

# CRU INDICES Level 1.5 Operations Manual

## CRU Steel

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## Level 1.5 Operations Manual

### 1. Price Index definitions

1.1. CRU's product definitions refer to "standardised trades" and are strictly adhered to. Appendix 1 illustrates "CRU's Level 1.5 Steel Price Indices" and their definitions.

### 2. Data providers

2.1. "CRU's Level 1.5 Steel Price Indices" are based upon data submitted by steel industry participants (our "data providers"), who collectively represent the supply chain, and include producers, consumers, stockists and traders.

2.2. Our data providers must have access to data relating to spot market transactions and are therefore typically employed in the sales/marketing department (sell-side) or purchasing/finance (buy-side) department of their companies.

2.3. CRU does accept applications from physical steel market participants to become "data providers" which are reviewed on a case-by-case basis. Applicants are only approved if they (in the opinion of CRU) have significant steel pricing/industry knowledge, integrity and who are also trustworthy and reliable. Data providers are expected to adhere to the code of conduct policies set by their employer.

2.4. All data providers agree:

- to sign a "Data provider agreement" - covering issues of security and confidentiality;
- to provide the required information to CRU Indices Ltd. by the specified deadline;
- to provide high quality data;
- not to disclose to anyone outside of their company that they are contributing data to "CRU's Level 1.5 Steel Price Indices";
- not to discuss their data submissions with anyone outside of their company, and this includes CRU staff engaged in the creation of reports/news stories and related consulting activities.

2.5. Each data provider is supplied with a "data provider welcome pack", which clearly outlines the data that they are required to submit. In addition, CRU Indices Ltd. staff contact each data provider before their first submission to ensure that they are entirely clear on what is expected of them.

2.6. Each data provider is allocated a "contributor ID". This is a randomly assigned alphanumeric string, which serves to prevent any CRU steel industry analyst, who may need to view the data submissions for quality assurance purposes (see section 6), from linking individual data points with individual companies.

2.7. Data providers submit to CRU Indices Ltd. a single price for each product, based upon CRU's strict price definitions (See Appendix ). This price represents the average price for the spot orders placed in the week (defined as Sunday through Saturday) before publication of the relevant CRU steel price Index. In the absence of spot orders, data providers can submit an opinion on the prevailing market price. Data providers are required to indicate on the "CRU Price Collection Platform (CPCP)" if their submission is an "actual transaction" or an "opinion". All data submitted is used solely for the purpose of calculating the final CRU steel price Indices.

### 3. Raw data collection and storage

3.1. The collection of raw data is looked after by CRU Indices Ltd, a Delaware incorporated company tasked with managing "CRU's Level 1.5 and 2.0 Price Indices". CRU Indices Ltd. staff are not involved in other aspects of CRU's business, such as market analysis or journalistic activities.

3.2. For each "CRU Level 1.5 Steel Price Index", the "data submission window" opens each Friday before publication and closes on Monday before publication; in the case of public holidays this is extended to the Tuesday before publication.

3.3. As the "data submission window" opens, data providers are sent an email. This includes a URL that allows data providers to access the front-end of the "CRU Price Collection Platform (CPCP)" through [www.cruindices.com](http://www.cruindices.com). Each data provider is directed to a user defined submission page, which will only allow data to be submitted for the products for which that data provider is registered. The page includes measures designed to eliminate the risk of errors in data entry. For example, all data providers are required to enter the data that they are submitting twice.

3.4. At least twelve hours before the "data submission window" closes (12.00pm London, UK on the Monday before publication), the "CPCP" identifies the registered data providers that have not yet submitted data. Each are then sent a further email, reminding them of when the "data submission window" is set to close. Again, this email will include a URL that allows data providers to access the front-end of the "CPCP".

3.5. In the event of a data provider experiencing technical difficulties in submitting data to CRU Indices Ltd., back-up procedures are in place. Data providers are, for example, permitted to submit data via fax or from a pre-defined email address, using templates provided in the "data providers' pack". On such occasions, CRU Indices Ltd. staff will input the data into the "CPCP" on behalf of the data provider.

3.6. Data providers are permitted to provide multiple submissions or corrections to the data submitted, provided that these are received by the time the "data submission window" is closed. The last submission that the data provider submits before the "data submission window" is closed is the only submission that is considered for inclusion in subsequent price Index calculations.

3.7. All data submissions are stored to deal with queries should they arise.

3.8. The database used to store data submissions is hosted in a physically separate location to CRU Indices Ltd., on servers in a "clustered array" environment. These servers synchronise in real-time, providing a fully redundant "hot" back-up of each other, giving immediate failover to the alternative server should a critical part of the infrastructure fail. In addition, a daily data backup process allows copies of the data to be taken from the databases and outside of the live infrastructure. In addition, a daily data backup process ensures copies of the data are kept in two separate physical locations.

3.9. Data stored that includes the identity of the provider, is only directly accessible to employees of CRU Indices Ltd. However, a “cleansed version” of the data is available to CRU’s steel industry analyst, who may need to view the data for quality assurance purposes (see section 6), through the “CPCP”.

3.10. The “cleansed version” of the data comprises the price submissions, along with the associated contributor ID of each participant. At no point is data released along with the true identities of the data providers.

## 4. Error detection procedures - raw data and initial price Indices calculation

4.1. Data submissions are subject to pro-active checks in order to detect errors. For example, each price submitted by a data provider must fall within the “gateway range” set by CRU’s steel industry analyst. A price submission that falls outside of this range is excluded from the “Initial price index”.

4.2. In the instance where a data submission is significantly outside of the “gateway range”, staff of CRU Indices Ltd. contact the data provider to ensure that the correct data has been submitted. If the data has been entered incorrectly, staff of CRU Indices Ltd can re-enter the correct data into the back-office of the “CPCP” on behalf of the data provider. In this instance, the data provider is required to submit written confirmation of the data, via email or fax, to CRU Indices.

4.3. All price submissions that have passed this initial check are then subjected to a further statistical check by the “CPCP”

4.4. Individual price submissions are compared with the previous price submission made by that data provider. Submissions beyond a specific percentage range (+/-5%, although this is actively adjusted by CRU steel industry analysts in situations of significant market volatility) from the previous submission are “flagged”. At this point, CRU Indices Ltd. staff check with CRU’s steel industry analyst whether such a change is plausible.

4.5. If the answer is “yes”, those price submissions are included in the “Initial price index” calculations. If the answer is “no”, those price submissions are not included in the “Initial price Index” calculations. At no point will CRU Indices Ltd. share the identity of the data provider with CRU’s steel industry analysts.

4.6. When all of the checks have taken place and CRU Indices Ltd. have checked any individual data submissions for validity and are satisfied that all data submissions are valid, the CRU Indices Ltd. team run the “Initial price indices calculations”.

## 5. Calculation procedures for final price Indices

5.1. At this point the CRU steel industry analyst is notified via automatic email through the “CPCP” that the “Initial price Index calculation” has been completed.

5.2. If the CRU steel industry analyst is satisfied with the “Initial price indices calculation” then it can be passed as the “Final price index”. Alternatively, they also have the option of reviewing all of the “cleansed data” – including those submissions that failed the statistical checks – and, if they feel it is warranted, re-including any submissions.

5.3. When they are completely satisfied with the data points that will be included in the calculation, they calculate the “final price indices” via the “CPCP”. At this point they approve the “Final price indices” on the “CPCP” which automatically notified CRU Indices Ltd. staff that the “Final price indices” are approved for publication.

5.4. If the “Final price index” in the judgement of CRU Indices Ltd, is significantly different than the “Initial price Index” then CRU Indices Ltd staff will seek confirmation from the CRU steel industry analyst.

5.5. “CRU’s Level 1.5 Steel Price Indices” are an average of the price submissions that have been passed for inclusion in the calculation.

5.6. In the absence of any data being submitted, or that the data submitted does not fall within the “gateway range”, CRU steel industry analysts would consider using reported trades to arrive at a price Index, and in so doing they would use their judgement and other market information to assess whether the trades gave a true reflection of the market price.

## 6. Error detection/resolution procedures - final price Indices

6.1. The “Initial price indices” calculated by CRU Indices Ltd. are subject to an “observation period”. During this period, CRU’s steel industry analysts can view the “cleansed version” of the raw data.

6.2. “Initial price indices” that appear reasonable can be accepted as “Final price indices” and released for publication. If an Index is flagged-up by CRU’s steel analyst as being suspect (based upon their understanding of the current market), they request that CRU Indices Ltd. seek verification of the data collection and index calculation procedures.

6.3. In the unlikely event that a suspect submission passes the statistical tests imposed on incoming data, that submission is identified and removed from the price Index calculations.

6.4. As stated in section 3.10, this “cleansed version” of the data will comprise the price submissions, along with the associated contributor ID of each participant. At no point is data released along with the true identities of the participants.

6.5. Only when CRU's steel industry analysts are happy that the calculation has been based upon reliable data is the index released for publication.

6.6. No adjustments will be made to the definitive CRU steel price indices after they have been published.

## 7. Dissemination of final price Indices

7.1. CRU steel prices Indices are published every Wednesday by 2.00pm (London, UK).

7.2 They are made available to subscribers of the "CRU Steel Monitor", "CRU Steel Sheet Products Monitor", data providers and licensees.

7.3. If, for whatever reason, it is not possible to publish a definitive price, CRU will always publish a provisional price by 2.00pm (London, UK), but reserves the right to change this. If this happens, it will be clearly indicated that the price published is provisional.

## 8. Other information

8.1. To ensure that CRU Indices Ltd. is following the procedures outlined in this "Operations Manual", it will – from time-to-time – be audited.

## Appendix: Level 1.5 Price Index Definitions

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### Italian Hot-rolled (HR) coil:

- Base price, from parity point within Italy, for spot purchases for forward delivery
- Commercial quality (prime) material, within standard tolerances
- In coils of at least 15 tonnes, with standard packaging
- Extras for gauge and width excluded
- Delivery charges and taxes excluded
- Raw materials surcharges (where applicable) are included

### Italian Cold-rolled (CR) coil:

- Base price, from parity point within Italy, for spot purchases for forward delivery
- Commercial quality (prime, annealed and tempered) material, within standard tolerances
- In coils of at least 15 tonnes, with standard packaging
- Extras for gauge and width excluded
- Delivery charges and taxes excluded
- Raw materials surcharges (where applicable) are included

### Italian Hot-dipped galvanised (HDG) coil:

- Base price, within Italy from parity point
- Commercial quality hot-dipped galvanised coil within standard tolerances
- In coils of at least 15 tonnes each, with standard packaging
- Extras for gauge and width are excluded
- Delivery charges and taxes are excluded
- Raw materials surcharges (where applicable) are included
- Coating extras excluded

### Italian Plate:

- Delivered price for forward delivery
- Commercial quality plate, with standard packaging
- All extras for gauges width and length are excluded
- Delivery charges from Mills to domestic customers are included but taxes are excluded
- Raw material surcharges (where applicable) are included

### German Hot-rolled (HR) coil:

- Base price, from parity point within Germany, for spot purchases for forward delivery
- Commercial quality (prime) material, within standard tolerances
- In coils of at least 15 tonnes, with standard packaging
- Extras for gauge and width excluded
- Delivery charges and taxes excluded
- Raw materials surcharges (where applicable) are included

### German Cold-rolled (CR) coil:

- Base price, from parity point within Germany, for spot purchases for forward delivery
- Commercial quality (prime, annealed and tempered) material, within standard tolerances
- In coils of at least 15 tonnes, with standard packaging
- Extras for gauge and width excluded
- Delivery charges and taxes excluded
- Raw materials surcharges (where applicable) are included

### German Hot-dipped galvanised (HDG) coil:

- Base price, within Germany from parity point
- Commercial quality hot-dipped galvanised coil within standard tolerances
- In coils of at least 15 tonnes each, with standard packaging
- Extras for gauge and width are excluded
- Delivery charges and taxes are excluded
- Raw materials surcharges (where applicable) are included
- Coating extras excluded

### German Plate:

- Delivered price for forward delivery
- Commercial quality plate, with standard packaging
- All extras for gauge, width and length are excluded
- Delivery charges to domestic market customers are included but taxes are excluded
- Raw materials surcharges (where applicable) are included