

Aluminium forecasts



Methodology and price
specifications – June 2023

Mission statement

Fastmarkets Metals and Mining is the leading global provider of pricing intelligence for the non-ferrous metal, steel, steelmaking raw materials, industrial minerals, ferrous and non-ferrous scrap markets, producing price assessments with Fastmarkets MB and Fastmarkets AMM since 1913 and 1882 respectively. The research arm of Fastmarkets Metals and Mining provides forecasts and analysis based on price assessments from Fastmarkets MB and Fastmarkets AMM. Established in 1991, we have provided regular, insightful analysis and forecasts to businesses around the world to help them make informed and strategic decisions and recommendations. Our mission is to meet the market's data requirements honestly and independently, acting with integrity and care to ensure that the trust and confidence placed in the reliability of our methodologies is maintained. We do not have a vested interest in the markets on which we report. Within the research function of Fastmarkets, we stress our ability to operate independently of the rest of the Group, and the existence of formal rules of confidentiality that exist between the pricing and news providers within the Group and the research and consulting functions.

Introduction

Fastmarkets' reporters and analysts are required to abide by a code of conduct and clear pricing procedures during their market reporting and pricing activities. Fastmarkets is completely independent and has no vested commercial interest in any of the markets it prices. We are the world's largest dedicated price reporting teams for both metals and forest products. We have offices in London, New York, Boston, San Francisco, Eugene, Charlottesville, Atlanta, Pittsburgh, Beijing, Shanghai, Hong Kong, Singapore, Melbourne, Sao Paolo, Mumbai, Brussels, Helsinki, Dnipro and Istanbul. The aim of this document is to provide a clear overview of Fastmarkets' forecasting methodology and specifications for the prices forecast. If you have any questions, please contact Fastmarkets Executive VP Analytics Dan Klein at dan.klein@fastmarkets.com for metals, Fastmarkets Metals and Mining research leader, Kim Leppold, at kim.leppold@fastmarkets.com about our forecast products.

Fastmarkets' forecasting methodology

Fastmarkets provides a dynamic, bottom-up and unbiased approach to short-term (<2-year) monthly and quarterly price forecasting.

The methodological model takes a three-way approach to account for:

1. supply-demand fundamentals
2. underlying costs & implied margins
3. market sentiment

This framework enables the analysts to determine the key but changing drivers of price movements in the past and future.

To source the information to prepare our price forecasts, forecasters conduct both extensive desk-based research as well as primary research; the latter being more heavily weighted toward our near-term (<3 month) view.

Fastmarkets' forecasting methodology includes drawing on expertise from our in-house analysts with forecasting experience of up to 20-25 years who rely heavily on the intelligence gathering and data analytics insight of our extensive editorial teams.

We supplement this valuable network with our proprietary databases, which focus on the underlying physical market movements that drive prices and the archive of spreads between price series that instruct and contextualize our understanding of margins.

These are supported by exhaustive third-party data and economic forecasting services, which help us to build the fundamental drivers of the future.

Our analysts access extensive existing relationships across the industry through face time and written interviews, and take into account the opinions provided to our price reporters and data analytics team. This cross-referencing approach helps us to value the intelligence, generate insight and help in our mission to illuminate markets.

Modeling Fastmarkets' forecasts

Generating our forecasts is an involved process that combines macroeconomic theory, market insight, statistical modeling and machine learning. It is this combination of expert knowledge and cutting-edge data

modeling which generates our trusted forecasts. They also allow deeper insight into the fundamental workings of a market and elicit data patterns that give insight and relative weighting of key market factors that drive price direction, such as seasonality and its impact on collections in the scrap markets. These insights and their statistical robustness allow our expert analysts to improve forecast accuracy and reliability and to inform their commentary along with traditional macro-economic and sentiment analysis.

Our data collection and process:

- Include price benchmarks - which refer to prices used in industrial contracts - and prices that are viewed as trendsetters for a particular region or a product group
- Bespoke approach to each price forecast
- Draw on a comprehensive set of macro-economic data
- Machine learning approach to find the best model candidate and predictions with rigorous checks on model approach and output
- Models undergo periodical review
- Rigorous approval process

Alumina price forecasts

Crucial to the results of our alumina price forecasts is a detailed analysis of distinct product-specific factors:

- Fastmarkets' internal forecasts for alumina production and consumption in individual countries and regions derived from our proprietary database.
- Estimated inventory levels in the supply chain.
- Net trade flows and trade policy changes.
- Market sentiment, including price trends of benchmark prices upstream and downstream.
- Seasonal trends and patterns.
- Relationship with LME prices.

LME aluminium price forecasts

Crucial to the results of our LME price forecasts is a detailed analysis of distinct product-specific factors:

- Fastmarkets' internal forecasts for production and consumption in individual countries and regions, derived from our proprietary fundamental and macroeconomic models.
- Estimated inventory levels in the supply chain.
- Net trade flows and trade policy changes.
- Market sentiment, including technical analysis and news/data releases.
- Analysis of speculative positioning and changes in positioning.
- Seasonal trends and patterns.
- Correlation with other financial assets, including the other components of the base metals complex and the broader commodities asset class, currency markets and equity markets.

Forecast list

MB-AL-0020

Aluminium P1020A premium, ddp Midwest US, US cents/lb

Quality: London Metal Exchange specification P1020A or 99.7% minimum Al purity (silicon 0.10% max, iron 0.20% max, zinc 0.03%, gallium 0.04%, vanadium 0.03%)

Location: Delivered consumer works Midwest

Unit: US cents per pound

Quantity: 100 tonnes

Delivery: Within four weeks

Form: Ingot, T-bar, Sow

Payment terms: 30 days, other payment terms normalized

Publication: Twice a week, every Tuesday and Friday between 3pm and 4pm London time

MB-AL-0004

Aluminium P1020A premium, in-whs dp Rotterdam, \$/tonne

Quality: P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot

Quantity: Min 100 tonnes

Location: In-warehouse Rotterdam duty-paid, premium on top of LME cash prices

Unit: USD/tonne

Timing: Within 4 weeks

Payment terms: Cash against documents (7 days after bill of lading date); other terms normalized

Publication: Twice weekly. Tuesday and Friday 4pm London

MB-AL-0343

Aluminium P1020A (MJP) spot premium, cif Japan, \$/tonne

Quality: P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max) in line with LME specifications. Ingot, T-bar, sow

Quantity: Min 100 tonnes

Location: cif in main Japanese ports at Yokohama, Nagoya and Osaka, premium on top of LME cash prices

Timing: Within 6 weeks

Unit: USD/tonne

Payment terms: Cash against documents (2 days after Bill of lading date)

Publication: Twice weekly. Tuesday and Friday by 4pm London time

Notes: Excluding metal from LME warehouses and metal subject to international sanctions. Assessed by Fastmarkets' Singapore office

MB-AL-0345

Aluminium P1020A premium, cif Shanghai, \$/tonne

Quality: P1020A or 99.7 % Minimum Al purity (Si 0.10% max, Fe 0.20% max). Ingot

Quantity: Min 100 tonnes

Location: cif Shanghai, premium on top of LME cash prices

Unit: USD/tonne

Timing: Within 4 weeks

Payment terms: Letter of Credit or Telegraphic Transfer, other payment terms normalized

Publication: Monthly, last Tuesday of the month 3-4pm London time

MB-ALU-0002

Alumina index, fob Australia, \$/tonne

Quality: Smelter-grade alumina, minimum purity of 98.5% Al₂O₃

Quantity: 5,000 tonnes

Location: fob Bunbury/Kwinana, Australia (other Pacific origins normalized)

Timing: Within 2 months

Unit: US\$ per dry metric tonne (dmt)

Payment Terms: 30 days after loading

Publication: Daily at 4pm London time

Notes: Bulk carrier. Data history from Augusts 2010.

XL-AL-FRC.O	LME aluminium cash official prices, \$/tonne
Quality:	LME specifications P1020A or 99.7 % min Al purity (Si 0.10% max, Fe 0.20% max)
Quantity:	25 tonnes lot size
Unit:	USD/tonne
Publication:	LME official settlement: 12.30-1.25pm London time

Contacts

Will Adams

Head of Research, Battery Raw Materials and Base Metals
william.adams@fastmarkets.com

Yang Cao

Senior Analyst
yang.cao@fastmarkets.com

Risk & Compliance Team

T: +44 20 7827 5264 or
T: +44 20 7779 8519

riskandcompliance@fastmarkets.com

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