volume Thresholds

There is no minimum volume threshold for the determination of the Closing Prices. The Closing Price will always be set within the last bid/offer spread, if available, and therefore transactions of any size that are not reflective of the market price, i.e. outside the last bid/offer spread, at the end of K2 will not be used in the determination of the Closing Price.

Where there is a lack of input data, i.e. no bid, offer or trade prices, the Quotations Committee will exercise discretion and may use or have regard to various sources of data including (but not limited to) previous Closing Price(s) published by the LME. The sources of data used depend on the metal and are at the Chairman of the Quotations Committee's discretion.

4.2 Relative Importance of Benchmark Criteria

The Closing Price is typically the last traded price in K2 if it falls within the last bid/offer spread. If the last traded price does not fall within the last bid/offer spread quoted during K2, 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 bid or offer price 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 in the Ring (for more information, see the Benchmark Statement for the Closing Prices). In the Ring, 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 to one tick, being a "minimum price movement". The "minimum price movement" for each metal is set out in the Contract Specification on the LME website.

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 Benchmark determinations. 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 Chairman in conjunction with other members of the Quotations Committee, thereby ensuring 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.

4.6.1 Ring Price Banding

The LME is under an obligation to maintain a fair and orderly market on its trading venues. To support the LME's oversight, the LME has implemented ring price banding for illiquid base metals traded on the Ring. These price bands are designed to maintain and protect the integrity of the Closing Prices by providing price parameters to help prevent extreme price movements when there is a minimal number of market participants active in relation to the relevant metal.

The Quotations Committee is responsible for determining which metals are subject to these price bands. Metals that are subject to these price bands are communicated to Members by Notice from time to time (the "**Ring Price Band Contracts**").

Therefore, when considering whether or not a bid or offer for a Ring Price Band Contract quoted at the close is reflective, the Quotations Committee shall be bound by the ring price banding.

The ring price banding works as follows:

From time to time, the Quotations Committee will determine an anchor price for each Ring Price Band Contract (the "**Anchor Price**"). The Anchor Price will be determined by the Quotations Committee using the most up to date information available from all three of the LME's trading venues, and not just the Ring. An Anchor Price can be adjusted at the Quotations Committee's discretion, including on an intra-day basis. The Quotations Committee will then determine a ring price band (the "**Band**") for each of the Ring Price Band Contracts, which effectively forms an upper and lower limit on the pricing of the relevant Ring Price Band Contract, and which seeks to prevent significant price fluctuations caused by a small number of bids or offers having an unreflective impact on the Closing Prices due to its illiquid character.

Subject to the Pricing Committee's general right to use Expert Judgement, where the last bid or offer immediately prior to the close of a Ring Price Band Contract is outside of the Bands (the "**Bid/Offer Price**"), the Closing Price shall only be set at that Bid/Offer Price when the quantity of Lots offered by the Dealer at that Bid/Offer Price is equal to, or greater than, 10. If the Dealer's bid or offer at the Bid/Offer Price is for fewer than 10 Lots, the Closing Price shall be set at the relevant value at the appropriate end of the Band.

Illustrative Case-Study

The Anchor Price for the three-month Copper contract is set at US\$5,000 with a Band of US\$500. This creates an upper limit of US\$5,500 and a lower limit of US\$4,500.

- If a Dealer bids or offers US\$4,400 or US\$5,600 on the three-month Cash Copper contract without disclosing the tonnage they wish to buy or sell, the Closing Price would be limited to US\$4,500 or US\$5,500 (i.e. the limit of the Band).



- If a Dealer bids or offers US\$4,400 or US\$5,600 on the three-month Cash Copper contract and the Dealer is bidding for, or offering, less than 10 Lots, the Closing Price would be limited to US\$4,500 or US\$5,500 (i.e. the limit of the Band).

If a Dealer bids or offers US\$4,400 or US\$5,600 on the three-month Cash Copper contract and the Dealer is bidding for, or offering, 10 Lots or more, then the quoted price can be considered by the Quotations Committee for the purpose of setting the Closing Price (i.e. the Band does not apply).

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 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.

5 Document Change History

Version	Date
1.0	02/12/2019
1.1	15/01/2021
1.2	06/09/2021



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POLICY FOR ESTABLISHING (A) OFFICIAL AND CLOSING PRICES ON LMESELECT IN THE EVENT THAT THE RING IS NOT AVAILABLE OR TRADING IS DISRUPTED AND (B) CASH-SETTLED FUTURE DAILY SETTLEMENT PRICE FOR CASH-SETTLED FUTURES IN THE EVENT THAT TRADING ON LMESELECT IS DISRUPTED DURING THE RELEVANT VWAP WINDOW¹

Defined Terms

1. Capitalised terms not otherwise defined herein shall have the meaning ascribed to them in the rules and regulations of the LME (“Rulebook”) or the Benchmark Administration – Definitions document (“Definitions”) available on the LME’s website, as applicable, and in each case as amended from time to time.

Policy

2. To ensure continuity in the publication of the LME’s prices in the event that the Ring is not available, or trading is disrupted by an emergency:
 - (a) the Official and Closing Prices will be established by the Quotations Committee basis LMEselect activity, in accordance with the provisions set out in Paragraphs 3 to 13 (inclusive); and
 - (b) the Cash-Settled Future Daily Settlement Price for Cash-Settled Futures shall be determined in accordance with the provisions in Paragraph 17.

Establishment of Official and Closing Prices

3. In the event that the Ring is not available, or Ring activity is disrupted by an emergency situation, the LME will endeavour to continue establishing the Official Prices and Closing Prices for each base Metal Future and each Aluminium Premium Contract at the prescribed times. Where this is not possible, or if Ring trading is disrupted while the Ring is in operation, the LME will communicate revised times for determining the Official Prices and/or Closing Prices for any relevant Metal Future or Aluminium Premium Contract as soon as is practically possible. Any Official Price or Closing Price established in the Ring before the LME’s business continuity procedures are invoked may stand, subject to the discretion of the Quotations Committee.

Arrangements for key Prompt Dates

4. The following Official Prices and Closing Prices will be determined using a volume weighted average price (“VWAP”) from transactions on LMEselect over a 5 minute

¹ Paragraphs 3 to 14 of the Policy detail the approach that the LME will take to determining (*inter alia*) the Closing Prices electronically in circumstances where the Ring is not available, or Ring trading is disrupted by an emergency. Further to LME Notices 21/111 and 21/153, the Closing Prices will be determined electronically with effect from the reopening of the Ring following the Covid-19 related temporary suspension. This Policy should therefore be read in this context, with the methodology set out in paragraphs 3 to 14 representing the primary pricing methodology for the Closing Prices, with effect from the date on which the Ring reopens. The business continuity methodology for electronically determined Closing Prices is set out in Appendix 2 to this Policy.



pricing period (“Pricing Period”), where the minimum volume requirement threshold (“MVR Threshold”) is met:

i) Cash and 3 months for Officials and 3 months for Closing Prices for Metal Futures; and

ii) Month 1 for Aluminium Premium Contracts.

The VWAPs will then be rounded up or down, as applicable, in accordance with the protocol set out on the LME’s website, and updated from time to time. For information on the determination of all other Prompt Dates (for which Official Prices and Closing Prices are published) please refer to Paragraphs 9 to 13

5. For the Official Prices referred to in Paragraph 4, the Pricing Period will be the period that would have constituted the 5 minutes of the second Ring of the first session for the relevant metal as set out on the LME’s website from time to time. For the Closing Prices referred to in Paragraph 4, the Pricing Period will be the time that would have constituted the last 5 minutes of the kerb in the second session for the relevant metal as set out on the LME’s website from time to time.
6. The MVR Thresholds are set out on the LME’s website and are subject to change from time to time following ongoing review of market activity, and consultation where required. All LMEselect trades in outright for the relevant Prompt Date for the relevant Metal Future or Aluminium Premium Contract that occur during the relevant Pricing Period 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.
7. The Official and Closing Prices determined under this Policy for each metal will only be one price and not a two-way bid/offer price (as would typically be the case). However, this single price will be disseminated on the LME market data feed as both the bid and the offer price – and, for the purposes of usage of the data (in physical supply contracts or otherwise), the LME considers that the single price may be utilised as both the bid and offer price.
8. If the relevant MVR Threshold is not reached, the Quotations Committee shall determine the Official Price and Closing Price for the affected Prompt Date using the following pricing waterfall:
 - a) it shall be the last traded price on LMEselect during the Pricing Period if the last traded price is within, or at, the bid/offer on the close of the relevant Pricing Period;
 - b) if the last traded price on LMEselect during the Pricing Period is outside of the bid/offer on the close of the Pricing Period, 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 Period, but has traded on LMEselect prior to the Pricing Period and/or where a bid/offer is available at the close of the Pricing Period, 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 Period and there is no bid and/or offer available on the close of the Pricing Period, the price will be determined using available spread information and the last valuation.

The Official Price and Closing Price will then be rounded up or down, as applicable, in accordance with the protocol set out on the LME's website from time to time.

Where:

- a) the LME does not have access to sufficient input data necessary to determine the Official Price and Closing Price; or
- b) a linear approach to the pricing waterfall would result in an inaccurate price (in the Quotation Committee's expert judgement),

the LME may set the Official Prices and 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 in Paragraphs 10 to 13 may apply.

Arrangements for all other Prompt Dates

9. The establishment of prices for all other Prompt Dates (i.e. all outright Prompt Dates not listed in Paragraph 4(i) and (ii) above) that are published as part of the Official Prices and Closing Prices will not utilise VWAPs. Rather, they will be determined using the 3 Month outright price established on the basis of the pricing waterfall set out in Paragraph 8, in conjunction with any available spread information. In establishing the spread information, the waterfall set out in Paragraph 8 will be applied with reference to spread orders and spread transactions from LMEselect, as follows:

- (a) Closing Prices: the pricing process will take account of spread orders and transactions placed or transacted before the start of the Pricing Period for Closing Prices² (the "Closing Price Cut-off"); and
- (b) Official Prices: the pricing process will take account of spread orders and transactions placed or transacted before the conclusion of the Pricing Period for Official Prices (the "Official Prices Cut-off").

Where the waterfall is not deemed appropriate, the Quotations Committee may use expert judgement in establishing the spread information and for the determination of Official Prices and Closing Prices for the Prompt Dates

² In the case of Cobalt, Aluminium Alloy, NASAAC and Aluminium Premium Contracts, before the end of the Pricing Period for Closing Prices.



addressed by this Paragraph 9. Where expert judgement is used, the considerations in Paragraphs 10 to 13 may apply.

Expert judgement

10. The most active months will form the basis for the forward prices. For the purposes of the determination of the forward months for the Official Prices and 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 applicable Cut-off (detailed in Paragraph 9 above). However, it will give particular regard to trading activity and orders placed towards and on the applicable 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.
11. 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:
 - volume traded or volume placed on bids/offers, with particular regard to activity towards the applicable Cut-off. The LME may reference the traded volume or visible volume placed on bids/offers per Contract set out on the LME website from time to time ("Minimum Visible Volume Requirements" or "MVVR") to assist the Quotations Committee to prioritise relevant input data when considering price moves or with conflicting spreads across forward months;
 - 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;
 - any orders that are placed in the last minute prior to the applicable Cut-off; and
 - the manner in which any price has incrementally moved, with particular regard to activity towards the applicable Cut-off.
12. 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.
13. 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.

Publication of Official Prices



14. When the Official Prices have been established for each Metal Future and each Aluminium Premium Contract, provisional prices will be published to LMEselect users via an LMEselect market message as soon as is practically possible after the close of the relevant Pricing Period for that metal (with 5 minutes being the target). LMEselect Member users will then have 5 minutes to raise objections to the provisional prices. If no objections are lodged with the LME after 5 minutes, the status of these prices will become final. If there is an objection lodged with the Quotations Committee, the objection will be reviewed with the resolution published to LMEselect users via an LMEselect market message. Any objections should be sent to the Quotations Committee at Closing.Prices@lme.com.
15. Official Prices will be made available to LME licenced data vendors both in their provisional and final status.

Publication of Closing Prices

16. When the Closing Prices have been established for each Metal Future and each Aluminium Premium Contract, provisional prices will be placed on the LME SFTP server for Category 1, Category 2 and Category 4 Members to view. At the same time, the Closing Prices will be disseminated to LME licenced data vendors with an appropriate message to show the status of these prices as provisional. The timing for the publication of provisional prices will be determined by the Quotations Committee, as soon as is practical after each metal closes out on LMEselect from 4.00 pm (or at a revised time communicated by the LME). The objection procedure will then apply until 5.30 pm (but can be extended subject to the discretion of the Quotations Committee). If no objections are lodged by 5.30 pm, the provisional prices will be the Closing Prices. If there is an objection lodged with the Quotations Committee, this will be reviewed with the resolution published to Members and LME licenced data vendors in the usual way. Any objections should be sent to the Quotations Committee at Closing.Prices@lme.com.

Establishment of Cash-Settled Future Daily Settlement Price for Cash-Settled Futures

17. In the event that trading is disrupted on LMEselect during the relevant VWAP window for a Cash-Settled Future, the Cash-Settled Future Daily Settlement Price shall continue to be determined using the current waterfall pricing methodology, except that a different pricing period shall be used to determine the Cash-Settled Future Daily Settlement Price and the timing of the publication of these prices will be determined by the Quotations Committee at a revised time communicated by the LME.

General

18. For the avoidance of doubt:-
 - (a) 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 Period or applicable Cut-off;
 - (b) the Official Prices and Closing Prices for each base Metal Future and each Aluminium Premium Contract will be established at the prescribed times (for



example: a Pricing Period ending at 17:00 shall mean 16:55:00.000 - 16:59:59.999);

- (c) only bids/offers placed and transactions concluded up to the close of each respective Pricing Period on that day will be taken into account for the purposes of determining the Official Prices and Closing Prices listed in Paragraph 4(i) and (ii) above;
- (d) only bids/offers placed and transactions concluded up until the applicable Cut-off on that day will be taken into account for the purposes of determining the spread information, for example:
 - (i) for Official Prices, where the Pricing Period is between 12:30:00.000 and 12:34:59.999, the Cut-off for when spread activity will be considered would be 12:34:59.999;
 - (ii) for Closing Prices, where the Pricing Period is between 16:55:00.000 and 16:59:59.999, the Cut-off up for when spread activity will be considered would be 16:54:59.999³; and
- (e) where the Official Prices have been determined basis this Policy, the Official Settlement Price shall be the offer price for each Cash Prompt Date, or third Wednesday in Month 1 for Aluminium Premiums, that is determined.

Business Continuity Procedures for Closing Prices

19. The LME may calculate Closing Prices for one or more metals using the methodology set out in Appendix 2 of this Policy ("Closing Prices BC Methodology") in the event trading on LMEselect (the primary pricing venue for Closing Prices⁴) is disrupted or unable to provide sufficient information for the Quotations Committee's purposes. Where the Closing Prices BC Methodology has 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.

³ In the case of Cobalt, Aluminium Alloy, NASAAC and Aluminium Premium Contracts, the Cut-off would be the close of the respective Pricing Period

⁴ With effect from 6 September 2021.



APPENDIX 1

MINIMUM VOLUME REQUIREMENT (MVR) THRESHOLDS, MINIMUM VISIBLE VOLUME REQUIREMENTS (MVVRs) AND VWAP ROUNDING PROTOCOL

The table below sets out the MVR Thresholds, MVVRs and VWAP rounding protocol applicable to the LME policy for establishing (a) Official and Closing Prices on LMEselect in the event that the Ring is not available or trading is disrupted and (b) Cash-Settled Future Daily Settlement Prices for Cash-Settled Futures in the event that trading on LMEselect is disrupted during the relevant VWAP window (the “Policy”). The MVR Thresholds, MVVRs and rounding protocol have been provided in this Appendix 2 for ease of reference only; market participants should have regard to the binding MVR Thresholds, MVVRs and rounding protocol that are set out on the LME website, as updated from time to time.

Official Prices					
Metal	Pricing Period	MVR Threshold (lots)		Rounding (\$)	
	VWAP	Cash	3M	VWAP	Non-VWAP
CO	12:20:00.000 – 12:24:59.999	5	5	0.5	5
CA	12:30:00.000 – 12:34:59.999	25	50	0.5	0.5
AA	12:35:00.000 – 12:39:59.999	5	10	0.5	0.5
NA	12:35:00.000 – 12:39:59.999	5	10	0.5	0.5
SN	12:40:00.000 – 12:44:59.999	5	10	1	1
PB	12:45:00.000 – 12:49:59.999	10	25	0.5	0.5
ZS	12:50:00.000 – 12:54:59.999	10	25	0.5	0.5
AH	12:55:00.000 – 12:59:59.999	25	50	0.5	0.5
NI	13:00:00.000 – 13:04:59.999	10	25	1	1
Aluminium Premiums M1	13:05:00.000 – 13:09:59.999	5		0.5	0.5



Closing Prices

Metal	Pricing Period	MVR Threshold (lots)	Rounding (\$)		Closing Price Cut-off	MVVR Threshold (Lots)
	VWAP	3M	VWAP	Non-VWAP	Spreads	Spreads
CO	16:20:00.000 - 16:24:59.999	5	0.5	5	16:24:59.999	5
CA	16:45:00.000 - 16:49:59.999	50	0.5	0.5	16:44:59.999	50
AA	16:35:00.000 - 16:39:59.999	10	0.5	0.5	16:39:59.999	5
NA	16:35:00.000 - 16:39:59.999	10	0.5	0.5	16:39:59.999	5
SN	16:05:00.000 - 16:09:59.999	10	1	1	16:04:59.999	10
PB	16:15:00.000 - 16:19:59.999	25	0.5	0.5	16:14:59.999	25
ZS	15:55:00.000 - 15:59:59.999	25	0.5	0.5	15:54:59.999	25
AH	16:30:00.000 - 16:34:59.999	50	0.5	0.5	16:29:59.999	100
NI	16:55:00.000 - 16:59:59.999	25	1	1	16:54:59.999	25
Aluminium Premiums M1	16:35:00.000 - 16:39:59.999	5	0.5	0.5	16:39:59.999	5



APPENDIX 2

CLOSING PRICES BC METHODOLOGY

LMEselect has an automatic failover process to its secondary instance which significantly reduces the likelihood that business continuity procedures would be invoked for the establishment of the Closing Prices. However, in the event the LME are unable to determine the Closing Prices using the Closing Prices Benchmark Methodology, for example in the event trading on LMEselect is disrupted or unable to provide sufficient information to the Quotations Committee, the LME may invoke business continuity procedures for the establishment of the Closing Prices.

If a system outage results in LMEselect being unavailable prior to the Pricing Period, 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 Period, 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 Threshold for the 3 month Prompt Date has been reached for the respective Metal Future and in respect of Aluminium Premium Contracts, the Month 1 Prompt Date.

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 determine the Closing Prices for any relevant Metal Future or Aluminium Premium Contract as soon as is reasonably possible.

If the LME is unable to establish the Closing Prices basis LMEselect activity, the LME may set the Closing Prices at its absolute discretion, using expert judgement and by reference to all appropriate available data sources. These data sources shall include, without limitation, previously established LME prices (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.

POLICY FOR ESTABLISHING (A) OFFICIAL AND CLOSING PRICES ON LMESELECT IN THE EVENT THAT THE RING IS NOT AVAILABLE OR TRADING IS DISRUPTED AND (B) CASH-SETTLED FUTURE DAILY SETTLEMENT PRICE FOR CASH-SETTLED FUTURES IN THE EVENT THAT TRADING ON LMESELECT IS DISRUPTED DURING THE RELEVANT VWAP WINDOW¹

Defined Terms

1. Capitalised terms not otherwise defined herein shall have the meaning ascribed to them in the rules and regulations of the LME (“Rulebook”) or the Benchmark Administration – Definitions document (“Definitions”) available on the LME’s website, as applicable, and in each case as amended from time to time.

Policy

2. To ensure continuity in the publication of the LME’s prices in the event that the Ring is not available, or trading is disrupted by an emergency:
 - (a) the Official and Closing Prices will be established by the Quotations Committee basis LMEselect activity, in accordance with the provisions set out in Paragraphs 3 to 13 (inclusive); and
 - (b) the Cash-Settled Future Daily Settlement Price for Cash-Settled Futures shall be determined in accordance with the provisions in Paragraph 17.

Establishment of Official and Closing Prices

3. In the event that the Ring is not available, or Ring activity is disrupted by an emergency situation, the LME will endeavour to continue establishing the Official Prices and Closing Prices for each base Metal Future and each Aluminium Premium Contract at the prescribed times. Where this is not possible, or if Ring trading is disrupted while the Ring is in operation, the LME will communicate revised times for determining the Official Prices and/or Closing Prices for any relevant Metal Future or Aluminium Premium Contract as soon as is practically possible. Any Official Price or Closing Price established in the Ring before the LME’s business continuity procedures are invoked may stand, subject to the discretion of the Quotations Committee.

Arrangements for key Prompt Dates

4. The following Official Prices and Closing Prices will be determined using a volume weighted average price (“VWAP”) from transactions on LMEselect over a 5 minute pricing period (“Pricing Period”), where the minimum volume requirement threshold (“MVR Threshold”) is met:

- i) **Cash and 3 months for Officials and 3 months for Closing Prices for Metal Futures;** and
- ii) **Month 1 for Aluminium Premium Contracts.**

The VWAPs will then be rounded up or down, as applicable, in accordance with the protocol set out on the LME’s website, and updated from time to time. For information on the determination of all other Prompt Dates (for which Official Prices and Closing Prices are published) please refer to Paragraphs 9 to 13

5. For the Official Prices referred to in Paragraph 4, the Pricing Period will be the period that would have constituted the 5 minutes of the second Ring of the first session for the relevant metal as set out on the

¹ Paragraphs 3 to 14 of the Policy detail the approach that the LME will take to determining (*inter alia*) the Closing Prices electronically in circumstances where the Ring is not available, or Ring trading is disrupted by an emergency. Further to LME Notices 21/111 and 21/153, the Closing Prices will be determined electronically with effect from the reopening of the Ring following the Covid-19 related temporary suspension. This Policy should therefore be read in this context, with the methodology set out in paragraphs 3 to 14 representing the primary pricing methodology for the Closing Prices, with effect from the date on which the Ring reopens. The business continuity methodology for electronically determined Closing Prices is set out in Appendix 2 to this Policy.



LME's website from time to time. For the Closing Prices referred to in Paragraph 4, the Pricing Period will be the time that would have constituted the last 5 minutes of the kerb in the second session for the relevant metal as set out on the LME's website from time to time.

6. The MVR Thresholds are set out on the LME's website and are subject to change from time to time following ongoing review of market activity, and consultation where required. All LMEselect trades in outright for the relevant Prompt Date for the relevant Metal Future or Aluminium Premium Contract that occur during the relevant Pricing Period 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.
7. The Official and Closing Prices determined under this Policy for each metal will only be one price and not a two-way bid/offer price (as would typically be the case). However, this single price will be disseminated on the LME market data feed as both the bid and the offer price – and, for the purposes of usage of the data (in physical supply contracts or otherwise), the LME considers that the single price may be utilised as both the bid and offer price.
8. If the relevant MVR Threshold is not reached, the Quotations Committee shall determine the Official Price and Closing Price for the affected Prompt Date using the following pricing waterfall:
 - a) it shall be the last traded price on LMEselect during the Pricing Period if the last traded price is within, or at, the bid/offer on the close of the relevant Pricing Period;
 - b) if the last traded price on LMEselect during the Pricing Period is outside of the bid/offer on the close of the Pricing Period, 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 Period, but has traded on LMEselect prior to the Pricing Period and/or where a bid/offer is available at the close of the Pricing Period, 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 Period and there is no bid and/or offer available on the close of the Pricing Period, the price will be determined using available spread information and the last valuation.

The Official Price and Closing Price will then be rounded up or down, as applicable, in accordance with the protocol set out on the LME's website from time to time.

Where:

- a) the LME does not have access to sufficient input data necessary to determine the Official Price and Closing Price; or
- b) a linear approach to the pricing waterfall would result in an inaccurate price (in the Quotation Committee's expert judgement),

the LME may set the Official Prices and 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 in Paragraphs 10 to 13 may apply.

Arrangements for all other Prompt Dates

9. The establishment of prices for all other Prompt Dates (i.e. all outright Prompt Dates not listed in Paragraph 4(i) and (ii) above) that are published as part of the Official Prices and Closing Prices will not utilise VWAPs. Rather, they will be determined using the 3 Month outright price established on the basis of the pricing waterfall set out in Paragraph 8, in conjunction with any available spread information. In establishing the spread information, the waterfall set out in Paragraph 8 will be applied with reference to spread orders and spread transactions from LMEselect, as follows:



- (a) Closing Prices: the pricing process will take account of spread orders and transactions placed or transacted before the start of the Pricing Period for Closing Prices² (the “Closing Price Cut-off”); and
- (b) Official Prices: the pricing process will take account of spread orders and transactions placed or transacted before the conclusion of the Pricing Period for Official Prices (the “Official Prices Cut-off”).

Where the waterfall is not deemed appropriate, the Quotations Committee may use expert judgement in establishing the spread information and for the determination of Official Prices and Closing Prices for the Prompt Dates addressed by this Paragraph 9. Where expert judgement is used, the considerations in Paragraphs 10 to 13 may apply.

Expert judgement

10. The most active months will form the basis for the forward prices. For the purposes of the determination of the forward months for the Official Prices and 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 applicable Cut-off (detailed in Paragraph 9 above). However, it will give particular regard to trading activity and orders placed towards and on the applicable 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.
11. 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:
 - volume traded or volume placed on bids/offers, with particular regard to activity towards the applicable Cut-off. The LME may reference the traded volume or visible volume placed on bids/offers per Contract set out on the LME website from time to time (“Minimum Visible Volume Requirements” or “MVVR”) to assist the Quotations Committee to prioritise relevant input data when considering price moves or with conflicting spreads across forward months;
 - 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;
 - any orders that are placed in the last minute prior to the applicable Cut-off; and
 - the manner in which any price has incrementally moved, with particular regard to activity towards the applicable Cut-off.
12. 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.
13. 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.

Publication of Official Prices

14. When the Official Prices have been established for each Metal Future and each Aluminium Premium Contract, provisional prices will be published to LMEselect users via an LMEselect market message as soon as is practically possible after the close of the relevant Pricing Period for that metal (with 5 minutes being the target). LMEselect Member users will then have 5 minutes to raise objections to the provisional prices. If no objections are lodged with the LME after 5 minutes, the status of these prices will become final. If there is an objection lodged with the Quotations Committee, the objection will be reviewed with the resolution published to LMEselect users via an LMEselect market message. Any objections should be sent to the Quotations Committee at Closing.Prices@lme.com.

² In the case of Cobalt, Aluminium Alloy, NASAAC and Aluminium Premium Contracts, before the end of the Pricing Period for Closing Prices.



15. Official Prices will be made available to LME licenced data vendors both in their provisional and final status.

Publication of Closing Prices

16. When the Closing Prices have been established for each Metal Future and each Aluminium Premium Contract, provisional prices will be placed on the LME SFTP server for Category 1, Category 2 and Category 4 Members to view. At the same time, the Closing Prices will be disseminated to LME licenced data vendors with an appropriate message to show the status of these prices as provisional. The timing for the publication of provisional prices will be determined by the Quotations Committee, as soon as is practical after each metal closes out on LMEselect from 4.00 pm (or at a revised time communicated by the LME). The objection procedure will then apply until 5.30 pm (but can be extended subject to the discretion of the Quotations Committee). If no objections are lodged by 5.30 pm, the provisional prices will be the Closing Prices. If there is an objection lodged with the Quotations Committee, this will be reviewed with the resolution published to Members and LME licenced data vendors in the usual way. Any objections should be sent to the Quotations Committee at Closing.Prices@lme.com.

Establishment of Cash-Settled Future Daily Settlement Price for Cash-Settled Futures

17. In the event that trading is disrupted on LMEselect during the relevant VWAP window for a Cash-Settled Future, the Cash-Settled Future Daily Settlement Price shall continue to be determined using the current waterfall pricing methodology, except that a different pricing period shall be used to determine the Cash-Settled Future Daily Settlement Price and the timing of the publication of these prices will be determined by the Quotations Committee at a revised time communicated by the LME.

General

18. For the avoidance of doubt:-
- (a) 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 Period or applicable Cut-off;
 - (b) the Official Prices and Closing Prices for each base Metal Future and each Aluminium Premium Contract will be established at the prescribed times (for example: a Pricing Period ending at 17:00 shall mean 16:55:00.000 - 16:59:59.999);
 - (c) only bids/offers placed and transactions concluded up to the close of each respective Pricing Period on that day will be taken into account for the purposes of determining the Official Prices and Closing Prices listed in Paragraph 4(i) and (ii) above;
 - (d) only bids/offers placed and transactions concluded up until the applicable Cut-off on that day will be taken into account for the purposes of determining the spread information, for example:
 - (i) for Official Prices, where the Pricing Period is between 12:30:00.000 and 12:34:59.999, the Cut-off for when spread activity will be considered would be 12:34:59.999;
 - (ii) for Closing Prices, where the Pricing Period is between 16:55:00.000 and 16:59:59.999, the Cut-off up for when spread activity will be considered would be 16:54:59.999³; and
 - (e) where the Official Prices have been determined basis this Policy, the Official Settlement Price shall be the offer price for each Cash Prompt Date, or third Wednesday in Month 1 for Aluminium Premiums, that is determined.

Business Continuity Procedures for Closing Prices

19. The LME may calculate Closing Prices for one or more metals using the methodology set out in Appendix 2 of this Policy (“Closing Prices BC Methodology”) in the event trading on LMEselect (the primary pricing

³ In the case of Cobalt, Aluminium Alloy, NASAAC and Aluminium Premium Contracts, the Cut-off would be the close of the respective Pricing Period.



venue for Closing Prices⁴) is disrupted or unable to provide sufficient information for the Quotations Committee's purposes. Where the Closing Prices BC Methodology has 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.

⁴ With effect from 6 September 2021.



APPENDIX 1

MINIMUM VOLUME REQUIREMENT (MVR) THRESHOLDS, MINIMUM VISIBLE VOLUME REQUIREMENTS (MVVRs) AND VWAP ROUNDING PROTOCOL

The table below sets out the MVR Thresholds, MVVRs and VWAP rounding protocol applicable to the LME policy for establishing (a) Official and Closing Prices on LMEselect in the event that the Ring is not available or trading is disrupted and (b) Cash-Settled Future Daily Settlement Prices for Cash-Settled Futures in the event that trading on LMEselect is disrupted during the relevant VWAP window (the “Policy”). The MVR Thresholds, MVVRs and rounding protocol have been provided in this Appendix 2 for ease of reference only; market participants should have regard to the binding MVR Thresholds, MVVRs and rounding protocol that are set out on the LME website, as updated from time to time.

Official Prices					
Metal	Pricing Period	MVR Threshold (lots)		Rounding (\$)	
	VWAP	Cash	3M	VWAP	Non-VWAP
CO	12:20:00.000 – 12:24:59.999	5	5	0.5	5
CA	12:30:00.000 – 12:34:59.999	25	50	0.5	0.5
AA	12:35:00.000 – 12:39:59.999	5	10	0.5	0.5
NA	12:35:00.000 – 12:39:59.999	5	10	0.5	0.5
SN	12:40:00.000 – 12:44:59.999	5	10	1	1
PB	12:45:00.000 – 12:49:59.999	10	25	0.5	0.5
ZS	12:50:00.000 – 12:54:59.999	10	25	0.5	0.5
AH	12:55:00.000 – 12:59:59.999	25	50	0.5	0.5
NI	13:00:00.000 – 13:04:59.999	10	25	1	1
Aluminium Premiums M1	13:05:00.000 – 13:09:59.999	5		0.5	0.5



Closing Prices

Metal	Pricing Period	MVR Threshold (lots)	Rounding (\$)		Closing Price Cut-off	MVVR Threshold (Lots)
	VWAP	3M	VWAP	Non-VWAP	Spreads	Spreads
CO	16:20:00.000 - 16:24:59.999	5	0.5	5	16:24:59.999	5
CA	16:45:00.000 - 16:49:59.999	50	0.5	0.5	16:44:59.999	50
AA	16:35:00.000 - 16:39:59.999	10	0.5	0.5	16:39:59.999	5
NA	16:35:00.000 - 16:39:59.999	10	0.5	0.5	16:39:59.999	5
SN	16:05:00.000 - 16:09:59.999	10	1	1	16:04:59.999	10
PB	16:15:00.000 - 16:19:59.999	25	0.5	0.5	16:14:59.999	25
ZS	15:55:00.000 - 15:59:59.999	25	0.5	0.5	15:54:59.999	25
AH	16:30:00.000 - 16:34:59.999	50	0.5	0.5	16:29:59.999	100
NI	16:55:00.000 - 16:59:59.999	25	1	1	16:54:59.999	25
Aluminium Premiums M1	16:35:00.000 - 16:39:59.999	5	0.5	0.5	16:39:59.999	5



APPENDIX 2

CLOSING PRICES BC METHODOLOGY

LMEselect has an automatic failover process to its secondary instance which significantly reduces the likelihood that business continuity procedures would be invoked for the establishment of the Closing Prices. However, in the event the LME are unable to determine the Closing Prices using the Closing Prices Benchmark Methodology, for example in the event trading on LMEselect is disrupted or unable to provide sufficient information to the Quotations Committee, the LME may invoke business continuity procedures for the establishment of the Closing Prices.

If a system outage results in LMEselect being unavailable prior to the Pricing Period, 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 Period, 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 Threshold for the 3 month Prompt Date has been reached for the respective Metal Future and in respect of Aluminium Premium Contracts, the Month 1 Prompt Date.

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 determine the Closing Prices for any relevant Metal Future or Aluminium Premium Contract as soon as is reasonably possible.

If the LME is unable to establish the Closing Prices basis LMEselect activity, the LME may set the Closing Prices at its absolute discretion, using expert judgement and by reference to all appropriate available data sources. These data sources shall include, without limitation, previously established LME prices (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.