

Methodology and price specifications – January 2022





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, CIS, Istanbul and five other US locations.

The aim of this document is to provide a clear overview of Fastmarkets MB's ferrous scrap 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 produces independent, fair and representative price assessments and indices of steel, steelmaking raw materials and ferrous scrap prices on a daily, bi-weekly, weekly or monthly basis.

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 suit the ferrous scrap market's requirement for a transparent pricing mechanism.

During the price-discovery process, the price reporter's goal is to discover at what representative level market participants have concluded business, made offers or received bids over the defined trading period, which is generally the period since the conclusion of the previous price quotation.

If, for instance, the last price assessment published by Fastmarkets MB was on Friday at 2-3pm London time and our next assessment is due on the following Friday at 2-3pm London time, we will accept price data for business conducted and reported to Fastmarkets MB between 2pm on Friday and one hour before publication time on the following Friday.

The time period, or window, identified to assess a market (eg, daily, bi-weekly, weekly, monthly) is determined by Fastmarkets MB after considering the number of data points that Fastmarkets MB can reasonably expect to collect on a consistent basis over the selected period to support the price assessment process.

Data collection

Data collection criteria

Fastmarkets MB reporters aim to talk to a broad sample of market participants specifically involved in the buying and selling of the steel product or steelmaking raw material of interest, with a good representation of both sides of the market, including producers and consumers, as well as traders.

Data is collected from market participants directly involved in spot business primarily by telephone but also by email, digital messaging or by direct submission. All input data received is kept confidential and stored on a secure network.

Fastmarkets MB encourages organisations to submit all their pricing data, especially all the concluded transactions. Depending on market liquidity, Fastmarkets MB reserves the right to also base its prices on bids, offers, deals heard and market participants' estimates or indications of prevailing values.

Fastmarkets MB welcomes organisations to submit transaction data from authorised back-office functions.

Price specifications and reference units

Fastmarkets MB has clear specifications for all the price points that it covers. All the reference units, such as currency and volume, are in line with the trading conventions in recognised steel and steelmaking raw materials markets.

Fastmarkets MB's specifications detail the material's characteristics or quality, location, incoterm, payment terms and the minimum volume accepted. These specifications are determined in consultation with market participants and follow industry convention. Reporters ensure that the information they receive matches these specifications.

Guidelines that control the exercise of judgment by price reporters during the assessment process.

To produce the price assessment, greater weighting is generally given to actual concluded transaction data; bids/offers are second in order of importance; followed by data sources' own estimate of the market when they have no business to report. But other considerations might also intervene such as, the trustworthiness of a data source based on past data submissions or their willingness to provide data on a consistent basis.

All Fastmarkets MB price specifications define the minimum lot size accepted. When volume information is available, this is also taken into consideration in the assessment process. For instance, a deal with a bigger volume will typically carry more weight than a smaller-volume transaction. But price reporters will also consider, for instance, normalizing or discarding a price reported for a deal with an abnormally large or small volume.

Since commodity markets differ in liquidity levels at different periods, the methodology does not set any minimum number, or threshold, of transactions to be gathered on which to base the assessment.



Data provision and quality

The Fastmarkets MB ferrous scrap Indices are tonnage-weighted calculations based on actual transactions that have been normalized to the base specifications. The basis of all our indices is the data provided by and collected from the market. To provide the most representative pricing for the market, it is essential we are able to collect as many representative data points as possible.

Fastmarkets MB aims to collect full details of each transaction including brand, commercial terms and any other details relevant to value and pricing.

Fastmarkets MB will also collect estimates, offers and bids from market participants to supplement transaction data. If included, this non-transaction price data will be weighted at the specified minimum tonnage for the respective index.

Any market participant involved in the physical ferrous scrap market may be able to contribute data to the indices following a review by Fastmarkets MB of their activities. Fastmarkets MB aims to engage a broad and balanced range of physical market participants in the provision of data.

All data sources are subject to review before being able to submit price data to the indices. 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 MB encourages provision of data from employees in back-office functions. Data may be provided from anyone authorised by the company to submit data, and details of the submitters are recorded for contact and clarification purposes.

Fastmarkets MB utilises several channels to collect data, including phone calls, email, and messenger services from across our offices in London, Istanbul, Moscow and Singapore. The deadline for data submission is one hour before the published publication time.

Any data received after this time will be included in the next publication of the index.

Confidentiality and data protection

All data and market information supplied to Fastmarkets MB is stored on secure servers. Data supplied to Fastmarkets MB under data submitter agreements is strictly confidential and access is restricted to our index analysts.

Index calculation

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

Market balance

The Fastmarkets MB ferrous scrap Indices are structured to balance the influence of all sides of the market. 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 index calculation.

The published index figure is the straight average of two sub-indices, each of which contains data from one side of the market – the buy side and sell side. Each sub-index is a tonnage-weighted calculation of price data normalized for product specification. Only the final indices are published.

The use of two sub-indices means that each side of the market has exactly the same influence on the final price as another, therefore removing the possibility of bias or any single data provider having an overbearing influence on the final index.

Normalization

Nearly all material traded on the ferrous scrap spot market differs from the base specification of the indices. Price data requires normalization to determine the equivalent price for the respective index base specification.

Material of different grades that falls within the target specification range is normalized to the index base specification. 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 MB to capture the value-in-use applied by the market to different materials, and normalise to a single specification.

The normalization coefficients for the indices are updated every quarter to reflect the constantly changing value-in-use relationship of different origins and grades.



Our aim is to balance the requirement to keep the value-in-use calculations reflective of the market and to provide a statistically robust data set for analysis.

Payment terms are based on typical commercial practice in the ferrous scrap spot market. Transactions that are conducted on different payment or credit terms can be normalized, taking into account discounts, interest rate and standard commercial terms.

Removal of outlier data

Fastmarkets MB has constructed its Ferrous Scrap Indices to exclude outlier data automatically. All data points after normalisation that fall more than 4% away from the initial calculated index are automatically excluded – the index is then recalculated. Outliers will be investigated; suspected attempts to influence the index unfairly may result in the data provider being warned or excluded.

Fastmarkets MB reserves the right to see contracts and signed paperwork before inclusion of the data in the calculation. If this is refused, then the data, and the data supplier, may be excluded from the data collection process.

Fastmarkets MB reserves the right to exclude data that is not fairly presented or is believed may be an effort to distort the index. In this instance, the data, and the data supplier, may be excluded from the data collection process.

Index calculation during periods of low liquidity

All Fastmarkets MB Ferrous Scrap 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.

In the absence of transactions, offers at lower levels or bids at higher prices, the index prices will reflect the stability of the market by being flat if participants' feedback has been little changed.

When estimates, offers and bids collected from the market are included into index calculation to maintain a robust data set, they will be weighted according to the lowest permissible tonnage permissible for the respective index.

Fastmarkets MB does not specify a minimum amount of transaction data, or a transaction data threshold, required for the publication of its indices because liquidity varies across the ferrous scrap markets.

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 fallback procedures (1-7) until a suitable number of data points is reached to calculate the index:

- 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.
- 3. 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 a day is provided by a single source, Fastmarkets will use the fall-back procedures 3-7 (see above) to ensure there is not dependency on a significant proportion of data being provided by a single entity.



Publication

The Fastmarkets MB Ferrous Scrap Indices are published according to the following schedule::

Daily 4pm London time:

HMS 1&2 (80/20 mix), United States origin material, cfr Turkey

HMS 1&2 (80/20 mix), North European origin material, cfr Turkey

Twice weekly, Tuesday and Friday 4pm London time: Shredded material, cfr India

Weekly, Friday 4pm London time: HMS 1&2 (80/20 mix), fob Rotterdam Shredded material, cfr Pakistan

Indices are not published on UK public holidays. Where public holidays occur on a Friday, the weekly indices will be published the previous 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 MB employs several procedures and measures to avoid delays in the publication of the indices. In the event of a delay, however, Fastmarkets MB 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.

Changes to Methodology

Changes to the methodology and/or index specification may be implemented following a formal consultation process that starts with Fastmarkets MB posting on its website an advance pricing notice providing clear details and a timeframe for the change proposed. The objective of the consultation process is to give market participants sufficient time and opportunity to provide feedback and views about the proposed changes.

Once a change has been confirmed, Fastmarkets MB will issue an updated pricing notice to the market, notifying participants of the decision and specifying the date from which any change will become effective.

Procedure to ensure consistency in the price discovery process

Fastmarkets MB aims to maintain the highest standards in the provision of prices to those involved in the global metals industry. All Fastmarkets MB pricing employees are required to adhere to Fastmarkets MB's Code of Conduct and Pricing Guidelines.

All indices are subject to peer review prior to publication and are signed off by a senior member of Fastmarkets MB's 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 MB's electronic database and may be accessed at any time for internal review and auditing purposes.

Index-related queries and complaints

Fastmarkets MB 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 index team; details are provided on page 8. In the event that the response is not satisfactory the issue may be escalated to the internal compliance department.

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



Ferrous scrap indices specifications

The Fastmarkets MB ferrous scrap Indices are benchmark prices representing the ferrous scrap market. All transaction data within the specified grades below are normalized to the base specification based on the value-in-use implied by the market. The indices are rounded to two decimal places.

The CFR and FOB indices are calculated separately. They reflect outright CFR and FOB values and are not based on net-back or net-forward calculations.

MB-STE-0420 Steel scrap HMS 1&2 (80:20 mix), fob Rotterdam, \$/tonne

Quality: HMS 1&2 (80:20 mix) NE origin

compliant to ISRI specifications 200-206. Grades normalized: shredded, HMS 1&2 (70:30 mix), HMS 1&2 (90:10 mix), HMS 1, Bonus Grade, P&S, and

A3 material

Quantity: Min 5,000 tonnes

Location: fob Rotterdam, the Netherlands

Timing: Within six weeks
Unit: USD per tonne

Payment Terms Cash, other payment terms

normalized to Rotterdam

Publication: Weekly, Fridays at 4pm London time
Notes: Bulk carrier from Northern Europe

Heavy melt scrap

MB-STE-0416 Steel scrap HMS 1&2 (80:20 mix)

North Europe origin, cfr Turkey,

\$/tonne

Quality: HMS 1&2 (80:20 mix compliant with

ISRI specifications 200-206. Grades normalized Shredded, HMS 1&2 (70:30),HMS 1&2 (90:10), HMS 1, Bonus Grade, P&S, and A3 material

Quantity: Min 5,000 tonnes
Location: cfr Iskenderun, Turkey
Timing: Within six weeks
Unit: USD per tonne

Payment Terms Cash, other payment terms

normalized to basis

Publication: Daily 4pm London time

Notes: Bulk carrier from Northern Europe

Month-to-date deal weighted average

The Fastmarkets MB steel scrap, month-to-date deal-weighted average, HMS 1&2 (80:20 mix), North Europe origin, cfr Turkey, \$ per tonne considers only deals (not bids, offers or assessments) to reflect the price of traded material only, over the course of a given month, in the Turkey steel scrap import market.

The tonnage weighting is continuously applied and updated throughout the month and the index is only updated when deals occur. If no deals are heard on a given day, the price is rolled over.

The month-to-date deal weighted average is reset at the start of each month. If no deals are heard at the start of a given month, the previous month's closing price is published each day until deals are heard, from which point only the deals heard in the current month are used.

MB-STE-0417 Steel scrap HMS 1&2 (80:20 mix)
US origin, cfr Turkey, \$/tonne

Quality: HMS 1&2 (80:20 mix compliant with

ISRI specifications 200-206. Grades normalized Shredded, HMS 1&2 (70:30), HMS 1&2 (90:10), HMS 1, Bonus Grade, P&S, and A3 material

Quantity: Min 5,000 tonnes
Location: cfr Iskenderun, Turkey
Timing: Within six weeks
Unit: USD per tonne

Payment Terms Cash, other payment terms

normalized to Iskenderun

Publication: Daily 4pm London time

Notes: Bulk carrier from the United States

The data used is drawn from the same pool of data collected for the steel scrap HMS 1&2 (80:20 mix) North Europe origin, cfr Turkey, \$/tonne (MB-STE-0416), ie, any deals used in the daily price index will be used in the month-to-date average.

As with the daily index, material of different grades that falls within the target specification range will be normalized to the index base specification. Data will be normalized to the base specification using models developed in-house and based on regression analysis of the collected data points.



MB-STE-0894 Steel scrap, HMS 1&2 (80:20 mix),

month-to-date deal-weighted average, North Europe origin, cfr

Turkey, \$ per tonne

Quality: HMS 1&2 (80:20 mix compliant with

ISRI specifications 200-206; grades normalized - Shredded, HMS 1&2 (70:30), HMS 1&2 (90:10), HMS 1, Bonus Grade, P&S, A3 material)

Quantity: Minimum 5,000 tonnes
Location: cfr Iskenderun, Turkey
Timing: Within six weeks
Unit: USD per tonne

Payment terms: Cash, other payment terms

normalized to basis
Daily, 4pm London time

Notes: Bulk carrier from Northern Europe.

Index is based on deals only. Tonnage weighting is applied cumulatively throughout each calendar month before resetting at the start of each

new month.

MB-STE-0895 Steel scrap, index, heavy recycled

steel materials, cfr north China,

\$ per tonne

Quality: Cut structural and plate scrap,

compliant with China scrap standard HRS101, minimum thickness of 6mm, minimum diameter of 10mm, length less than 1,500mm, width less than 600mm, maximum unit weight

1,500kg

Quantity: Minimum 2,000 tonnes (bulk)
Location: cfr northern China ports

Timing: 3-10 weeks
Unit: US\$ per tonne

Payment terms: Letter of credit on sight
Publication: Weekly, Tuesday and Friday,

5-6pm Shanghai time

Shredded

MB-STE-0421 Steel scrap shredded, index,

import, cfr Nhava Sheva, India

\$/tonne

Quality: Shredded material, compliant to

ISRI specifications 210-212. Grades normalized: shredded, HMS 1&2 (70:30 mix),HMS 1&2 (90:10 mix), HMS 1, Bonus Grade, P&S, and A3

material

Quantity: Min 100 tonnes
Location: cfr Nhava Sheva
Timing: Within six weeks
Unit: USD per tonne

Payment Terms Cash, other payment terms

normalized to Nhava Sheva

Publication: Twice weekly, Tuesday and Fridays at

4pm London time

Notes: Containerized, all origins

MB-STE-0887 Steel scrap shredded, index,

import, cfr Port Qasim, Pakistan,

\$ per tonne

Quality: Shredded scrap, compliant to ISRI

specifications 210-212.

Quantity: Minimum 500 tonnes Location: cfr Port Qasim, Pakistan

Timing: Within six weeks
Unit: \$ per tonne
Payment terms: Letter of credit

Publication: Weekly, Fridays at 4pm London time

Notes: Containerized, all origins.

Heavy scrap

Publication:

MB-STE-0889 Steel scrap, index, heavy recycled

steel materials, cfr east China,

\$ per tonne

Quality: Cut structural and plate scrap,

compliant with China scrap standard HRS101, minimum thickness of 6mm, minimum diameter of 10mm, length less than 1,500mm, width less than 600mm, maximum unit weight

1 500ka

Quantity: Minimum 2,000 tonnes (bulk)

Location: cfr eastern China ports

Timing: 3-10 weeks
Unit: US\$ per tonne

Payment terms: Letter of credit on sight
Publication: Weekly, Tuesday and Friday,

5-6pm Shanghai time



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