Price Bands and other Volatility Control Mechanisms

Please respond to:
Trading Operations
tradingoperations@lme.com

Contents

1 Introduction 3
2 Dynamic price bands 3
2.1 LMEselect dynamic price bands for Outrights 4
2.2 LMEselect dynamic price bands for Carries 4
2.3 LMEsmart and dynamic price bands 4
3 Static price bands 4
3.1 LMEselect static price bands 4
3.1.1 Refresh Rates for LMEselect static price bands 5
3.2 LMEsmart static price bands 5
4 Daily price limits 5
4.1 LMEselect DPLs 5
4.2 DPL Multiple Day Framework 6
4.3 LMEsmart DPLs 6
5 Document Control 7

1 Introduction

The LME uses three volatility control mechanisms (1) Dynamic price bands (2) Static price bands (3) Daily price limits ("DPLs") which are designed to be operational at all times during trading hours. The LME's determination of the optimal configuration of volatility control mechanisms for each contract group on each venue is informed by a number of factors including the historical volatility of the underlying, the liquidity profile of trading, the size of the market and open positions.

At least two of these mechanisms are in place for each LME contract and orders will effectively be constrained by the most stringent control in either direction at any time. For example, for Base metal outrights trading on LMEselect, dynamic price bands, static price bands and DPLs apply, therefore any order will need to be within the dynamic price band and the static price band channels for the instrument and within the DPLs.

There is a direct link between the static price bands and DPLs in LMEselect and those in LMEsmart, and whilst the bands/limits in LMEsmart are derived from those applicable in LMEselect, Inter-Office Trading retain the ability to update the static price bands in LMEsmart independently from LMEselect.

The processes set out in this document are not intended to restrict the LME's operation of the price bands, but rather to describe their normal operation. They are without prejudice to the LME's general power to operate the price bands in a different manner, as it considers appropriate, in the interests of the market.

Defined terms used herein shall have the meaning set out in the LME Rulebook, unless stated otherwise.

2 Dynamic price bands

Dynamic price bands are applied to all futures contracts available for trading on LMEselect. They use an established anchor price for each contract – which is updated in line with market activity – referencing the contract's no-cancellation range ("NCR") to create a price channel within which an order will be permitted to reach the market. No bids will be accepted above the upper dynamic price band, and no offers will be accepted below the lower dynamic price band. However, the market is not prevented from moving in either direction, subject to the relevant orders being within the bands.

All orders rejected due to dynamic price bands will include a rejection message stating the relevant band value at time of rejection.

Dynamic price band price channels provide three width options, Normal, Wide, and Widest which are based on the relevant NCR value (see below). The price channels can be adjusted between these width options during the trading day to allow for increasing or decreasing market volatility.

NCR values are published on the LME website and any updates made from time to time are communicated to the market via Market Message.

Dynamic price bands are designed to be operational at all times during the trading day and will not be suspended except in the event of technical difficulties.

2.1 LMEselect dynamic price bands for Outrights

The LMEselect dynamic price bands for Outrights are calculated from the NCRs in the following way:

- **Normal** Same as the NCR
- **Wide** 1.5 times the NCR
- **Widest** 2 times the NCR

2.2 LMEselect dynamic price bands for Carries

The LMEselect dynamic price bands for Carries are calculated from the NCRs published on the LME website, in the following way:

- **Normal** 2 times the NCR
- **Wide** 3 times the NCR
- **Widest** 5 times the NCR

2.3 LMEsmart and dynamic price bands

Dynamic price bands are not applied to the Inter Office Market ("IOM"). The IOM enables Members to trade bilaterally and therefore when each counterparty submits their trade half to LMEsmart the economics of the trade must agree in order for it to match. This process ensures that any erroneous trade data (e.g. fat finger trade entry) is identified and resolved by the parties involved before matching. Should a Member submit a House vs Client cross (whereby they are both sides to the trade), and an error is subsequently identified, on trade date this can be cancelled or, from TD+1, reversed.

3 Static price bands

Static price bands are a volatility control mechanism that create an upper and lower price band around the anchor price which limits the extent of a market price move in either direction. The anchor price for the generation of the static price bands is updated according to the refresh rate, which is typically much less frequent than that for dynamic price bands.

3.1 LMEselect static price bands

No bids will be accepted higher than the upper static price band and no offers will be accepted below the lower static price band. If a contract trades to either the upper or lower band, the market remains open, but prices will be constrained by the relevant band until the anchor price has refreshed and the limits recalculated.

All orders rejected due to static price bands will receive a rejection message stating the relevant band value with a timestamp of the rejection.

Static price bands are designed to be operational at all times during the trading day and will not be suspended except in the event of exceptional circumstances.

Intraday amendments to static price bands will only take place in exceptional circumstances if it is deemed to be in the best interests of the market to do so.

3.1.1 Refresh Rates for LMEselect static price bands

Static price bands are applied to all 3M Base contracts with a 15-minute refresh rate.

Static price bands are also applied to all Cash-Settled Futures contracts with a 60-minute refresh rate, with the exception of LME Steel HRC Shanghai contracts which will have a 15-minute refresh rate.

3.2 LMEsmart static price bands

Static price bands create price channels around a reference price outside of which the Agreed Trade halves submitted by Members will not be accepted into LMEsmart for matching. The static price bands are in place for Base, Cash-Settled and Option Contracts and are calibrated by the LME based on historical volatility and other relevant factors.

Static price bands applied in the IOM may be set at different levels to those applied to LMEselect.

In the event that a Member submits a trade into LMEsmart that falls outside of the static price bands, the trade will have a 'Pending Validation' status and the Member should contact Inter-Office Trading to accept or reject the trade. In such cases, the LME will request such information as it considers necessary to allow the trade to be accepted for matching on LMEsmart.

4 Daily price limits

DPLs prevent large daily price moves in a contract. They are configured as a fixed percentage of a previous Business Day's Closing Price (as communicated to the market by Notice and available on the LME website).

DPLs for the main nine physically settled Base metals (CA, AH, ZS, NI, PB, SN, AA, NA and CO) are configured and applied as a fixed percentage of the previous Business Day's 3M Closing Price for that contract.

For example, if XX 3-month closed last night at $8,000 then a 15% DPL for all XX outright prompts today would be $1,200 above and $1,200 below last night's Closing Price for that prompt.

DPLs for Cash-Settled Futures, which are only applicable to LME Cobalt (Fastmarkets MB) and LME Steel HRC Shanghai, are configured and applied as a fixed percentage of the previous Business Day's Month 2 Closing Price for that contract.

The calibration review for Cash-Settled Futures occurs in line with the other Base metal and Cash-Settled Contracts, i.e. bi-annually as well as on an ad-hoc basis where circumstances warrant additional review.

4.1 LMEselect DPLs

No orders (whether bids or offers) will be accepted above the upper DPL or below the lower DPL. If an instrument trades to either limit the market remains open.

All orders rejected due to DPLs will receive a rejection message stating the relevant limit value with a timestamp of the rejection.

DPLs are designed to be operational at all times during the trading day and will not be suspended except in the event of technical difficulties. Intraday amendments to DPLs will only take place in exceptional circumstances if it is deemed to be in the best interests of the market to do so. Any changes to the DPLs will be communicated to the market.

4.2 DPL Multiple Day Framework

The DPL Multiple Day Framework applies when a contract has been impacted by its respective DPL, in the same direction, for multiple days in a row. The LME will automatically suspend the market for that particular metal at the end of the third business day. The LME may also consider suspending the market for Cash Settled Futures linked products earlier if deemed necessary and at the sole discretion of the LME. The framework explains the LME's approach in such circumstances.

This framework applies to the LME contracts that have DPLs in place.

The framework is in effect when the LME determines that a Day 1 "Qualifying Event" has occurred. A Qualifying Event is where the DPL has impacted Closing Prices. The LME shall notify the market of such an event via Notice.

Similarly, if the same contract is impacted by a price move in the same direction for a second consecutive business day, the LME will publish a notice detailing a Day 2 "Qualifying Event".

4.3 LMEsmart DPLs

Where DPLs are enabled for a contract, these limits will apply identically in LMEsmart and LMEselect. Therefore, in the event that a Member submits a trade into LMEsmart that falls outside of the DPL, the trade will have a 'Pending Validation' status.

On a T+1 basis, Inter-Office Trading will review the prior day's activity to ensure that no outright futures trades outside of the upper and lower DPLs had been released erroneously from a Pending Validation status. If an error is identified, Trading Operations will escalate to senior management for a determination as to whether or not the trade in question should be cancelled. In the event of a cancellation, the LME Relationship Manager will notify the Member(s) and request a timely reversal of the erroneous trade.

5 Document Control

Document Name	Price Bands and Other Volatility Control Mechanisms
Document Owner	Trading Operations
Frequency of Review	Annual

Amendment and Change History

Version	Date	Author	Revisions
1.6[1]	October 2022	Trading Operations	Addition of Static Price Bands and Daily Price Limits, general housekeeping
1.7	July 2023	Trading Operations	Amended Daily Price Limit Section
1.8	March 2025	Trading Operations	Amended Static Price Band references
1.9	April 2025	Trading Operations	Amended section 4.1
1.10	October 2026	Trading Operations	Addition of Steel HRC Shanghai, general housekeeping

[1] Note that amendments prior to this version 1.6 were not recorded in this document