

Methodology and price specifications – June 2021





Mission statement

Fastmarkets is a leading commodity price reporting agency (PRA) covering the metals, mining, minerals and forest products industries. Our products include Fastmarkets MB, Fastmarkets AMM, Fastmarkets IM, Fastmarkets RISI, Fastmarkets FOEX and Random Lengths. For more than 100 years we have been providing commodities price reporting services for use by market participants in their day-to-day commercial activities. These services include assessments and indices of commodity prices as well as news, research and commentary on the underlying markets.

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 pricing methodologies is maintained. We do not have a vested interest in the markets on which we report.

Introduction

Fastmarkets MB 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 since 1913.

Fastmarkets MB reporters 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 metals price reporting team. We have offices in London, New York, Pittsburgh, Shanghai, Hong Kong, Sao Paulo, Melbourne, Singapore, Mumbai, Dnepr, Istanbul and five other US locations.

The aim of this document is to provide a clear overview of Fastmarkets MB's European HRC Indices methodology and specifications for the prices it assesses.

If you have any questions, please contact Fastmarkets editorial director Alex Harrison at aharrison@fastmarkets.com.



Price discovery and methodology

Methodology rationale

Fastmarkets MB's rationale for adopting the pricediscovery process described in this methodology document is to produce a consistent and representative indicator of market value to meet the requirements of the European HRC market for a transparent pricing mechanism.

The primary role of these indices is to provide market participants with a fair and robust representation of physical spot market prices. It has been designed to meet the requirements of the financial and the physical markets.

The intention is for the index to be reflective of the prices seen during the data collection window; and to be a reliable indicator of the value of the European HRC market.

The European HRC market is constantly developing. Fastmarkets MB reviews its methodology and specifications, and engages in discussions with market participants on a regular basis, to ensure they remain as representative of the market as possible.

Data collection and quality

The basis of all our indices is the data provided by the market. To provide the most representative pricing for the European HRC market, it is essential we are able to collect as many representative data points as possible.

Any market participant involved in the physical European HRC market may be able to contribute data to the index following a review by Fastmarkets of their activities. The aim is to make sure that submitters have sufficient visibility and understanding of the market to be able to provide reliable price data. Fastmarkets aims to engage a broad and balanced range of physical market participants in the provision of data.

Fastmarkets' Data Submitter Policy provides guidelines to ensure the high level of data quality and integrity that Fastmarkets expects from contributing organisations providing pricing data. The policy can be found on Fastmarkets' website or is available upon request.

Fastmarkets encourages data sources to provide data on all their concluded transactions and welcomes provision of data from employees in back-office functions. Fastmarkets collects data via different channels, including phone calls, email, and digital messenger services across our offices in Dnepr, London, Shanghai, Singapore and Sao Paulo.

The deadline for data submission for the European HRC Indices is 3pm London time daily. Data received after this time will not be included in the calculation of the index, which will be published at 4pm. The data collection window is the 24-hour period up to 3pm on the day of publication. Only price data submitted and communicated to Fastmarkets within the daily window will be included in the calculation of the index. The indices are reflective of the price levels recorded during this window.

All the reference units, such as currencies and volumes used in the index, are in line with recognised European HRC market conventions and the reference units used in these markets. The index specification has a minimum acceptable volume.

All data supplied to Fastmarkets' European HRC indices are kept strictly confidential. Fastmarkets Index may sign Data Submitter Agreements (DSAs) upon request with any data provider.

Index calculation

The Fastmarkets European HRC indices are a tonnage-weighted calculations, where actual transactions carry full weight as reflected by the reported volume, while offers, bids and market participants' own estimate of the market are weighted at the specified minimum tonnage for the index. Fastmarkets aims to collect full details of each transaction including brand, commercial terms and any other details relevant to value and pricing.

Market balance

The Fastmarkets European HRC Indices methodology is designed to provide market participants with a fair and robust reflection of the physical European HRC spot price level. The methodology incorporates structures and mechanisms to ensure a balanced and consistent calculation that is able to resist possible undue influences.

The Fastmarkets European HRC indices are structured to balance the influence of both sides of the market: sellers and buyers. This reduces the potential risk of market distortions and bias in the data and ensures that all parts of the market have the same influence on the final calculation of the indices.



The published index figure is the straight average of two sub-indices, each of which contain data from either the buy side or sell side of the market. Each sub-index is a tonnage-weighted calculation of normalized price data. Only the final index is published. The use of two sub-indices means that each part of the market has a maximum 50% weighting in the final index. This removes the possibility of bias or any single data provider having an overbearing influence on the final index.

Normalization

Some material traded on the European HRC spot market differs from the base specification of the index. This price data requires normalization to determine the equivalent price for the respective index base specification.

Material that falls within the target specification range is normalized to the index base specification and port of delivery or origin. The base specifications and ranges have been chosen following consultation with the market to reflect the reality of the physical spot market.

Data is normalized to the base specifications using inhouse developed models based on regression analysis of the collected data points. The analysis allows Fastmarkets to capture the value-in-use applied by the market to different materials, and to normalize to a single specification. This normalization process also allows Fastmarkets to capture and normalize variables outside of the chemical and physical properties such as values associated with regional origin and product-specific factors. This reflects the level of data liquidity in the market and balances the requirement to keep the value-in-use calculations reflective of the market, while providing a statistically robust data set for analysis.

Specification payment terms are based on typical commercial practice in the European HRC spot market. Transactions that are conducted on different payment or credit terms can be normalized, taking into account discounts, interest rates and standard commercial terms

Criteria for discarding pricing data

Fastmarkets uses its expert judgment to exclude prior to inclusion in the model unrepresentative numbers and discard prices that it believes may otherwise be questionable and unreliable.

Additionally, Fastmarkets has specifically constructed the European HRC indices to exclude outlier data automatically. All data points that fall more than 10% away from the initial calculation of the indices are automatically exclude – the indices are then recalculated. Outliers will be investigated; suspected attempts to unfairly influence the indices may result in the data provider being warned or excluded.

Fastmarkets reserves the right to see contracts and signed paperwork before inclusion of the data in the calculation. If this is refused, the data supplied may be excluded from the calculation process. Fastmarkets reserves the right to exclude data that is not fairly presented or is believed to be an effort to distort the

Index calculation in periods of low data liquidity

The Fastmarkets European HRC indices are calculated based on price data collected from the market. The indices are set up so that actual transactions have the greatest effect on the final calculated price.

Fastmarkets aims to calculate each index based on a robust data set and therefore, where necessary, will look to utilize price data, including estimates, offers and bids collected from the market. Data points that do not represent actual transactions will be entered into the index like transaction data but will be weighted according to the lowest tonnage permissible for the index.

Fastmarkets does not specify a minimum amount of transaction data, or a transaction data threshold, required for the publication of its index given that liquidity varies across the billet market. In the event that in a particular pricing session the dataset collected is not considered suitably robust (such as there being too few data points) for the calculation of an index, Fastmarkets will implement the following fall-back procedures (1-7) until a suitable number of data points is reached to calculate the index:

Calculation fall-back procedure

- Carry over transaction data from other sub-indices in same calculation period.
- 2. Carry over non-transaction data from other subindices in same calculation period.
- Carry over transaction data from the previous calculation in the appropriate sub-index.
- 4. Carry over transaction data from the previous calculation from any sub-index .
- 5. Carry over non-transaction data from the previous calculation in the appropriate sub-index.
- 6. Carry over non-transaction data from the previous calculation from any sub-index.
- 7. If no price data can be collected then the index price will be carried over.



In the unlikely situation that more than half of the pricing data collected on one day is provided by a single source, Fastmarkets will use the fall-back procedures 3-7 (see above) to ensure there is not a dependency on a significant proportion of data being provided by a single entity.

Publication

The European HRC indices are published every day at 4pm London time. Indices are not published on England and Wales public holidays.

Where public holidays occur on a Friday, the indices will be published on the following working day.

Please refer to the **pricing holiday schedule** for this year's public holidays.

Corrections and delays

If an index is published incorrectly, it will be rectified and republished as soon as possible. A correction notice will be sent to all subscribers.

Fastmarkets employs several procedures and measures to avoid delays in the publication of its indices. In the event of a delay, however, Fastmarkets will inform subscribers as soon as possible. In the event of late publication only data that has been received within the correct standard time frame will be included in the calculations. No indices will be amended due to the emergence of new data or market activity after the initial publication. Retrospective changes to the published values will only be made in cases of administrative or calculation error.

Specifications

European HRC Indices

MB-STE-0028 Northern Europe domestic HRC

Index

Quality Grade s235jr, 1,200-1,300mm,

thickness 3mm. Standard extras for

dimensions excluded

Quantity: Min 50 tonnes

Location: Ex-works Northern Europe (defined

as Germany, the Netherlands and

Belgium)

Timing: Up to 6 weeks (longer delivery times

will be considered under unusual conditions when no material is available for delivery within 6 weeks)

Unit: EUR/tonne

Payment terms: Typical commercial practice in the

HRC market. Transactions that are conducted on different payment or credit terms will be adjusted back to the base specifications, taking into account discounts and standard

Publication: Daily, 4pm London time

Notes: Only material offered to/traded

within Northern Europe, as defined

above, will be considered

MB-STE-0892 Steel hot-rolled coil index

domestic, exw Italy, €/tonne

Quality: Grade s235jr, width 1,250-1,500mm,

thickness 3-4mm. Standard extras

for dimensions excluded

Quantity: Minimum 28 tonnes Location: Ex-works Italian mills

Timing: Up to 6 weeks (longer delivery times

will be considered under unusual conditions when no material is available for delivery within 6 weeks)

Unit: € per tonne

Payment terms: Typical commercial practice in the

HRC market. Transactions that are conducted on different payment or credit terms will be adjusted back to the base specifications, taking into account discounts and standard

Publication: Daily, 4pm London time

Notes: Only material offered to/traded

within Italy will be considered



Methodology and price specifications review process

Fastmarkets aims to continually develop and periodically revise its methodology in consultation with industry participants, with the objective of adopting product specifications, trading terms and conditions that reflect and are representative of typical working practices in the European HRC industry.

Any change to the methodology and/or price specifications are implemented following a consultation process that starts with Fastmarkets posting on its website an advance pricing notice providing clear details and a timeframe for the proposed change.

The objective of the consultation process is to give market participants sufficient time and opportunity to provide feedback and views about the change proposed.

For more details on the formal periodic review of the methodology and details of the consultation process to propose changes to the methodology, refer to Fastmarkets's Internal and External Review Process and Fastmarkets's Change to the MethodologyConsultation process documents are available on Fastmarkets' website.

Procedure to ensure consistency in the price discovery process

Fastmarkets aims to maintain the highest standards in the provision of prices to those involved in the global metals industry.

All Fastmarkets pricing employees are required to adhere to Fastmarkets' Code of Conduct and Pricing Guidelines.

Prior to publication all indices are subject to peer review and are signed off by a senior member of Fastmarkets' editorial or index teams. This peer-review process is in place to make sure that pricing procedures and methodologies are correctly and consistently applied and to ensure integrity and quality of the published prices.

Full details of data inputs and calculations are stored in Fastmarkets' electronic database and may be accessed at any time for internal review and auditing purposes.

Index-related queries and complaints

Fastmarkets encourages engagement from the market on its pricing principles and methodology. The company promotes understanding of its calculation procedures and is committed to responding to requests for further information and clarification on a timely basis. There are multiple channels for interaction with the Index department including email, telephone and instant messenger services.

If a subscriber has an issue with the published prices, then they may contact the Price Development Team. In the event that the response is not satisfactory the issue may be escalated to the internal compliance department.

Fastmarkets takes all queries and complaints seriously and will seek to provide an explanation of the prices wherever possible. It is important to note, however, that calculation models and input data remain confidential and cannot be provided to third parties.

Price correction policy

Publication of price errors can occasionally happen for reasons that may include technical or input errors or incorrect application of the methodology.

To minimise as much as possible the inconvenience to our subscribers, Fastmarkets aims to investigate each error immediately as it becomes aware of it and to publish a correction promptly on its website through a pricing notice with an explanation of the reason for the correction.

Fastmarkets will publish a correction of a price only where it has established that undeniably there has been an error. Fastmarkets price assessments are produced based on the best data available at the time of the assessment. It will not retroactively change a price based on new information or additional submission of data received after a respective pricing session has closed.



Become a contributor Contacts to the price discovery process

Fastmarkets continually seeks to increase the number of market sources willing to take part in the price discovery process. Fastmarkets' principal requirement is that contributors are active participants in the spot market. Fastmarkets Group's Data Submitter Policy provides guidelines defining the high level of data quality and integrity that is expeccted from a contributing organisation providing pricing data. The policy can be found on Fastmarkets' website or upon request.

All data sources are subject to review before their data submitted is fully taken into account in the pricing process. The aim is to make sure that submitters are trustworthy and have sufficient visibility and understanding of the market to be able to provide viable

If you want to become a contributor to Fastmarkets pricing, or have questions or comments about the methodology and price specifications, please contact the Fastmarkets editorial director Alex Harrison at aharrison@fastmarkets.com.

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Your investment actions should be solely based upon your own decisions and research and appropriate independent advice should be obtained from a suitably qualified independent adviser before any such decision is made.