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FINAL NOTICE

To:	The London Metal Exchange (RIE)
Reference Number:	207387
Address:	10 Finsbury Square London EC2A 1AF UNITED KINGDOM
Date:	19 March 2025

1. ACTION

1.1 For the reasons given in this Final Notice, the Authority hereby imposes on the London Metal Exchange (LME) a financial penalty of £9,245,900 pursuant to section 312F of the Act.

1.2 The London Metal Exchange (LME) agreed to resolve this matter and qualified for a 30% (stage 1) discount under the Authority's executive settlement procedures. Were it not for this discount, the Authority would have imposed a financial penalty of £13,208,400 on the LME.

2. SUMMARY OF REASONS

2.1 The LME is one of the world's biggest commodities markets. It is used globally by both the metal industry and financial institutions, trading through LME Members, as a price formation venue for base metals. The Exchange's electronic trading platform, LMEselect, is open from 1.00am until 7.00pm each day, serving a global market.

2.2 LME's most liquid futures contract for base metals is the 3-month ("3M") contract (a contract which is physically settled by delivery of the metal in three months' time). Between Friday 4 and Tuesday 8 March 2022, LME's 3M nickel contract more than trebled in price. The extraordinary speed and extent of the price rise severely disrupted its market and threatened to push multiple LME Members into default.

2.3 The events of 7 and 8 March 2022 had a very significant adverse effect on the operation of the LME's market such that the orderliness of, and confidence in, that market was undermined. This – given the strategic position of the LME in the global physical metals market – also gave rise to a significant risk of adverse impact on the wider economy. The LME nickel market was suspended from 8.15am on 8 March to 8.00am on 16 March 2022 while the underlying causes of the market disorder were established and addressed. The LME's nickel market did not re-open in Asian trading hours until March 2023.

2.4 It was a key part of LME's role to ensure that its trading platform could cope with severe market stress and so comply with its regulatory obligations regarding the maintenance of an orderly market. Between 3 January 2018 and 8 March 2022 (the Relevant Period), the LME's policies, controls and training programme had not sufficiently catered for the risks to market orderliness presented by extreme volatility. The prevailing philosophy at the LME was that trading and price discovery should not be restricted even in times of extreme volatility, unless the market became disorderly. However, it failed to implement written policies or to train its front-line operational staff so as to ensure they recognised situations in which 'genuine' (i.e. intentional) trades indicated a disorderly market, and did not fully understand when it was necessary to escalate such a situation to senior decision makers.

2.5 Under MiFID 2 it was mandatory for any algorithmic trading platform (which includes LMEselect), to have automatic volatility control mechanisms in place to halt or constrain trading in order to mitigate the risk of market disruption and harm caused by sudden significant movements in price. Such movements can undermine the orderliness of the market. They can be caused by technical issues such as error trades or 'rogue' algorithms but can also be caused by unusual market conditions or trading behaviour such as an imbalance in supply and demand, false rumours, or a 'short squeeze', during which an upward movement in price is augmented by short position holders exiting their positions to cut losses.

2.6 LME's automatic volatility controls, introduced as part of its MiFID 2 implementation, were its dynamic and static 'price bands', also known in the industry as 'price

collars'. Their purpose was to mitigate the potential exposure of investors and market users to risks arising from extreme volatility in the market. LME designed and calibrated the width of its price bands to take account of a range of relevant factors, such as the liquidity of the instruments and the parameters used by other exchanges. In calibrating them it took into account the need to ensure that they would be wide enough to allow for genuine price discovery including in stressed market conditions.

2.7 However, in practice, the LME's focus when operating the price bands was narrower than this. It treated them as a control measure against error trades, other erroneous order submissions and/or rogue algorithms. The LME failed to articulate to staff responsible for operating the price bands (including when that message was most needed during the events of 7 and 8 March 2022) that the price bands formed part of its controls more broadly to ensure orderly trading under conditions of severe market stress, and that this included 'genuine' trades insofar as, in adverse conditions, such trades could cause sudden movements in price and undermine the orderliness of the market.

2.8 Under LME's processes, it was intended that the risk of market disorderliness be managed by a process of escalation to LME's senior management authorised to take steps such as suspension of the relevant market. LME's Trading Operations team ("TO Team") was the only team responsible for real-time monitoring of trading conditions and so the escalation process had to begin with that team. There was a lack of training or instruction to allow the TO Team to recognise signs of situations when volatility caused by intentional, non-erroneous, trades may have to be managed, and trading potentially constrained. As seven of LME's nineteen daily trading hours were managed overnight in Hong Kong, the risk of non-escalation during overnight trading hours was acute, even though senior managers remained available to be contacted by phone out of working hours.

2.9 There were also significant gaps in the LME's written policies and its arrangements for implementing the price bands during the Relevant Period. LME told the market nothing at all about its static price bands and they went almost unmentioned in its key internal operational manuals despite an explicit regulatory obligation on LME to set out and publish policies and arrangements relating to its volatility control mechanisms.

2.10 When the price bands appeared to be inhibiting movements in price resulting from 'genuine' trades, the TO Team would seek to override or disapply the relevant parameters of the price bands, and on some occasions resorted to suspending their

operation altogether. It had never consulted with LME's senior management before doing so, and the TO Team had never received specific training nor been instructed to escalate such a decision.

2.11 LME was correct to identify during the Relevant Period that a key role of automatic volatility control mechanisms – even if not their only role – was to deal with price disruption caused by a fat finger error or a rogue algorithm. However, given such phenomena could take the price well beyond its prescribed volatility limits in a few seconds, the ongoing manual monitoring by the TO team could not be fully effective in preventing any disruption. Therefore, when the price bands were suspended, there was an increased risk of those risks crystallising, as well as the risks from 'genuine' trades. In 2021, the TO Team explicitly flagged its practice of suspending the price bands during periods of high volatility – and the risks arising from error trades that resulted from it – in an internal incident report. There was an intention to introduce some enhancements in this area through the planned introduction of a new trading platform, but the date when they would be introduced was uncertain, and pending those changes, the practice continued.

2.12 In early 2022 the metal markets were volatile, and the price of the 3M nickel contract began to accelerate upwards from Friday 4 March. During the early hours of Monday, 7 March 2022, the upward movement became sufficiently extreme that LME's nickel static price band was triggered. This was the first time that the static band in any metal had ever actually constrained trading. The Hong Kong Trading Operations team responded by expanding the maximum width of nickel's static price band from $2,350 to $6,000, to keep pace with the rising market. This took the 3M nickel price band way beyond the tolerances originally envisioned when the price bands were designed and calibrated. By 7.16am that morning the escalation in price was highly concerning: since the market had opened at 1.00am the 3M nickel contract had increased by 28% from just under $30,000 to $37,000.

2.13 By 1.14pm on 7 March, the price of 3M nickel had reached $46,850. During that day, LME senior managers and committees discussed whether the market had already become disorderly. They decided that the market was not disorderly, at least not yet. They also considered whether to address the increasingly extreme conditions by setting an upper price limit for nickel or even suspending the nickel contract from trading altogether. On the basis of the information available to them, they decided to delay taking either step. None of the LME senior managers or committees questioned how the price could already have risen so far so quickly, if the price bands were functioning as intended.

2.14 LME Members and their clients were facing unprecedented margin calls driven almost exclusively by the escalating 3M nickel price: the total margin calls generated on Friday 4 March had been $3.5bn, a record, and the Monday morning call – which followed from overnight trading commencing at 1.00am that morning – had set another new record of $5.1bn. Several LME Members had been late meeting the Monday morning call, and one call was still outstanding at the end of the day. In mid-afternoon, an LME Board member referred to the state of the LME's metals markets as one of "total disarray".

2.15 By the time LMEselect closed at 6.59pm on 7 March, 3M nickel had reached $50,300, more than 65% up since trading had opened at 1.00am London time. LME's Trading Operations team in London had suspended the nickel price bands, then re-applied them, a number of times during the day to try to keep pace with the rising prices.

2.16 LME's senior managers understood by close of business that an increase in the nickel price, in such stressed conditions, could materially add to the risk of multiple LME Members defaulting on their margin calls when payment was next required at 9.00am the following morning, Tuesday 8 March. Multiple defaults by LME Members would, in turn, run a real risk of destabilising the LME's market more widely.

2.17 There was speculation within LME by some staff at a senior level that the escalating price of nickel must be related to short covering, on the basis that short position holders would be trying to limit their losses by buying up 3M contracts. The LME, at that stage, could not see certain positions in the OTC market that it later found were a material cause of the prices rises. LME had no way of knowing whether an upward price spiral would continue when the market re-opened. The possibility of further price rises was highlighted that evening by LME managers in emails and by LME Members who contacted LME to express their extreme concern.

2.18 Shortly after 6.00pm, LME announced that it had introduced a 'backwardation limit', a kind of price cap, and a deferred delivery mechanism on nickel and its other most heavily-traded metals. It did so to address the risk that, in the rising market, low stocks of nickel in LME warehouses might result in a 'delivery squeeze', in which market participants due to deliver nickel would be forced to default on their contracts, possibly triggering wider consequences including market disorder.

2.19 The backwardation limit would apply to LME's shortest-dated contracts only – not the 3M contract – and would not (and was not intended to) mitigate the risk of the 3M nickel price continuing to rise. If the nickel price did continue to rise, LME senior managers knew that they may have to suspend trading on the basis that the market

had become or was becoming disorderly. All of those senior managers were London based and off-duty overnight.

2.20 The Hong Kong TO team was not briefed on senior management's concerns about the escalating price or the pressure on margin calls. The team was aware of the overnight telephone escalation procedure, under which senior managers were available overnight to answer an emergency call and take decisions or escalate matters to LME executives if required. However, on 7 March the Hong Kong TO Team was not instructed to contact LME senior managers overnight in the event the price of 3M nickel continued to rise. The Hong Kong TO team would be LME's first line of defence during those early morning trading hours; no other LME staff would be on duty.

2.21 Once the LME's market reopened at 1.00am the price of 3M nickel began to climb. Despite expansion of the nickel price bands, attempted trades were still being rejected as too high. The Hong Kong TO team made further manual adjustments which did not prevent the price continuing to escalate. Standard email notifications of these price rises were sent to certain LME and LME Clear email addresses by the Hong Kong TO team, but none of those mailboxes were monitored overnight. By 4.49am the price had risen to $60,000, a 20% increase, on top of the 65% increase on 7 March.

2.22 The Hong Kong TO team was still receiving trade rejection alerts and was being contacted directly by traders asking that their higher-priced trades be allowed into the system. In those circumstances, the most important job of the Hong Kong TO team – in its own view and according to the instructions and training it had received – was ensuring that market participants could place 'genuine' trades at the prevailing market price without technical obstructions.

2.23 The Hong Kong TO team had made a number of adjustments to the price bands and resorted to suspending their operation altogether at around 4.49am. This left the nickel market without any automated protection at all against extreme volatility.

2.24 However, the Hong Kong TO team did not alert LME senior managers of the suspension of the price bands or to the extreme price movements that followed it. Nor had they been trained or instructed to do so, despite the fact that only those executives were empowered to make judgments on LME's behalf about the orderliness of the market and take vital discretionary decisions such as suspending the market.

2.25 In the first 55 minutes of price band suspension, to 5.44am, the price rose from $60,000 to $70,000. Between 5.44am and 6.08am, it rose from $70,000 to $101,365, an increase of 44% in 24 minutes. The price had now doubled since market close on 7 March. By 6.33am, the price of 3M nickel had fallen back to $80,010.

2.26 An LME board member had awoken at approximately 5.30am and seen the price movements via a third-party market data application on his mobile phone. The matter was actively discussed by senior management from 6.07am. At around 7.30am LME board members and other senior managers convened, and a decision was made to suspend the LME's nickel market. Had margin calls been made to LME Members based on the $80,000 figure, they would have totalled some $20bn and been likely to trigger multiple LME Member defaults.

2.27 The suspension of the LME's nickel market commenced at 8.15am on 8 March 2022. LME published a notice stating that it had taken this decision on "orderly market grounds". Later that day, LME published its further decision that all of the trades executed on or after 00.00 UK time on 8 March 2022 should be cancelled as the LME deemed them to have taken place in a disorderly market.

2.28 The operation of the price bands was suspended continuously for more than three hours from 4.49am to 8.15am. This meant that the LME's only automated volatility control mechanisms were of no effect during a time of extreme market conditions, and on the basis of a decision made by junior staff without any oversight from senior management.

2.29 Post event, the LME was unable for several months to provide accurate and complete information to the FCA in answer to important queries regarding the operation and calibration of the price bands on 7 and 8 March, and related decisions made by the TO Team. This was partly because the LME did not capture a reliable chronological record of its price band settings and the adjustments made during 7 and 8 March 2022. However, the LME did not tell the FCA for more than 2 months that its price bands had been suspended on 8 March, and this important omission was not attributable to its lack of detailed records. The FCA does not suggest that the LME intended deliberately to misinform or to mislead the FCA.

2.30 At no point on the morning of 8 March did LME senior managers dealing with the crisis realise that the price bands had been suspended, despite the length of the suspension, and the speed of the large price rise observed in a short period of time, which exceeded any price rise that could have resulted in that time frame had the

price bands been operating as originally designed and calibrated. LME senior managers became aware of the suspension of the price bands on or around 9 March.

2.31 Analysis carried out after the event showed that very large positions held mainly on the Over the Counter ("OTC") market were highly material to the extraordinary speed and extent of the price rises at the height of the nickel market events. As the OTC trades took place outside the LME's market, the LME did not have visibility of these positions at the time. This interaction between off-market OTC trades and the LME market was the largest driver of price volatility between 4 and 8 March 2022. Since 8 March 2022, both the LME and the FCA have taken steps to mitigate the risk of OTC positions causing such impacts in the future. The LME has introduced weekly OTC position reporting via its Rulebook, providing it with visibility into sizeable OTC positions. The FCA has issued PS 25/1, which recognises and addresses the risks which can arise to exchange contracts from large OTC positions.

2.32 The LME further commissioned an Independent Review of the events and undertook in advance to publish the results, which were published in January 2023. Based on its recommendations, the LME announced an Action Plan on 30 March 2023 including improvements to daily price limit calibration methodology and enhanced real-time monitoring. Taken together with the FCA's announced reforms in PS 25/1, these deliver a materially enhanced set of mitigants to disorderly conditions on LME markets.

2.33 The Authority hereby imposes on LME a financial penalty of £9,245,900 pursuant to section 312F of the Act.

3. DEFINITIONS

3.1 The definitions below are used in this Notice:

"the Act" means the Financial Services and Markets Act 2000

"algorithmic trading" – trading on an electronic exchange where a computer algorithm automatically determines individual parameters of orders such as whether to initiate the order, the timing, price or quantity of the order for how to manage the order after its submission, and there is limited or no human intervention (other than certain order routing and other systems).

"the Authority" – the Financial Conduct Authority or FCA.

"Backwardation" – a futures market in which the near-dated contracts are more expensive than the far-dated ones.

"Carry trade" – future contracts for two different prompt dates being traded against each other.

"Cash Contract" – the LME's shortest-dated contract for physical delivery of the relevant metal in 2 days' time.

"Circuit breaker" – either a term used to specify trade halts as a particular way of dealing with volatile markets, or – as used by ESMA – a generic term for any mechanism to manage volatility, including both trade halts and price bands.

"Closing Price" – LME Closing Prices are prices discovered through LMEselect trading activity that takes place during specific "pricing periods" towards the end of the trading day. For Nickel this was calculated in the pricing window between 16:15:00 – 16:19:59.

"Contango" – a futures market in which the far-dated contracts are more expensive than the near-dated ones.

"Derivative" – financial contracts between two or more parties deriving its value from an underlying asset, group of assets or benchmark.

"Error trade" – a trade deemed by LME to have been made in error, taking into account market conditions at the time.

"ESMA" – the European Securities and Markets Authority.

"Fat finger error" – pressing the wrong alphabetical or numerical key when using a computer to input data.

"Flash crash" – a sudden and dramatic drop in price in an electronic market, with no obvious cause.

"Inter-office market" – LME's market for broking trades by telephone or other electronic means than LMEselect.

"LME Clear" – LME's clearing house, part of the LME group, and the central counterparty to all trades on LME's exchange.

"LME Clear Member" – a legal person that is permitted by LME Clear to clear trades on the LME's market.

"LME Member" – a legal person which has relevant permissions from LME to trade on LME's market or to route its clients' trades to that market.

"LMEselect" – LME's algorithmic trading platform.

"LME Smart" – LME's electronic trade matching system.

"Margin call" – a sum of money required by LME Clear from an LME Clear Member, calculated by reference to that Member's open positions, to manage the risk of that Member's potential default.

"MiFID 2" – Direction 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU.

"OTC contract" – a futures contract directly between two market participants, rather than through a central counterparty, usually with bespoke terms.

"Outright trade" – the outright purchase of a futures contract.

"Overnight" or "Asian hours" trading – trading on LME's markets between 1.00am and 7.00am London time.

"Price Band" – a price channel within which trades are admitted onto an exchange, also sometimes known as a "price collar" or "interval price limit".

"Prompt date" – date on which an LME futures contract is due for settlement.

"Relevant period" – 3 January 2018 to 08:15am on 8 March 2022.

"Short-covering" – buying a commodity to exit a short position in that commodity.

"Spot price" – the cash price of a commodity for immediate settlement.

The "Ring" – LME's open outcry physical trading venue, located in London.

"Rogue algorithm" – a trading algorithm which is not operating as intended.

"SHFE" – the Shanghai Futures Exchange.

"Short squeeze" – a market phenomenon whereby a rising market forces short position holders to try to exit their short positions to avoid losses or higher margin calls and this forces prices still higher, creating a spiral and putting additional pressure on those short position holders.

"Three month" or "3M" contract – the LME's most liquid physically-settled base metal contract, for settlement (i.e., physical delivery of the metal specified in the contract) in 3 months.

"T+1" – a transaction date plus one day.

4. FACTS AND MATTERS

4.1 The London Metal Exchange ("LME" or "the exchange") provides the world's largest market in standardised futures contracts on industrial metals. It describes itself as the "world centre" for the trading of industrial metals and as "the world's price formation venue" for non-ferrous metals.

4.2 Market participants can route orders to the LME's market through an LME Member. LME offers both physically settled and cash settled futures contracts in base metals. The physically settled contracts vary in length from 2 days to 15 months and can be either 'outrights' or 'carries'. On settlement of an 'outright' trade, one party delivers the metal and the other pays cash on delivery. In a 'carry' trade, two contracts with different prompt dates are traded against each other.

4.3 LME Members who hold forward positions are required by LME Clear to post initial margin, which is a calculation of the risk inherent to a position, additional margin to capture non-standard risks, and variation margin which is calculated daily. In the event of intra-day volatility, LME Clear may make additional intra-day margin calls which LME Members have one hour to meet.

4.4 The most liquid futures contract traded on the LME is the 3-month futures contract ("the 3M contract"). The LME publishes its prices in its 3M contract for base metals and describes those prices in its literature as a "global reference" for physical contracts.

4.5 Users of the LME's market include traders, producers and fabricators of metals, and merchants and distributors of metals, as well as financial players such as investment funds and proprietary traders. The possibility of delivery at the end of a physically settled LME futures contract is designed to encourage price convergence between the derivative and the underlying metal and enhance the utility of the futures contract as a tool for managing risk. Producers and consumers of base metals trade futures contracts predominantly for the purpose of hedging their production or raw materials costs.

4.6 Trades on the exchange may be agreed by LME Members on three 'venues': in a physical 'open outcry' venue called the 'Ring', on the electronic trading platform LMEselect, or by the 'inter-office' market whereby indicative quotes from Members are distributed via a vendor network and agreed by telephone. The Ring is open from 11.40am to 5.00pm. Trading on the inter-office market can take place at any

time. The 5.00pm price is published as the 'Closing Price' and used by LME Clear for margining purposes, and by LME Members for risk management, but trading continues on LMEselect, which is open from 1.00am to 7.00pm. Approximately 95% of trading in the 3M contract takes place on LMEselect. In the Relevant Period, LMEselect was the primary source of LME's Closing Price and was fundamental to price formation.

4.7 All trades are cleared by the LME's appointed clearing house, LME Clear. In the event of a clearing Member failing to post margin on time, LME Clear will consider whether to declare that Member formally in default and whether it is necessary for LME Clear to step in and take on the defaulting Member's risk positions.

4.8 Futures traded on the LME are based on set terms including lot size, settlement date and margin requirements. Every metal traded on the LME must conform to strict specifications regarding quality, lot size and shape. Separately and off-exchange, LME Members may also provide bespoke 'over the counter' (OTC) forward contracts for their clients which differ from the set terms of LME futures contacts by having different lot sizes, settlement dates and margin requirements. Clients or Members may also use the LME to hedge their exposure on other major global commodities exchanges with different requirements and specifications such as the Shanghai Futures Exchange ("SHFE").

Monitoring of LMEselect

4.9 During the Relevant Period, trading on LMEselect was monitored on a day-to-day basis by the LME's Trading Operations team ("TO Team"). The TO Team in London consisted of about 20 people, including managers and senior managers. The systems and controls applied by the TO Team to trading activity were similar across all metals and all contracts. Day-to-day management of inter-office trading was carried out separately by the LME's Post Trade team.

4.10 The TO Team was responsible for live monitoring of Members' order and trade activity in the system to ensure an orderly market that aligned with internal and external rules and regulations. Only the TO Team monitored the LME's markets in real time; the LME's trade surveillance team analysed order and trade activity to detect market abuse or other behaviour not conducive to the integrity of the market, but on a T+1 basis.

4.11 The TO Team monitored the relevant IT systems and carried out system checks prior to market opening at 1.00am to ensure Members' system connectivity and access. During trading hours the team would provide live telephone and email

support to customers, if for example a trader was encountering difficulties in executing a trade. The TO Team would monitor the volume of orders, including any breaches or alerts in relation to capacity limits or price band thresholds.

4.12 The TO Team had a '3M Price Movement Monitor' to flag real-time percentage changes to the live 3M price against the previous night's valuation. In the event of a price move in an outright contract of 3% or more, the TO team received a system alert, which it would act on by sending an email to LME Clear and the LME's Post Trade team, to ensure that the Post Trade team was aware of any pricing adjustments it needed to make in respect of trades brokered by telephone. This was also intended to ensure that LME Clear was aware of any required changes to variation or additional margin. The email would also be copied to the Market Surveillance teams for analysis and further investigation on a T+1 basis as required.

Overnight monitoring of LMEselect

4.13 From 1.00am to 7.30am London time, monitoring of LMEselect was carried out by Trading Operations staff in Hong Kong, usually a team of two, but sometimes a single individual if the other team member was on leave. An IT team worked the overnight shift to deal with purely technical issues. London-based LME staff would generally be online after 7.00am. Arrangements were put in place if one individual was on leave/absent to ensure that the London-based TO Team were aware and remained alert to any additional support that may be required by the individual in Hong Kong.

4.14 After 5.00pm each evening, the London TO team would typically send a handover briefing to the Hong Kong TO team, by email, telephone and/or instant message. This would include any details the London TO team considered relevant for review prior to the market re-opening at 1.00am (London time) the next morning.

4.15 The Hong Kong TO team had telephone numbers for senior Trading Operations managers, all of whom were based in the UK. These managers were available overnight to answer an emergency call and take decisions or escalate matters to LME and LME Clear executives if required. Only limited guidance existed regarding the circumstances in which such calls should be made; an LME manager has explained to the FCA that management did not want to be "prescriptive" as they wished to allow experienced staff members to exercise their judgement. The LME Group Incident Escalation and Reporting Framework and Incident Management Process related solely to IT incident management, not more general crisis management. It was silent on how to approach disruption in the market that did

not involve a system outage or other technical operational issue. The overwhelming focus was business and market continuity.

4.16 LME's 'Trade Halt' procedure specified that if a member of the TO Team, or any other relevant staff member, identified that a 'situation has developed, or has begun to develop, that could warrant the need for a trade halt' the staff member must immediately escalate it to a member of the Trading Operations Management team.

4.17 The Trading Operations team did not receive specific training on the nature of a disorderly market or how to recognise it. In particular, they were not trained to recognise that disorderliness could arise in a market that was, from the technical standpoint, functioning properly. They were trained to monitor the market for signs of technical malfunction or dysfunction, and they also received periodic training on the nature of market abuse, which could lead to disorderliness, but were never trained or instructed to see extreme price volatility in itself as a sign of disorder requiring urgent escalation for decision and remedial action. During the Relevant Period, the role of the TO team – with respect to disorderliness – was thus reduced to monitoring for error trades, 'rogue' algorithms or other technical factors impeding proper price discovery. Outside of such factors, the TO Team regarded its role as ensuring price discovery.

The dynamic and static price bands

4.18 MiFID 2 made it mandatory, from 3 January 2018, for electronic trading venues to have automatic mechanisms to manage volatility, such that trading would be halted or constrained if there was significant price movement in a financial instrument.

4.19 As ESMA explained in a 2016 document, "within modern markets, speed and interconnectivity appear to represent a fertile ground for price overreactions, extraordinary volatility and sudden price drops which adversely affect market orderliness and confidence". IOSCO stated in 2018 that such mechanisms "seek to minimise market disruption caused by trigger events such as (a) clearly erroneous orders... (b) large aggressive orders that create imbalances between liquidity providers and liquidity takers... [and] (c) positive feedback loops that may occur when large price movements initiate further buying or selling in the same direction...".

4.20 Such mechanisms could take more than one form: automated trading halts, which responded to a period of excessive volatility by halting trading for a period of time, or 'price bands', also known as 'price collars', which restricted trading to within set price thresholds in order to slow down excessive market moves. The latter type

reject or constrain certain orders rather than halt trading, and allow trading and price formation to continue. Price bands could be anchored to 'static' reference prices, such as (for example) the closing price of the previous day's trading session, or 'dynamic' prices, such as the price of the most recent transaction.

4.21 ESMA referred to both types of volatility control mechanism, trading halts and price bands, as types of "circuit breakers". In the finalised guidance, it stated that circuit breakers (of either type) should be calibrated according to a "pre-defined, statistically supported methodology" which takes into account various factors including the "nature of the financial instrument" and its "liquidity profile and quotation level". Trading venues "should in particular have tighter parameters for instruments considered to be liquid". The instrument's "volatility profile" should also be taken into account. Trading venues deploying price bands should use both static and dynamic price bands unless the trading venue "can demonstrate... that volatility is adequately managed with only static or dynamic thresholds".

4.22 LME introduced dynamic and static price bands in 2017 as part of its MiFID 2 implementation, and announced its dynamic price bands to the market as its mechanism to "prevent orders being submitted at prices that do not reflect prevailing market prices". LME did not announce the introduction of the static bands.

4.23 The dynamic price bands operated in respect of both "carry trades", which move a given exposure between different prompt dates, and "outright trades", which create a new (long or short) exposure. They created a price channel around a reference price, the 'anchor price', outside of which, orders would not be accepted. The reference price and price channel adjusted incrementally if required by each new order. This prevented large gaps between consecutive orders.

4.24 At the centre of each price band was a central reference price, referred to as the "anchor reference price", which could be manually adjusted up or down by the TO team. Depending on market conditions, the TO team could also switch the dynamic price bands for outright trades on LMEselect between three parameters, 'normal', 'wide' and 'wider'. The 'wide' and 'wider' parameters were designed for periods of higher volatility. In deciding between the 'normal', 'wide' and 'wider' options, the TO Team would rely upon movements in the 3M contract as the most liquid contract and use that to drive LME's updates to the rest of the price curve.

4.25 LME decided to fix its price band settings by reference to its 'No Cancellation Ranges' (NCRs). These were USD thresholds within which LME Members were not permitted to cancel error trades. LME determined the width of the NCRs based on its own market analysis. In assessing potential error trades, LME would take into account

a range of factors relating to market conditions, including volatility, economic data and news stories.

4.26 During the Relevant Period, the NCR settings for nickel were most recently changed in March 2019, and most recently reviewed in February 2021. LME's price band procedures specified that the price band settings were to be "calculated from the NCRs as per the following": the USD width of the 'normal' setting of the dynamic price band was the same as the relevant NCR, the 'wide' setting 1.5 times the NCR, and the 'wider' setting 2 times the NCR.

4.27 This fixed relationship with the NCRs therefore appears to have constituted LME's "pre-determined... methodology" for calibrating its price bands. However, in practice, the TO team altered these parameters, whether or not the NCRs had altered, if they considered this to be the most practicable option in the prevailing market conditions.

The static price bands

4.28 The static price bands operated in respect of outright trades only. If the upper or lower limit of a static price band was hit, bids higher than the upper band, or offers lower than the lower band, would be prevented from entering the market. LME's procedure manual explained that this protected the market "from price spikes caused by multiple limit or triggered stop limit orders moving the market in one direction". Static price bands allowed price formation to continue in periods of volatility, by allowing trading to continue within the band, "whilst preventing further movements beyond the limit values".

4.29 The static price bands, like the dynamic bands, had 'normal', 'wide' and 'wider' settings. LME has informed the Authority that, when it was designing the price bands, it researched arrangements at other exchanges. Based on that research, at the outset and throughout the Relevant Period, LME set the specific USD values for the static bands in a 5:1 ratio relative to the USD values of the dynamic bands (which in turn were fixed relevant to the NCRs). This was to ensure the static bands would not restrict "genuine" price discovery.

4.30 References to the static bands in both LME's internal procedures and its public-facing documents during the Relevant Period were extremely limited:

4.31.1 Until March 2021, references to the static bands in the LME's price band procedure manual were so minimal that the purpose, functionality and even existence of the static bands were unclear.

4.31.2 LME never, during the Relevant Period, informed the market that it had introduced static bands, or published any details setting out how they worked.

4.31.3 The parameters of the static bands, including the 5:1 ratio, were nowhere set out in LME's documents.

4.31.4 LME's Compliance Monitoring Programme (CMP) review into Trading Operations in January 2019 and its MiFID 2 Self-Assessment in November 2019 stated only that the LME used dynamic price bands as its mechanism to halt or constrain trading, and did not mention the static bands.

4.31.5 In January 2022, LME sent a notification to the FCA of its price band parameters, specifying the parameters of its dynamic price bands, but not mentioning the static price bands or their parameters.

4.31 The dynamic price bands were designed to work in tandem with the static price bands. The dynamic price bands were primarily a fat finger error or rogue algorithm-related control and the wider static price bands were designed to address a wider range of market scenarios causing sudden significant movements in price. As static bands were set more widely than dynamic price bands owing to their intended function, it was understandable that the TO Team's more detailed day-to-day focus was on dynamic price bands. However, at the LME this resulted in a lack of focus on the distinctive function of the static price bands, which were set so wide that until 7 March 2022 they had never been triggered on any metal.

Suspension of the dynamic and static price bands

4.32 The static and dynamic price bands could also be temporarily disabled, so that they would no longer function in any way to constrain trading. Within Trading Operations this was referred to as "suspending" the price bands.

4.33 Trading Operations staff explained to the FCA that suspending the price bands was a practice that had developed within the TO Team over several years preceding the nickel market events and was used in periods of significant volatility to allow genuine trades into the system. An incident report of October 2021 had noted that suspension of the price bands had been applied at certain times since March 2021 during periods of volatility in the tin and copper markets as an "interim measure" because at times it could be "operationally unmanageable to manually react to sharp market moves and update [the price] bands accordingly".

4.34 The incident report noted that the practice gave rise to both "operational risk" and "reputational risk" to LME. The operational risk identified by the TO team was that suspending and reapplying the price bands intra-day, during live trading, meant that LME's market was not protected against error trades. While the mechanisms were disabled, phenomena such as 'fat finger errors' could enter trades at other than prevailing prices or rogue algorithms could potentially ladder the price of the instrument way beyond its prescribed volatility limits within a few seconds, disrupting the market or undermining its orderliness.

4.35 The incident report does not specify the nature of the "reputational risk" to which price band suspension gave rise. An additional operational risk of price band suspension – not identified by the TO Team at that time – was that for the duration of the suspension the market lacked protection from sudden significant movements in price not caused by error trades, but by (for example) multiple limit orders being triggered, moving the market sharply in one direction, market rumours, misinformation, or a short squeeze. This risk was accentuated by the fact that, due to technical constraints, it was impossible for the TO team to suspend the dynamic bands without also suspending the static bands.

4.36 At no point during the Relevant Period did LME have any written policy or procedure endorsing or even mentioning its practice of suspending the price bands. No written criteria or guidance existed setting out whether it was appropriate to do it or the level of authorisation required.

4.37 The LME's documents specifying how it would deal with unusual trading conditions, insofar as they dealt with the price bands at all, only mentioned the dynamic bands and only suggested that they could be widened, never suspended. For example, LME's "Fast Market Policy" (which stipulated what happens when the LME declares a 'Fast Market', which it did not declare in March 2022) specified that during "significant periods of volatility" (including trading on the Ring) "Dynamic Price Banding limits will be set to the next widest banding. For example, if the current limits are set to 'Normal' then the banding will be set to 'Wide'." Nothing in this or any other LME Policy indicated when (if ever) it was acceptable to suspend the price bands altogether.

The Third-Party Compliance Review

4.38 In August 2020, LME commissioned an independent third-party review of its MiFID 2 compliance to "review the compliance of the LME's current arrangements and provide findings and recommendations for any areas in which weaknesses were identified". The review's broad findings were that implementation by the LME of its

MiFID 2 obligations was systematic and generally robust. In January 2021, the LME received draft findings from the Third Party, including a finding on "Effective Mechanisms to Manage Volatility".

4.39 This finding stated that "LME has in place trade controls to manage volatility in the form of price bands. These are designed to limit price volatility and ensure that transactions take place at 'fair' prices. However, in a situation of increased volatility, such price bands do not halt trading and would have a limited constraining effect on prices." It recommended that the LME "consider designing an appropriate mechanism for managing significant price volatility as part of the New Trading Platform project. Such [a] mechanism should either halt trading altogether or constrain transaction execution prices for a short period of time. This would, for example, allow the market to digest the available information that may be behind the price movement before ongoing price formation resumes." The Third Party classed the finding as "significant", as they considered that a regulatory requirement of RTS 7 was being breached, although they did not consider the breach as "fundamental". The Third Party also noted that "Whilst a trading halt is not strictly required by MiFID II, the LME should have in place a procedure that actively constrains trading when significant price volatility is observed".

4.40 LME explained that the Third Party had reached this conclusion because it was unaware of the existence or purpose of the static price bands. This would not have been surprising, given the lack of references to it in LME's own publications, internal compliance reports and operational procedures. The LME's view was that the effect of the static bands, if they were hit, would have been to constrain transaction execution prices for a short period of time and therefore met the regulatory requirements. The LME Management response to the finding in the report explained that, "In addition to dynamic price bands, LMEselect functionality incorporates "static" price bands. These are applied to outright orders and prevent large moves within a given period of time. If the static band limits are hit, the market will go into a hold state preventing bids higher than the upper band, or offers lower than the lower band, from being entered into the market until the anchor price has been reset and the price band limits recalculated, through either manual intervention or automatically with the expiry of the refresh time interval." An LME executive told the Authority in interview that they considered at the time that, had the Third Party understood the purpose of the static bands, it would not have made the finding it did, because the static bands were designed to constrain trading in the way described.

4.41 As a result of receiving the draft finding, LME noted that there were no details of the static bands in LME's internal procedure manual, and a short additional section was added in March 2021. LME's compliance function also noted that no details of the static bands were published on the LME's website, despite this being a regulatory requirement. They decided that this was a relatively low priority and could be rectified in the coming weeks. However, in the event, nothing further was done to publish details of the static bands during the remaining year of the Relevant Period.

4.42 In its annual self-assessment of MiFID 2 compliance, LME made materially identical comments to those quoted above which it made in response to the finding in the Third Party report. These comments provided a clear assurance that LME had the static price bands in place to constrain trading in times of significant price volatility during trading hours. However, the comments did not address, and took no account of, the TO Team's practice of suspending the operation of the price bands during periods of increased volatility.

4.43 LME recognised that a comprehensive review of its governance arrangements was required in the wake of the Third Party Report. In respect of the finding relating to its mechanisms to manage volatility, LME acknowledged in June 2021 that "enhancements [to the static band] could be made to minimise the risk of a disorderly market when prices are volatile, and the LME will undertake work in the remainder of this year to... assess the appropriate level of the thresholds." It planned to "investigate further in order to assess (a) the potential effectiveness of the static band functionality as they currently stand with adjustment to the thresholds and (b) the nature of any other enhancements that may be needed."

4.44 The team engaged on this project at LME was considering whether the width of the static price bands should be reduced and/or the frequency of their refresh rates increased. That would mean that their constraints on price, to mitigate the effects of excessive volatility, would be tighter. Yet, the practice was ongoing in the TO team at the same time of suspending the operation of the price bands altogether during periods of volatility.

February to March 2022

4.45 Nickel is the third most traded base metal on the LME, by volume, after copper and aluminium. It is used in a range of industrial applications, including the manufacture of car batteries. The lot size of a 3M LME nickel contract is 6 metric tonnes and LME grade nickel must be of at least 99.8% purity.

4.46 During January and February of 2022, the price of LME nickel was volatile. Stocks of nickel in LME's warehouses were unusually low. On 14 February, it was reported that the 'spot' price of nickel had just reached its highest-ever level relative to the LME 3M contract. Russia is a significant source of nickel, aluminium and zinc. On 22 February, Russia invaded Ukraine, and on 28 February, sanctions against Russia were announced by the European Union and the USA, including sanctions against its Ministry of Finance and Central Bank. The prices of some commodities including nickel and aluminium climbed following this news.

4.47 Between 24 February and 3 March, the price of LME 3M nickel increased by 10.6%. It then began to escalate sharply by comparison to other metals for which Russia was a significant source: On 4 March, LME 3M nickel increased in price by 7.4%, whereas the LME price of aluminium increased by 0.2% and zinc by 1.3%.

4.48 On Sunday 6 March, the US Secretary of State stated that the US government and its European allies were considering imposing an embargo on Russian oil "while making sure that there is still an appropriate supply of oil on world markets". Although the prospect of imposing a similar embargo on Russian produced industrial metals was not mentioned, this was one of the first explicit indications that sanctions or embargoes may be placed on Russian-sourced commodities, which could affect their supply and therefore their price.

4.49 On Monday 7 March, the LME's market opened as usual at 1.00am. Prior to this, the Hong Kong TO team had re-set the anchor reference price for 3M nickel as they had noted price band alerts suggesting traders were attempting to trade at higher prices. Almost immediately after opening, the price of 3M nickel began to move up significantly.

4.50 At 1.34am, as per its standard procedure, the Hong Kong TO team sent an email alert to the Post Trade team LME Clear Market Risk, the Market Surveillance team and the Trading Operations Group, none of whom would be working until London hours, "notifying you that nickel... 3M price has moved more than 10% away from the previous closing price".

4.51 The static band's 'wider' setting of $2350 was 5 times the dynamic band setting of $470, in line with LME's (unwritten) procedure designed to ensure that it was wide enough not to impact on genuine price discovery. The static price band was set so wide that the Trading Operations team had never before known the static band to be 'hit', so as to constrain prices, but it was hit now as the 3M nickel price increased exceptionally quickly. In an attempt to accommodate this, between approximately 1.47am and sometime after 2.04am, the Hong Kong TO team increased the size of

the 'wider' static band to $2,550, $3,000, $3,500, and finally $6,000. Now, instead of being 5 times as wide as the dynamic band figure, it was 13 times as wide.

4.52 By 7.16am, the LME's 3M nickel price had increased by almost 28% to $37,000 per tonne. At 7.36am LME Clear Manager A noted that the most recent point of comparison for such a move in the LME 3M nickel price was a 26% increase in 1988, more than 30 years previously. At 7.45am, LME Manager A sent an email to other managers stating that a "28% [increase] for a liquid commodity contract is extraordinary and it's got the potential to get out of control if we don't act proactively". Such proactive steps, to mitigate this price volatility, might have included the introduction of a hard upper price limit on the 3M contract, re-calibrating the price bands, or suspending the nickel market.

4.53 The Shanghai Futures Exchange, or SHFE, is a derivatives exchange that provides market participants access to trade a range of metals. SHFE trades a liquid physically-settled nickel contract. By the early hours of 7 March this had increased by 12%, triggering SHFE's 'circuit breaker', so that trading in that contract on SHFE was suspended. The Hong Kong TO team asked, during the course of its handover to the London TO Team, "Do we consider [using a] circuit breaker in this kind of big move?", using the term 'circuit breaker' to mean a pause in the market, rather than a mechanism to slow it such as price bands. The London TO team responded: "we don't do a circuit breaker at the LME I believe... that's another unique part of our exchange".

4.54 The Hong Kong TO team asked Trading Operations management in London whether it would be "reasonable" to suspend the 3M outright price bands in these circumstances. London TO responded, "yes I would say so, we need to allow members to trade and our systems don't update quick[ly] enough to allow that". The Hong Kong team said that they were "aware that some prices could be crazily high" and as they were not "sure if it is 'error order'" they were "hesita[nt] to suspend 3M". London TO team suggested that, if the band was suspended, "we will just have to have all eyes on the screen when everyone is in the office on our side, to monitor no errors occur". Slightly later, London TO confirmed to Hong Kong TO that "suspending [the] 3M outright nickel [price band]" would be "fine".

4.55 At 9.00am on 7 March, LME Clear's call for additional variation margin on the 3M nickel contract amounted to $5.1bn. Such figures were unprecedented, and LME Members had already paid additional variation margin of $3.5bn on 4 March. LME Members contacted the LME by telephone to express alarm about their ability to meet margin calls. One suggested that the LME should consider adding a "price

limit" to avoid a "margin calling spiral" in which rising prices force short position holders to liquidate, pushing prices and margin calls still higher and forcing further liquidation in turn. This phenomenon would be a particularly serious instance of a 'short squeeze', with obvious dangers to the orderliness of the market.

4.56 Several LME Members were initially unable to pay the additional margin required of them by 9.00am on the morning of 7 March. All but one made good the shortfall later that morning. LME Clear's Default Management Committee (DMC) convened at 11.15am to decide whether or not to put the remaining LME Member into formal default. It decided not to, as it diagnosed the failure as a temporary liquidity problem which could be remedied at the next round of margin calls.

4.57 Although the DMC was an LME Clear committee, LME senior managers were present at the meeting. One, LME Board Member A, explained to the Committee that "four or five" LME Members had expressed concern about intra-day calls if the price of nickel continued to rise and had "suggested the [LME's] Special Committee convene to consider adding a price limit or circuit breakers".

4.58 At 10.23am, a member of the LME's Market Surveillance team sent an email arranging for the LME's Special Committee to be urgently convened later that day "in light of the price volatility in various metals over the past week, and especially this morning." LME senior managers were of the view that the possibility of sanctions against Russia was driving up the 3M price.

4.59 At 12.03pm, the LME requested a "reasonably urgent" call with the FCA in the next 30 minutes as "about member nickel positions". It took place at approximately 12.35pm. The LME stated that some Members had missed margin calls and others were encountering difficulties, and that the Special Committee would be discussing potential mitigating measures later that afternoon.

4.60 By this time the price of 3M nickel was rising and dipping rapidly. At 1.14pm, it reached $46,850, an increase of 51.7% since the market opened 12 hours earlier. Between 1.14pm and 1.37pm, it dipped back to $40,850, a drop of almost 13% in only 23 minutes. This level of volatility resulted in significant operational difficulties in the margin calling process. In some cases intra-day margin calls by LME Clear on LME Members were out of date by the time they fell due for payment one hour later. LME and LME Clear managers became concerned that LME may end up retaining more margin than it actually needed in circumstances where Members were struggling to find funding.

4.61 At 1.25pm, LME Clear Manager A emailed LME and LME Clear managers, expressing their concern "that our [intra-day] call process is going to add to the market stress. We have called $7bn already today and nickel has just moved up another 10%. I would propose we halt, knowing we have covered a large percentage of the exposure and it will get rolled into the [end of day] process tonight". LME Board Member B responded "Sounds sensible but worth a quick discussion... With Nickel now up over 60% there is a question of how orderly the mkt is and whether we suspend but the danger is, as per our conversation earlier, are you then just postponing an even bigger move when we open".

4.62 None of the managers questioned how the price could have risen by 60%, bringing the orderliness of the market into question, if the static price bands were functioning as intended.

4.63 LME Clear had suspended all intra-day margin calls by 2.00pm. By then, it had called more than $7.4bn in additional margin on the 3M nickel contract that day. LME Board Member C, in the course of an email update to HM Treasury at 2.16pm, described the "metals markets" as being in "total disarray", referring to the extreme volatility and risk of LME Member defaults given the serious difficulties they were encountering in meeting margin calls.

4.64 In mid-afternoon, yet another sharp climb in the 3M nickel price began. At 3.48pm, LME Clear Manager A sent another email to senior groups comprising senior LME and LME Clear individuals stating that the market, having fallen back to "around 40% up on the day", had had "another bounce and a new price high... of $47,875 (+65.55%)". This was more than double the biggest single day increase in the nickel contract since 1988.

The Special Committee meeting at 4pm on 7 March

4.65 The Special Committee is a sub-committee of the LME Board and was comprised of non-executive individuals from both inside and outside the LME with specialist market knowledge. It had executive power to intervene in undesirable market situations.

4.66 On 7 March 2022 the Special Committee had been called at short notice and as a result no comprehensive briefing had been produced. Committee members were provided in advance of the meeting with a table of price movements on Friday 4 March and informed of two key agenda points.

4.66.1 The first was notified to Committee members by an email containing the following: "In light of the price volatility in various metals over the past week, and especially this morning, we need to convene the Special Committee today to discuss potentially implementing measures similar to Copper in the other physically settled base metal contracts." This referred to a possible introduction of a backwardation limit and deferred delivery mechanism for physically settled base metal contracts. In market parlance, a market in which the short-dated contracts are more expensive than the long-dated contracts was referred to as a market 'in backwardation'. The possibility of such measures, and a draft text, had been shared with and discussed with the Special Committee earlier that day. As LME held relatively low inventory of nickel in its warehouses, and there was a threat to nickel supply from sanctions on Russia, LME was concerned that its nickel price curve might be distorted by a 'delivery squeeze' in which market participants holding maturing, physically-settled contracts would not be able to access sufficient short-term supplies. This would cause the price on its shortest-dated nickel contracts to shoot up. The 'backwardation limit' would be, in effect, a price cap on those shortest-dated contracts, to control this risk. It would also mitigate the risk of market participants defaulting, which could have knock-on effects for market orderliness.

4.66.2 The second was noted by LME Board Member B who described to as follows to LME Market Surveillance colleagues: "a second agenda point [for the Special Committee] – circuit breakers – some members have asked us to put in place a circuit breaker – i.e. if the price moves a certain % suspend trading. We don't feel that this is the right thing though because as soon as you unsuspend you get the pent up volatility but want to have the conversation with the [Special Committee]".

4.67 The minutes of the Special Committee meeting begin with an update on 'market developments' from LME Executives in which it was noted 3M nickel was now up 65% from Friday's close (having been up 31% when the meeting was called just a few hours earlier). The minute notes that "all physically settled markets had been impacted and the volatility observed was unprecedented" and that "the volatility in the market was considered to be largely due to supply concerns following the sanctions that had been imposed on Russia". Russia is a major nickel producer and, with nickel stocks already at historically low levels, the LME and members of the Special Committee were concerned that the supply of nickel would be further reduced if Russia was sanctioned.

4.68 The Committee endorsed a backwardation limit of 1% of the previous day's official price and a deferred delivery mechanism for all such contracts, "to ensure that an orderly market was maintained". The mechanism for deferred delivery would help the backwardation limit to mitigate the risk of a delivery squeeze. LME managers were concerned that the comments by the US Secretary of State might create a backwardated market and a delivery squeeze if the high prices proved contagious to LME's shortest-dated 'cash' contract for settlement in two days. LME had encountered this kind of market distortion before and was keen to guard against it.

4.69 However, on the afternoon of 7 March 2022, the nickel market was not in backwardation but its opposite, known in market parlance as 'contango'; it was the 3M contract that was spiking, and had become much more expensive than the shorter-dated contracts. A backwardation limit and deferred delivery mechanism would do nothing to correct that and nothing to dampen whatever was causing the 3M contract to increase.

4.70 The Committee also considered whether to address the extreme volatility in 3M nickel by an upper price limit. This would have suspended trading once the price had risen by a certain percentage relative to the opening price. However, attendees and members considered that introducing a price limit would potentially limit the ability of the market to react to a genuine price move and introducing a cap to protect LME Members from having to meet large margin calls may have unintended consequences. They were also concerned that there would be technical difficulties implementing such a price limit. Ultimately, the view that prevailed among members was that when the market re-opened, the price was more likely to come down rather than continue to go up; LME Board Member B told the FCA in interview that, at the time, he was confident that the market would not continue to go up when trading reopened.

4.71 The Committee decided against imposing an immediate price limit. The minutes record its conclusion that in order to avoid any "unintended consequences" of a price cap, "more work" should be done before one was imposed, including "preparing robust rules in relation to the introduction of a price limit, analysis of possible implications in the market... and confirmation of an appropriate percentage point increase at which point the price limit would trigger action".

The evening of 7 March 2022

4.72 At 5.10pm, LME and LME Clear senior managers received a table of 5.00pm closing prices by email which showed that while 3M nickel had increased in price by 66%, to $48,075, aluminium had actually dropped in price by 3%. LME Board Member B

responded "I don't understand why AH [aluminium] is down 3% and NI [nickel is] up 66%. Russia is a large global producer of both, there is less depth on [LME] Select for Nickel but there must be more to the story?"

4.73 Two other LME managers responded to the LME board member with their own views. LME Manager B said that the first 10-15% of the price rises in 3M nickel on 7 March had resulted from the potential for sanctions; the rest was due to "short covering and stopping out", and was "in no way fundamental" and a similar price move had not happened in respect of aluminium mainly because there were more "speculative shorts" in the nickel market. LME Manager C agreed, opining that the aluminium market was much more liquid than the nickel market, and therefore less vulnerable to volatility caused by short-covering.

4.74 That evening, Bloomberg reported that nickel had "surged to a record high in one of the most extreme price moves ever seen on the London Metal Exchange, as fears over Russian supplies leave buyers exposed to a historic squeeze. The metal used in stainless steel and lithium-ion batteries rose as much as 90% to $55,000 a metric ton, the highest in the 35-year history of the contract. That topped a previous record of $51,800 reached in 2007."

4.75 No steps had been taken, following the Special Committee meeting, to inform the Trading Operations team, including its managers, that the Special Committee had been actively considering whether the market remained orderly, and whether it was necessary to impose a price limit or even suspend the nickel market. When the London TO Team sent a handover email to the Hong Kong TO team at 5.56pm, it focused on steps the Hong Kong TO team might take during overnight trading to facilitate intentional orders (the price of which outpaced the parameters of the price bands). It explained that during 7 March the London TO team had resorted to suspending "outright bands [in nickel] a number of times throughout the day... As you will be able to see from the prices we hit a high "as of typing" $55,000 and I think we had a % increase of 90% [in the price of nickel]... [This is] a heads up... as it could happen all over again on most metals".

4.76 The volatility in the 3M nickel price during daytime trading on 7 March was so extreme that it was outside the maximum limits which had been hard coded into LME's systems to calculate its closing prices, and delayed that calculation in respect of nickel (although this particular issue was resolved by 9pm).

4.77 At 6.21pm, LME publicly issued a formal Member Notice:

"The LME have been monitoring the impact on the LME market of the situation in Russia and the Ukraine, as well as the recent low-stock environment observed in various LME base metals. With immediate effect, the LME (acting through the Special Committee) has determined that it is appropriate in the circumstances to take the following two actions in respect of the physically settled base metal contracts Aluminium, Aluminium Alloy, Cobalt, Lead, NASAAC, Nickel, Tin and Zinc: (i) imposing a limit on the backwardation for tom-next contracts; (ii) introducing a deferred delivery mechanism for certain contracts... These measures will take immediate effect and be reviewed as appropriate by the Special Committee."

4.78 At 7.07pm, LME Clear Board Member A circulated a summary of the Special Committee discussion to other senior executives and stakeholders, stating that the Committee had decided not to put a price limit in place due to the risk of "unintended consequences". However, the email continued, the "[LME] Executive will continue to monitor the Nickel market and reserve[d] the right to suspend the Nickel market if it is considered that it could become disorderly."

4.79 At 7.50pm, an LME Member emailed the LME, stating "Curious, if this [LME Notice 22/051] was the only action plan from today's special meeting? As you know, this doesn't really help the current situation as nickel does not have a backwardation problem? What happened to price limits...?" LME Board Member A responded to the LME Member stating "The Special Committee did discuss the idea of a 3M price limit cap (e.g. halt the market if price is up 10%), but didn't feel that it was appropriate to make specific rules at this time. Please however be assured that we will monitor the market closely tomorrow, and can intervene to stop trading on a discretionary basis if there are further concerns".

4.80 At 8.05pm, LME Senior executives were informed that a representative of Bloomberg's news service had "called this evening and have asked for a comment on what they're hearing in the market – which is that the measures put in place via the notice don't address the actual situation faced by the nickel market today – which was short position holders being unable to deliver margin calls." LME declined to comment.

4.81 The FCA had asked the LME for an update on any decisions taken at the Special Committee meeting. At 9.36pm, the LME updated the FCA by email, including an assurance that LME "...executives will continue to monitor the nickel market and [LME] reserves the right to suspend the nickel market if it is considered that it could become disorderly... we will see where we stand 0800-0900 tomorrow. If the nickel price has fallen overnight, we'll be in a much better position. If it continues to rise,

we'll need to consider how much further we will let it rise, before potentially intervening [to suspend the market]".

4.82 No special arrangements had been made for LME executives to take any role at all in overnight monitoring of the market. Furthermore, as previously noted, the Hong Kong TO team that would be carrying out that monitoring had not been briefed on the Special Committee's concerns, and had not been told that it should contact senior managers if the 3M nickel price continued to rise overnight. In respect of the price bands, the only specific instructions the Hong Kong TO team had received was that if the 3M nickel price did continue to rise, it may have to suspend them.

8 March 2022

4.83 At 12.28am London time, Bloomberg published an article stating that an LME Member "was given additional time by the LME to pay hundreds of millions of dollars of margin calls it missed Monday amid an unprecedented spike in nickel prices, according to people familiar with the matter". It explained that "Prices have been rallying for weeks, as traders worry about the possibility of disruption to supplies from Russia, the largest exporter of refined nickel. Monday's squeeze was driven by market participants with short positions being forced to close them out because they couldn't meet margin calls, brokers and traders said".

4.84 At 1.00am, London time, the market reopened. At 1.22am, the Hong Kong TO team sent a notification email to LME's Post Trade Services, Market Surveillance, Trading Operations Group and LME Clear's Market Risk mailboxes, none of which were monitored overnight, stating the price of 3M nickel "has traded to a high of $50,225 (+4.47%). SHFE's [Shanghai Futures Exchange] most actively traded Nickel contract advanced 15% to Yen 228,810 and triggered the circuit breaker. Trading [on the SHFE] is currently suspended." At 2.54am, the Hong Kong TO team sent a second notification email stating that "The market [in 3M nickel] has traded to a high of $53,980.00 (+12.28%)". On top of the price rises seen on 7 March, and the consequent stress on market participants, this was a very significant rise. However, the Hong Kong TO team was still receiving frequent system alerts indicating that the price bands were rejecting trades above the price bands.

4.85 At 3.38am, the team sent another email, this time to several members of Trading Operations management in London (none of whom were monitoring their email accounts overnight). The email stated that the Hong Kong TO team had widened the 'wider' dynamic price band for nickel from $470 to $540 because "it makes sense to allow spike of 1% from last traded price... in view of the price jump... from $28,000 to $54,000 level". This set the dynamic band more widely than the

maximum implied (even on the 'wider' setting) by LME's published Non Cancellation Ranges.

4.86 A Hong Kong TO team member went on to suggest in the same email that LME could "consider creating a Widest price band for NI [Nickel] Outright as well (after market close) so that we can maintain the price band while trying to avoid Suspending [the] price band". In other words, instead of having 'normal', 'wide' and 'wider' settings only, there would be an additional 'widest' setting. The Hong Kong TO team knew that suspending the dynamic price bands increased the system's vulnerability to error trades.

4.87 The price continued to move upwards. The Hong Kong TO team received telephone calls and emails from traders complaining that their attempts to trade at higher prices were being rejected. At 4.42am, the Hong Kong TO team sent another email to Post Trade Operations, LME Clear Market Risk and LME Market Surveillance stating "The market has traded to a high of $59,970.00 (+24.73%). SHFE has not resumed trading on Nickel futures."

4.88 At 4.49am, the price of 3M nickel crossed the $60,000 threshold. At 4.50am, a trader emailed the Hong Kong TO team to ask them to "review" the price bands as they were "too small, given how much the price is moving" and that they "will affect at [sic] market and stop orders".

4.89 The Hong Kong TO team had decided at 4.49am that it was necessary to suspend the operation of the 3M nickel price band altogether. The price was moving so quickly that the team had exhausted its repertoire of manual adjustments to the price bands. As one of them later described it to the FCA, despite all of the manual adjustments they had made, they were still receiving "massive alerts and getting phone calls [and] emails" indicating that orders were being rejected. Therefore, "as a price discovery process, we [decided we] would let the market decide [where] to go next". At 5.04am the team sent a notification email to LME Trading Operations senior managers stating: "[We] have suspended the [nickel] 3M price band". At no point did the Hong Kong TO team consider telephoning senior managers in London to seek instructions regarding this step. They considered suspending the operation of the price bands to be one of their established practices for aiding price discovery.

4.90 The Hong Kong TO team understood that a possible consequence of suspending the price bands was that the price may rise even more quickly. They considered this to be a matter of market forces, and not something it was their role to manage. As a member of the team explained to the FCA in interview: "Maybe if we suspend, it allows price movement and then the market stabilises. Maybe, but maybe, after

that, the market will still go up and go up again. It's decided by the market, decided by the traders, not... us."

4.91 Approximately 55 minutes after the suspension of the price bands, at 5.44am, the price of 3M nickel breached $70,000 per tonne. In the next 24 minutes to 6.08am, it rose by more than another $30,000 to $101,365. This was double the opening price on 8 March, and more than triple the opening price of $29,770 on Monday 7 March.

4.92 The 3M nickel static price band had been constraining the contract to move by a maximum of $6,000 per hour. This was already an extremely wide setting. Once the static price band was removed altogether, the price of 3M nickel moved by $41,365 in just 79 minutes.

4.93 The dynamic price band had been limiting the gaps between consecutive 3M nickel trades to $540. Once the dynamic price band was removed, the gap between consecutive trades was on occasion measured in thousands of dollars. On one occasion, at 6.04am, the gap in 3M price between two consecutive trades – eight seconds apart – was $5,300.

4.94 LME Board Member A had awoken at approximately 5.30am and seen the escalating price of LME 3M nickel on a third party market data application on his mobile phone. At 6.07am he sent an instant message to an LME instant message group named "Function Heads" to say "Nickel is up 100% this morning. Just spoke to [an LME Member] – they will default if we margin at these levels. I suspect others too. Think we do need to suspend [the nickel market] now. Or at least before 0900 margin calls." LME Clear Board Member A responded "Agreed... we will have to decide on prices". LME Board Member A sent a further instant message at 6.11am saying "Yep... I suggest we freeze [everything] at last night's price, since we at least (hope) that [margin] calls have been paid".

4.95 At 6.28am, LME Board Member A stated in an email to the FCA that "nickel [is] up another 105% this morning. We will need to suspend the contract for the day. We are targeting 0800 (i.e. pre first margin calls, since nobody will be able to pay at these levels). Will keep you posted...".

4.96 Between 5.57am and 7.22am a number of LME Members contacted the LME and LME Clear. Some protested that LME had allowed the market to rise to such a level, without suspending it; some expressed their alarm that LME Clear may decide to call margin at the current prices, which were unmanageable. At 6.30am, one LME Member emailed an LME board member to say: "So you shouldn't have opened [for

nickel trading] in Asia – now you have to cancel trades and reset to the London close...".

4.97 By 6.33am, the price of 3M nickel had fallen back to $80,010. At 7.18am, LME Board Member A emailed LME's User Committee, stating: "Dear UC members – I'm sure you've seen continued movements in nickel this morning... We fully recognise that margin calls will be very difficult to settle at these levels". A senior member of the User Committee responded at 6.31am to say: "My recommendation is that: - we shut the nickel market for 24 possibly 48 hours to allow margin calls (both clearing house member calls and end client calls) to be made; - Reopen with a 10% price cap from last traded price – circuit breaker to last 24 hours; - suspend nickel trading in Asia indefinitely".

4.98 Work to prepare a suspension notice began after 6.22am on 8 March and was circulated among LME and LME Clear senior managers for comment at 6.55am. The covering email, from LME Board Member A, stated that the price of 3M nickel "has fallen back a little, but [is] still up 60%, which will be too much for many members to make margin. I would suggest we proceed with suspension if price is still up 20% or more (from last night's prices) at 0730".

4.99 At 7.24am, LME Clear Manager A circulated an email to senior managers and stakeholders setting out that morning's automatically generated additional variation margin calls for 3M nickel across all LME Members. They totalled $19.7bn. An urgent meeting of LME and LME Clear senior managers and senior stakeholders took place at 7.30am to discuss the suspension of trading. As of 7.30am, the price of 3M nickel was hovering just above $80,000 per tonne. It was decided that the suspension would take effect at 8.15am, and a Notice to the market would be sent out immediately thereafter.

4.100 At 8.02am, a final draft notice of suspension was circulated to senior LME and LME Clear managers. At 8.12am, LME Board Member A authorised Trading Operations to proceed.

4.101 At 8.15am, the market was suspended and Notice 22/052 issued, which stated: "Following further unprecedented overnight increases in the 3 month nickel price, the LME has made the decision to suspend trading [of all LME nickel contracts] for, at minimum, the remainder of today (Tuesday 8 March 2022)... The LME, in close discussion with the Special Committee, has been monitoring the LME market and the effect of the evolving situation in Russia and Ukraine. It is evident that this has affected the nickel market in particular, and given price moves in Asian hours this morning, the LME has taken this decision on orderly market grounds."

4.102 LME and LME Clear considered that, had margin been called at the prevailing price on the morning of 8 March, this would have posed a systemic risk to the LME's market including, potentially, multiple defaults of LME Members. The Notice also set out that "Margin on the LME Nickel contract will, for the present time, be calculated on the basis of Closing Prices on 7 March 2022. LME Clear will consider what additional measures, if any, should be taken from a risk management perspective."

4.103 The LME's key decision makers did not know on the morning of 8 March that the dynamic and static price bands had been suspended less than one hour prior to the most significant price increases.

Post suspension on 8 March

4.104 At a 9.00am meeting the LME and LME Clear management teams discussed next steps. Their management teams reached a consensus that all nickel trades since the previous night's close of trading should be cancelled.

4.105 Later that morning, the LME announced that it had "determined that it is appropriate in the circumstances to... cancel all trades executed on or after 00:00 UK time on 8 March 2022 in the inter-office market and on LMEselect until further notice". The notional value of the cancelled trades was $13.373bn.

4.106 The announcement also stated: "The current events are unprecedented. The LME is committed to working with market participants to ensure the continued orderly functioning of the market. The suspension of the Nickel market has created a number of issues for market participants which need to be addressed. This Notice is intended to address the most pressing of those issues. Further communications will be issued during the course of today, including regarding the process for reopening the market." Later on 8 March, the LME announced that it did "not anticipate resuming nickel trading earlier than 11 March 2022".

4.107 The LME began to discuss re-purposing the static price band as a price limit. As part of those discussions, LME Compliance noted in an email that the market had never been given a description of how the static bands worked.

4.108 The LME nickel market resumed nickel trading on 16 March 2022. During the suspension, the LME had decided to impose a daily price limit on all its base metal contracts. In the case of nickel, these limits were intended to ensure that once trading re-opened the upward or downward movement in price in a single day could not exceed 15%. The LME's nickel market did not re-open in Asian trading hours until March 2023.

4.109 LME promptly commissioned, and committed to publishing, an independent review, to establish what had happened, including analysis of the effect of trading activity in the OTC market. The report found that very large short positions and the associated missed margin calls on the OTC nickel market were a highly material cause of the extraordinary speed and extent of the price rises in the LME's contract. OTC trades and associated margin calls take place outside of the LME market but can impact it as they often reference LME prices or are hedged by positions taken on LME markets. This interaction between off-market OTC trades and the LME market was the largest driver of price volatility between 4 and 8 March 2022.

LME's discussions with the FCA regarding suspension of price bands

4.110 On 6 April 2022, as part of its supervisory investigatory work into the events of 7 and 8 March, the FCA asked LME to confirm details of the static price bands LME had in place on 7 and 8 March. On 19 May 2022, after protracted correspondence, that LME informed the FCA that the static and dynamic price bands had in fact been suspended on 8 March.

4.111 The 19 May communication also explained that historic data on price band settings was not routinely captured in a durable format, that the table provided with the same correspondence, detailing the alterations and suspensions of the price bands in chronological order had been pieced together retrospectively, and that it could not be relied on as an exact record of the events.

4.112 LME also corrected, in the 19 May communication, its statement on 7 April 2022 that $2350 was the widest setting for the price band. LME only now explained that the static price band had been widened to $6,000 on 7 March.

4.113 The FCA does not consider that the LME set out deliberately to misinform it regarding these matters. However, it considers that a series of misunderstandings could only have arisen because the operation of the price bands was not widely or well understood within the LME outside of the Trading Operations staff directly involved in manipulating and maintaining the system.

5. FAILINGS

5.1 The regulatory provisions relevant to this Notice are referred to in Annex A.

REC 2.5.1 paragraph 3

5.2 Between 3 January 2018 and 8 March 2022, the LME failed to ensure that the systems and controls, including procedures and arrangements, used in the

performance of its functions and the functions of the trading venues it operates were adequate, effective and appropriate for the scale and nature of its business contrary to REC 2.5.1 para 3(1), and were not adequate, effective and appropriate to ensure orderly trading under conditions of severe market stress, contrary to para 3(2)(h).

5.2.1 LME's process for escalating unusual or hazardous market conditions was inadequate. Decisions about market orderliness could only be taken by LME's senior management; but the Trading Operations team was the only team to conduct live monitoring of the LME's market. That team was inadequately trained and/or instructed in how to recognise and deal with severe market stress that posed a risk to market disorder but was not caused by technical issues or systems outages. It had had insufficient understanding of extreme volatility as an indication of market disorder.

5.2.2 The additional risks to which overnight trading gave rise were insufficiently managed. 7 of LME's 19 trading hours were overnight trading and were monitored by the Hong Kong Trading Operations team. However, the standard process for escalating sudden market moves was an email to a distribution list of email addresses within LME and LME Clear which was not monitored overnight. LME senior management were all off duty. The criteria for LME's emergency telephone escalation process were vaguely drawn and the escalation process was, in practice, reserved for escalating technical issues or systems outages.

5.2.3 Price bands were a volatility control mechanism that formed part of the systems and controls that the LME had in place to comply with its regulatory obligations regarding the maintenance of an orderly market. The LME's actions in disabling the price bands in its nickel market for a period of over three hours in conditions of severe market stress allowed the 3M nickel price to increase much more quickly than would otherwise have been possible and thereby increased the potential exposure of investors and market users to risks that the price bands were designed to mitigate.

Regulatory Technical Standard 7, Article 18(3) of Commission Delegated Regulation 2017/584 ('RTS7')

5.3 Between 3 January 2018 and 8 March 2022, the LME failed to ensure that it complied with Article 18(3)(a) of Regulatory Technical Standard 7 (RTS 7) by setting out policies and arrangements in respect of its mechanism to manage volatility:

5.3.1 From 3 January 2018 until March 2021 LME had no internal written procedure or guidance on the use or purpose of its static price band;

5.3.2 From 3 January 2018 until 8 March 2022, LME had no internal written procedure or guidance setting out the circumstances, if any, in which it may be appropriate to suspend the static and dynamic price bands, which would leave the LME's market temporarily vulnerable to error trades and sudden significant movements in price.

Article 18(4) of RTS7

5.4 Between 3 January 2018 and 8 March 2022, the LME failed to ensure that it complied with Article 18(4) of Regulatory Technical Standard 7 (RTS 7) by publishing policies and arrangements in respect of its mechanism to manage volatility:

5.4.1 No policies or arrangements were published to the market regarding the operation of the static band until after March 2021, by which time it had been operative for almost 4 years, more than 3 of which are included in the Relevant Period;

5.4.2 No policies or arrangements were published to the market in respect of the Trading Operations team's practices of (i) suspending the price bands during periods of high volatility, or (ii) extending the width of the price bands beyond the specified published ratios determined by its Non Cancellation Ranges.

6. SANCTION

6.1 The Authority's policy for imposing a financial penalty is set out in Chapter 6 of DEPP. The Authority applies a five-step framework to determine the appropriate level of financial penalty. DEPP 6.5A sets out the details of the five-step framework that applies in respect of financial penalties imposed on firms.

Step 1: disgorgement

6.2 Pursuant to DEPP 6.5A.1.G, at Step 1 the Authority seeks to deprive a firm of the financial benefit derived directly from the breach where it is practicable to quantify this. The Authority has not identified any financial benefit that the LME derived directly from its breach. Step 1 is therefore £0.

Step 2: the seriousness of the breach

6.3 Pursuant to DEPP 6.5A.2G, at Step 2 the Authority determines a figure that reflects the seriousness of the breach. Where the amount of revenue generated by a firm from a particular product line or business are is indicative of the harm or potential harm that is breach may cause, that figure will be based on a percentage of the firm's revenue from the relevant products or business area.

6.4 The Authority considers that the revenue generated by the LME in respect of all its physically settled and cash settled metal contracts in respect of trading on LMEselect is indicative of the harm or potential harm caused by its breaches. Harm could have crystallised in the event of extreme volatility in any of those contracts, as a result of the gaps in systems and controls. The Authority has therefore determined a figure based on a percentage of the LME's revenue from those contracts during the Relevant Period. The Authority considers the LME's relevant revenue for this period to be £146,760,509.74.

6.5 In deciding on the percentage of the relevant revenue that forms the basis of the step 2 figure, the Authority considers the seriousness of the breach and chooses a percentage between 0% and 20%. This range is divided into five fixed levels which represent, on a sliding scale, the seriousness of the breach; the more serious the breach, the higher the level. For penalties imposed on firms there are the following five levels:

Level 1 – 0%

Level 2 – 5%

Level 3 – 10%

Level 4 – 15%

Level 5 – 20%

6.6 In assessing the seriousness level, the Authority takes into account various factors which reflect the impact and nature of the breach, and whether it was committed deliberately or recklessly. DEPP 6.5A.2G(11) lists factors likely to be considered 'level 4 or 5 factors'. Of these, the Authority considers the following factors to be relevant:

6.6.1 The breach caused a significant risk of loss to investors and other market users (11(a));

6.6.2 The breach revealed serious weaknesses in the firm's procedures and internal controls aimed at providing safeguards against the harmful effects of extreme volatility in LME metal contracts (11(b)).

6.7 DEPP 6.5A.2G(12) lists factors likely to be considered 'level 1, 2 or 3 factors'. Of these, the Authority considers the following factors to be relevant:

6.7.1 No profits were made by the LME as a result of the breach (12(a));

6.7.2 While the breach showed serious weakness in a particular area of the firms' procedures and internal controls, it does not indicate a widespread problem or weakness at the firm (12(d));

6.7.3 The breach was not committed deliberately or recklessly (12(e)).

6.8 The Authority also considers that in respect of impact (DEPP 6.5A.2G, subsection (6)), the breach had an adverse effect on the operation of the market such that the orderliness of, and confidence in, that market were undermined.

6.9 Taking all of these factors into account, the Authority considers the seriousness of the breach to be level 3 and so the Step 2 figure is 10% of £146,760,509.72.

6.10 Step 2 is therefore £14,676,050.97.

Step 3: mitigating and aggravating factors

6.11 Pursuant to DEPP 6.5A.3G, at Step 3 the Authority may increase or decrease the amount of the financial penalty arrived at after Step 2, but not including any amount to be disgorged as set out in Step 1, to take into account factors which aggravate or mitigate the breach.

6.12 The Authority considers that the following factor aggravates the breach: Following the events, the LME provided the FCA with inaccurate information on several occasions about the calibration and suspension of the price bands on 7 and 8 March 2022. In particular, LME did not inform the FCA until 19 May 2022 that the price bands had been suspended on 8 March 2022 despite the following facts: (i) the suspension of the price bands permitted the price surge to occur more quickly than would otherwise have been possible if price bands had not been suspended at the time, (ii) senior management had been explicitly aware of it since 9 March and (iii) the FCA had asked a direct question on the point on 6 April. This was a failure to bring the relevant breaches quickly, effectively and completely to the FCA's

attention. The FCA does not allege that the misinformation or withholding of information was deliberate.

6.13 The Authority considers that the following factor mitigates the breach: the LME has taken steps since 8 March 2022 to ensure that similar problems cannot arise in the future. The LME commissioned an independent review of the nickel market events by a management consultancy and undertook in advance to publish the results, which were published in January 2023. The LME announced an Action Plan on 30 March 2023 based on the recommendations of the management consultancy, including improvements to daily price limit calibration methodology and enhanced real-time monitoring.

6.14 Having taken into account these aggravating and mitigating factors, the Authority considers that the Step 2 figure should be reduced by 10%.

6.15 Step 3 is therefore £13,208,445.87.

Step 4: adjustment for deterrence

6.16 Pursuant to DEPP 6.5A.4G, if the Authority considers the figure arrived at after Step 3 is insufficient to deter the firm who committed the breach, or others, from committing further or similar breaches, then the Authority may increase the penalty.

6.17 The FCA considers the absolute value of the penalty at Step 3 to be adequate to meet its objective of credible deterrence.

6.18 Step 4 is therefore £13,208,445.87.

Step 5: settlement discount

6.19 The Authority and the LME reached agreement at Stage 1 and so a 30% discount applies to the Step 4 figure.

6.20 Step 5 is therefore £9,245,912.09.

Proposed penalty

6.21 The Authority hereby imposes a total financial penalty of £9,245,900 on the LME for breaching REC 2.5.1 and RTS 7 Articles 18(3) and 18(4).

7. PROCEDURAL MATTERS

7.1 This Notice is given to the LME under section 312F and in accordance with the section 390 of the Act.

7.2 The following statutory rights are important.

Decision maker

7.3 The decision which gave rise to the obligation to give this Notice was made by the Settlement Decision Makers.

Manner and time for payment

7.4 The financial penalty must be paid in full by LME to the Authority no later than 2 April 2025.

If the penalty is not paid

7.5 If all or any of the financial penalty is outstanding on 2 April 2025, the Authority may recover the outstanding amount as a debt owed by LME and due to the Authority.

Publicity

7.6 Sections 391(4), 391(6) and 391(7) of the Act apply to the publication of information about the matter to which this notice relates. Under those provisions, the Authority must publish such information about the matter to which this notice relates as the Authority considers appropriate. The information may be published in such manner as the Authority considers appropriate. However, the Authority may not publish information if such publication would, in the opinion of the Authority, be unfair to you or prejudicial to the interests of consumers or detrimental to the stability of the UK financial system.

Authority Contacts

7.7 For more information concerning this matter generally, contact Emma Binnington (direct line: 020 7066 5350/ email: emma.binnington@fca.org.uk) or Steven King (direct line: 020 7066 3408/ email: steven.king@fca.org.uk) at the Authority.

Allegra Bell

Head of Department

Financial Conduct Authority, Enforcement and Market Oversight Division