

# A guide to the London Metal Exchange



SETTING THE GLOBAL STANDARD



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# The London Metal Exchange

## Setting the global standard

The London Metal Exchange (LME) is the world centre for the trading of industrial metals. The majority of non-ferrous on-exchange business is conducted on our markets.

The LME brings together participants from the physical industry and the financial community to create a vital, robust and regulated market where there is always a buyer or seller, where there is always a price and where there is always the opportunity to transfer or take on risk – 24 hours a day.

Investors value the LME as a vibrant futures exchange with close links to industry where they can take on risk based on prices that are truly reflective of global supply and demand. The possibility of physical delivery via the world-wide network of LME-approved warehouses makes it the perfect hedging venue for industry and the world gains a reference price they trust.

The Exchange provides producers and consumers of metal not only with a physical market of last resort but also, perhaps most importantly of all, with the ability to hedge against the risk of rising and falling world metal prices.

And with the recent expansion of our ferrous suite and introduction of gold and silver futures, more and more participants are benefiting from LME risk-management tools and liquidity.

It's what we've been doing since 1877.







Annual trading

\$12.7  
trillion

3.5  
billion tonnes

157  
million lots

2.2  
million lots in  
open interest







# Price risk management

## The perfect hedge

The LME is a meeting place of buyers and sellers of metal futures and options. It provides producers and consumers of metal around the world with the best way to manage their exposure to the risk created by metal price volatility.

Producers (those who sell the metal they mine and refine) are at risk of prices falling, and consumers (those who buy and make things from metal) are at risk of prices rising.

Hedging against these price movements using the LME's futures and options contracts enables the metal industry to focus on their core business.

### Benefits of hedging:

- protect against price movements
- lock in margins and offer long-term fixed prices to customers
- improve budget forecasts
- turn inventory into cash or security for finance
- protect physical inventory against price falls
- hedge physical purchases in times of production difficulty.

# The world's price formation venue

## What's in a price?

The LME is the de facto price formation venue for non-ferrous metals. The prices 'discovered' on our platforms are used as the global reference and basis for physical trading as well as in the valuation of portfolios, in commodity indices and metal ETFs.

Our prices are trusted because the LME is the most liquid and most traded industrial metals market in the world and its global network of warehouses ensures the price is truly reflective of supply and demand.

Real-time bid and offer prices are available 24 hours a day via our market data service, LMElive and also from approved data vendors. The LME also aggregates and publishes a set of reference prices that are based on highly liquid periods of the trading day.

The LME is also home to the LBMA Platinum and Palladium Prices, which are discovered in a twice-daily auction. This pricing solution is delivered via LMEbullion, our custom-built electronic platform.

[lmebullion.com](http://lmebullion.com)



#	CO	FB	MO	FB	Metal	Settlement
3 months	Final	2320.00	Final	1450.00	AH	1858.00
3M	CASH-3M	22.00c	CASH-3M	228.50c	AA	1850.00
MAY	C-MAY	10.00c	C-MAY	17.50c	NA	1873.00
MAY-JUN	MAY-JUN	10.00c	MAY-JUN	75.00c	CA	4735.00
JUN-JUL	JUN-JUL	10.00c	JUN-JUL	77.00c	MO	14739.00
JUL-3s	JUL-3s	32.00c	JUL-3s	57.00c	ZS	1650.00
3s-AUG	3s-AUG	32.00c	3s-AUG	32.50c	NI	8730.00
AUG-SEP	AUG-SEP	47.00c	AUG-SEP	48.00c	CO	23865.00
SEP-OCT	SEP-OCT	47.00c	SEP-OCT	83.00c	PB	1737.00
OCT-NOV	OCT-NOV	47.00c	OCT-NOV	83.00c	FM	100.00
NOV-DEC	NOV-DEC	47.00c	NOV-DEC	83.00c	SN	17425.00
					AE	120.00
					AN	200.00
					AS	85.00
					AW	100.00





## LME Reference Prices

What are they and how are they calculated?	How are they used?	Prompt dates	When are they published?	Currency
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### LME Official Price and Official Settlement Price

The LME Official Price is the last bid and offer quoted during the second open-out cry (or Ring) session and the LME Official Settlement Price is the last cash offer price	The LME Official Price is used as the global reference for physical contracts and the LME Official Settlement Price is the price at which all LME futures are settled	Cash, 3 month and 3-forward December prices* (which roll annually)	12.20 - 13.20	USD (we also publish exchange rates for EUR, GBP, JPY)
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### LME Unofficial Price

The LME Unofficial Price is the last bid and offer quoted during the fourth Ring	The LME Unofficial Price is a good indicator of afternoon trading and is used as a reference price	Cash, 3 month and 3-forward December prices* (which roll annually)	15.40–16.15 (ex minors)	USD
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### LME Closing Price (or Valuation)

The LME Closing Price (also known as the Evening Evaluation) is determined by the LME Quotations Committee after the close of trading on the Ring	Used by LME Clear and LME members for calculating margins	All prompt dates	LME Indicative Closing Price: from 16.15. LME Provisional Closing Price from 16.25. LME Closing Price: from approximately 18.15	USD, EUR, GBP, JPY
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### LME Asian Reference Price

The LME Asian Reference Price is calculated on the volume-weighted average price (VWAP) of trades transacted on our electronic trading platform, LMEselect, between 06.55–07.00 or 07.55–08.00 during British Summer Time (BST)	The LME Asian Reference Price provides traders with a useful early-day guide to trading in one of the most significant and liquid periods of the day	3 month LME Aluminium, LME Copper and LME Zinc	07.03 (08.03 BST)	USD (we also publish exchange rates for EUR, GBP, JPY)
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\* 15 month official and closing prices published for tin and minor metals. 15 month unofficial price also available for tin.

# Warehousing, branding and price convergence

## The physical market of last resort

Our market complements the physical. The possibility of physical delivery – supported by 550 international storage facilities and over 500 LME listed brands – results in price convergence ensuring our prices remain in line with the physical industry.

The combination of price convergence, the global reach of the LME’s storage facilities and listed metal brands, the fact that physical deals are negotiated using LME prices and our unparalleled levels of liquidity means the world gains a price it trusts.

In times of extreme shortage or over supply the LME also provides producers and consumers with a physical market of last resort. LME warehouse companies must meet strict criteria before they are approved and are typically located in high-consumption areas or logistical trading hubs for the shipment of material.

All metals stored in LME-approved storage facilities on warrant are LME-approved brands from LME-approved producers ensuring conformance to the Exchange’s strict rules on commodity grade, quality and shape.



550

LME-approved warehouses in 34 locations  
across the USA, Europe and Asia

512

LME-approved brands from 61 countries

5.3

million tonnes delivered in and out in 2017





## What is a 'future'?

A 'future' is the obligation to buy or sell a standard quantity of a specified asset (metal) on a set date, at a fixed price agreed today.

## What is an 'option'?

An 'option' is the right, but not the obligation, to buy or sell a futures contract at a price (the strike price) agreed today.

## What are 'prompt dates'?

The date by which an LME warrant must be delivered by the seller and paid for by the buyer of a futures contract. Also known as the 'settlement date'.



# The contracts and the metals

## Today's innovation, tomorrow's standard

Of the industry for the industry, the LME's products and services are designed with the metal community in mind and this is what makes the LME unique.

The LME prides itself on the unique settlement-date structure of its contracts and its focus on the physical market.

Designed to reflect the nature and timing of bilaterally negotiated metal trades, market participants can use the LME's contracts to transfer or take on risk against metal prices daily out to 3 months, weekly out to 6 months and monthly out to anything up to 123 months – that's over 10 years in the future.

Through our flexible prompt-date structure, large lot sizes that reflect industrial usage, and range of contract types the LME provides participants with unparalleled opportunity to transfer and take on risk.

### What are 3rd Wednesdays?

3rd Wednesday contracts are monthly futures that exist within the current prompt date structure for all major LME contracts. The overall contract specification (trading times, contract size, and physical delivery) are exactly the same as the 3 month contract, or any other prompt date. The key difference between the 3rd Wednesday and any other prompt date is that it does not expire every day. It only expires on the 3rd Wednesday of that month. Therefore, it is a monthly future.

### Types of LME contracts

#### LME futures

Physically settled contracts daily out to 3 months, weekly out to 6 months and monthly up to 123 months; cash settled contracts out to 15 months

#### LME traded options

American-style monthly options up to 63 months

#### LME TAPOS

##### (traded average price options)

Asian-style monthly average-price options up to 63 months

#### Monthly Average Futures

A contract where the difference between the 'fixed' price and 'floating' Monthly Average Settlement Price (MASP) is financially settled

#### LMEminis

Small-lot, cash-settled monthly futures out to 12 months

#### London Mini Futures

Small-lot, cash-settled monthly futures traded on HKEX, traded and priced in renminbi

# The metal contracts

Metal		Lot size	Shape	Underlying metal*
Precious metals	LME Gold	100 fine troy ounces	N/A	Unallocated Loco London Fine Gold
	LME Silver	5,000 fine troy ounces	N/A	Unallocated Loco London Fine Silver
Non-ferrous metals	LME Aluminium	25mt	Ingots Sows T-bars	High grade primary aluminium
	LME Aluminium Alloy	20mt	Ingots Small Sows Large Sows T-bars	Aluminium alloy
	LME Aluminium Premiums US Premium, West-Europe Premium, East-Asia Premium, South-East Asia Premium	25mt	N/A	High-grade primary aluminium premium warrant in each designated region
	LME Copper	25mt	Cathodes	Grade A copper
	LME Lead	25mt	Ingots	Standard lead of 99.97% purity (minimum)
	LME Nickel	6mt	Cathodes (full plate or cut) Pellets Briquettes	Primary nickel of 99.80% purity (minimum)
	LME NASAAC	20mt	Ingots Small Sows Large Sows T-bars	ME NA380.1 North American special aluminium alloy
	LME Tin	5mt	Ingots	Tin of 99.85% purity (minimum)
	LME Zinc	25mt	Ingots	Special high-grade zinc of 99.995% purity (minimum)
	Minor metals	LME Cobalt	1mt	Cathodes (broken or cut) Rounds Briquettes Ingots
LME Molybdenum		6mt	Powder packed in drums	Between 57 and 63% molybdenum contained in roasted molybdenum concentrate (RMC)
Ferrous metals	LME Steel Rebar	10mt	N/A	N/A
	LME Steel Scrap	10mt	N/A	N/A

mt=metric tonne

\*Quality specifications are available at [www.lme.com](http://www.lme.com)



	Contract types	Prompt dates	Main industry uses	First listed
	Futures	Daily: out to 25 days Monthly: out to 24 months Quarterly: out to 5 years	Jewellery	2017
	Futures	Daily: out to 25 days Monthly: out to 24 months Quarterly: out to 5 years	Jewellery, medicine, nuclear reactors	2017
	Futures Traded options TAPOs Monthly Average Futures London Mini Futures	Daily: out to 3 months Weekly: 3 out to 6 months Monthly: 7 out to 123 months (63 for TAPOs and traded options)	Automotive, transport, construction, aeronautical, packaging	1978 (1987 current specification)
	Futures Traded options TAPOs Monthly Average Futures	Daily: out to 3 months Weekly: 3 out to 6 months Monthly: 7 out to 27 months	Automotive, transport, construction, aeronautical, packaging	1992
	Futures	Third Wednesday of each maturity month, subject to trading regulations	Hedge regional premium exposure; discover transparent on-exchange premium prices; take delivery of readily available metal	2015
	Futures Traded options TAPOs Monthly Average Futures London Mini Futures	Daily: out to 3 months Weekly: 3 out to 6 months Monthly: 7 out to 123 months (63 for TAPOs and traded options)	Electricals, construction	1877 (1986 current specification)
	Futures Traded options TAPOs Monthly Average Futures	Daily: out to 3 months Weekly: 3 out to 6 months Monthly: 7 out to 63 months	Batteries	1920
	Futures Traded options TAPOs Monthly Average Futures	Daily: out to 3 months Weekly: 3 out to 6 months Monthly: 7 out to 63 months	Stainless steel	1979
	Futures Traded options TAPOs Monthly Average Futures	Daily: out to 3 months Weekly: 3 out to 6 months Monthly: 7 out to 27 months	Automotive	2002
	Futures Traded options TAPOs Monthly Average Futures	Daily: out to 3 months Weekly: 3 out to 6 months Monthly: 7 out to 15 months	Plating, soldering	1877 (1989 current specification)
	Futures Traded options TAPOs Monthly Average Futures London Mini Futures	Daily: out to 3 months Weekly: 3 out to 6 months Monthly: 7 out to 63 months	Galvanisation, brass	1920 (1986 current specification)
	Futures	Daily: out to 3 months Weekly: 3 out to 6 months Monthly: 7 out to 15 months	Batteries, turbines, paints	2010
	Futures	Daily: out to 3 months Weekly: 3 out to 6 months Monthly: 7 out to 15 months	Alloying agent in steel (stainless and construction)	2010
	Cash-settled futures	Monthly: out to 15 months	Construction	2015
	Cash-settled futures	Monthly: out to 15 months	Steel production	2015

All contracts quoted in US dollars and clearable in US dollars, pound sterling, Euro and Japanese yen (ex LME Steel Billet)





# Trading

## Unparalleled opportunity to transfer or take on risk

Metal futures and options are traded on three platforms at the London Metal Exchange.

Participants wishing to trade on the LME must do so with one of our member firms.

This can be done either directly with an LME member or through member sponsored access to LME's electronic trading platform.

Counterparty risk is mitigated by LME Clear, our own clearing house purpose-built for the metals market. As a Recognised Investment Exchange, the LME has a statutory requirement to ensure that business on our markets is conducted in a fair and orderly manner, providing proper protection to investors. The LME is regulated by the Financial Conduct Authority (FCA). The FCA also regulates those LME members that conduct investment business.

### Trading platforms at LME

#### The Ring | Trading hours: 11.40 – 17.00

Open-outcry trading floor. Liquidity is concentrated into five-minute sessions known as Rings. LME Official, Unofficial and Closing Prices are all, or in part, derived from trading activity on the Ring.

#### LMeselect | Trading hours: 01.00 – 19.00\*

Electronic trading platform, for the trading of all LME contracts. Offers a range of advanced features all tailored to the LME's unique prompt date structure.

#### Inter-office telephone | Trading hours: 24 hours

Members' indicative quotes are distributed via the vendor network and can be executed by telephone.

For a full list of LME member firms, please visit our website

[lme.com/trading](https://lme.com/trading)

\*LME precious trading hours on LMeselect 01.00-20.00



# LME Clear

## Trade and clear in one venue

LME Clear is the clearing house designed and built specifically for users of the London Metal Exchange. It delivers innovative clearing and settlement services for traded transactions.

LME Clear is the central counterparty (CCP) for all LME clearing members and their trading activity. It provides a financial guarantee to every traded contract, acting as ‘the seller to every buyer and the buyer to every seller’. In the event of a clearing member default, LME Clear will step in and manage the defaulting clearing member’s outstanding risk positions swiftly and efficiently.

LMEmercury, LME Clear’s revolutionary clearing system, allows members to monitor and assess the risk they are taking on in real time. This in turn means clearing members have more control over their business in key areas such as portfolio management, option expiry handling and reporting.

LME Clear regularly introduces new services to meet customer needs. We have added a position-transfer service, inter-prompt spread methodology, trade compression, warrants and offshore Renminbi as collateral, new averaging solution and a new gross segregated account.

[lme.com/lmeclear](https://lme.com/lmeclear)  
[lmeclearing@lme.com](mailto:lmeclearing@lme.com)

# Other services

## Education

The LME provides an extensive global programme of training courses for the metal and financial industries. Our popular introductory courses delivered in partnership with Euromoney Training, provide the opportunity to learn how to effectively manage the impact of price volatility through the use of futures and options.

We also offer more advanced courses and can create bespoke training programmes.

**[lme.com/education](http://lme.com/education)**  
**[education@lme.com](mailto:education@lme.com)**

## Market Data

Pricing data can be accessed via the LME's network of vendors including LMElive, our own real-time price and data service. LMElive offers the opportunity to monitor price volatility with live or 30-minute delayed data and provides a comprehensive view of futures and options trading with easy access via your laptop, PC or mobile device. Subscribe for a four-week free trial at:

**[lmlive.com](http://lmlive.com)**  
**[customersupport@lmlive.com](mailto:customersupport@lmlive.com)**

## LMEwire – EMIR trade reporting made simple

LMEwire is our trade-reporting service that enables members to meet their regulatory requirements and assist with EMIR compliance. Powered by LME Clear, LMEwire is efficient, cost-effective and customised to the needs of the metals market.

**[lme.com/wire](http://lme.com/wire)**  
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