

ARGUS RUSSIAN DRY BULK LOGISTICS

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The most up-to-date Argus Russian Dry Bulk Logistics methodology is available on www.argusmedia.com



Methodology overview

Methodology rationale

Argus strives to construct methodologies that reflect the way the market trades. Argus aims to produce price assessments which are reliable and representative indicators of commodity market values and are free from distortion. As a result, the specific currencies, volume units, locations and other particulars of an assessment are determined by industry conventions.

In the market for dry bulk logistics, Argus publishes physical market prices in the open market as laid out in the specifications and methodology guide. Argus uses the trading period deemed by Argus to be most appropriate, in consultation with industry, to capture market liquidity.

In order to be included in the assessment process, deals must meet the minimum volume, delivery, timing and specification requirements in our methodology. In illiquid markets, and in other cases where deemed appropriate, Argus assesses the range within which product could have traded by applying a strict process outlined later in this methodology.

Survey process

Argus price assessments are informed by information received from a wide cross section of market participants, including producers, consumers and intermediaries. Argus reporters engage with the industry by proactively polling participants for market data. Argus will contact and accept market data from all credible market sources including front and back office of market participants and brokers. Argus will also receive market data from electronic trading platforms and directly from the back offices of market participants. Argus will accept market data by telephone, instant messenger, email or other means.

Argus encourages all sources of market data to submit all market data to which they are a party that fall within the Argus stated methodological criteria for the relevant assessment. Argus encourages all sources of market data to submit transaction data from back office functions.

Throughout all markets, Argus is constantly seeking to increase the number of companies willing to provide market data. Reporters are mentored and held accountable for expanding their pool of contacts. The number of entities providing market data can vary significantly from day to day based on market conditions.

For certain price assessments identified by local management, if more than 50pc of the market data involved in arriving at a price assessment is sourced from a single party the supervising editor will engage in an analysis of the market data with the primary reporter to ensure that the quality and integrity of the assessment have not been affected.

Market data usage

In each market, Argus uses the methodological approach deemed to be the most reliable and representative for that market. Argus will utilise various types of market data in its methodologies, to include:

- Transactions
- · Bids and offers
- Other market information, to include spread values between grades, locations, timings, and many other data.

In many markets, the relevant methodology will assign a relatively higher importance to transactions over bids and offers, and a relatively higher importance to bids and offers over other market information. Certain markets however will exist for which such a hierarchy would produce unreliable and non-representative price assessments, and so the methodology must assign a different relative importance in order to ensure the quality and integrity of the price assessment. And even in markets for which the hierarchy normally applies, certain market situations will at times emerge for which the strict hierarchy would produce non-representative prices, requiring Argus to adapt in order to publish representative prices.

Verification of transaction data

Reporters carefully analyse all data submitted to the price assessment process. These data include transactions, bids, offers, volumes, counterparties, specifications and any other information that contributes materially to the determination of price. This high level of care described applies regardless of the methodology employed. Specific to transactions, bids, and offers, reporters seek to verify the price, the volume, the specifications, location basis, and counterparty. In some transactional average methodologies, reporters also examine the full array of transactions to match counterparties and arrive at a list of unique transactions. In some transactional average methodologies, full details of the transactions verified are published electronically and are accessible by subscribers.

Several tests are applied by reporters in all markets to transactional data to determine if they should be subjected to further scrutiny. If a transaction has been identified as failing such a test, it will receive further scrutiny. For assessments used to settle derivatives and for many other assessments, Argus has established internal procedures that involve escalation of inquiry within the source's company and escalating review within Argus management. Should this process determine that a transaction should be excluded from the price assessment process, the supervising editor will initiate approval and, if necessary, documentation procedures.

Primary tests applied by reporters

- Transactions not transacted at arms length, including deals between related parties or affiliates.
- Transaction prices that deviate significantly from the mean of all transactions submitted for that day.
- Transaction prices that fall outside of the generally observed lows and highs that operated throughout the trading day.
- Transactions that are suspected to be a leg of another transaction or in some way contingent on an unknown transaction.
- Single deal volumes that significantly exceed the typical transaction volume for that market.
- Transaction details that are identified by other market participants as being for any reason potentially anomalous and perceived by Argus to be as such.
- Transaction details that are reported by one counterparty dif-



ferently than the other counterparty.

- Any transaction details that appear to the reporter to be illogical or to stray from the norms of trading behaviour. This could include but is not limited to divergent specifications, unusual delivery location and counterparties not typically seen.
- Transactions that involve the same counterparties, the same price and delivery dates are checked to see that they are separate deals and not one deal duplicated in Argus records.

Secondary tests applied by editors for transactions identified for further scrutiny

Transaction tests

- The impact of linkage of the deal to possible other transactions such as contingent legs, exchanges, options, swaps, or other derivative instruments. This will include a review of transactions in markets that the reporter may not be covering.
- The nature of disagreement between counterparties on transactional details.
- The possibility that a deal is directly linked to an offsetting transaction that is not publicly known, for example a "wash trade" which has the purpose of influencing the published price.
- The impact of non-market factors on price or volume, including distressed delivery, credit issues, scheduling issues, demurrage, or containment.

Source tests

- The credibility of the explanation provided for the outlying nature of the transaction.
- The track record of the source. Sources will be deemed more credible if they
 - Regularly provide transaction data with few errors.
 - Provide data by Argus' established deadline.
 - · Quickly respond to queries from Argus reporters.
 - Have staff designated to respond to such queries.
- How close the information receipt is to the deadline for information, and the impact of that proximity on the validation process.

Assessment guidelines

When insufficient, inadequate, or no transaction information exists, or when Argus concludes that a transaction-based methodology will not produce representative prices, Argus reporters will make an assessment of market value by applying intelligent judgment based on a broad array of factual market information. Reporters must use a high degree of care in gathering and validating all market data used in determining price assessments, a degree of care equal to that applying to gathering and validating transactions. The information used to form an assessment could include deals done, bids, offers, tenders, spread trades, exchange trades, fundamental supply and demand information and other inputs.

The assessment process employing judgment is rigorous, replicable, and uses widely accepted valuation metrics. These valuation metrics mirror the process used by physical commodity traders to internally assess value prior to entering the market with a bid or

offer. Applying these valuation metrics along with sound judgment significantly narrows the band within which a commodity can be assessed, and greatly increases the accuracy and consistency of the price series. The application of judgment is conducted jointly with the supervising editor, in order to be sure that the guidelines below are being followed. Valuation metrics include the following:

Relative value transactions

Frequently transactions occur which instead of being an outright purchase or sale of a single commodity, are instead exchanges of commodities. Such transactions allow reporters to value less liquid markets against more liquid ones and establish a strong basis for the exercise of judgment.

- Exchange one commodity for a different commodity in the same market at a negotiated value.
- Exchange delivery dates for the same commodity at a negotiated value.
- Exchange a commodity in one location for the same commodity at another location at a negotiated value.

Bids and offers

If a sufficient number of bids and offers populate the market, then in most cases the highest bid and the lowest offer can be assumed to define the boundaries between which a deal could be transacted.

Comparative metrics

- The relative values between compared commodities are readily discussed in the market and can be discovered through dialogue with market participants. These discussions are the precursor to negotiation and conclusion of transactions.
- Comparison to the same commodity in another market centre.
- Comparison to a more actively traded but slightly different specification commodity in the same market centre.
- Comparison to the same commodity traded for a different delivery timing.
- Comparison to the commodity's primary feedstock or primary derived product(s).
- Comparison to trade in the same commodity but in a different modality (as in barge versus oceangoing vessel) or in a different total volume (as in full cargo load versus partial cargo load).

Volume minimums and transaction data thresholds

Argus typically does not establish thresholds strictly on the basis of a count of transactions, as this could lead to unreliable and non-representative assessments and because of the varying transportation infrastructure found in all commodity markets. Instead, minimum volumes are typically established which may apply to each transaction accepted, to the aggregate of transactions, to transactions which set a low or high assessment or to other volumetrically relevant parameters.

For price assessments used to settle derivatives, Argus will seek to establish minimum transaction data thresholds, and when no such threshold can be established Argus will explain the reasons. These thresholds will often reflect the minimum volumes necessary to



produce a transaction-based methodology, but may also establish minimum deal parameters for use by a methodology that is based primarily on judgment.

Should no transaction threshold exist, or should submitted data fall below this methodology's stated transaction data threshold for any reason, Argus will follow the procedures outlined elsewhere in this document regarding the exercise of judgment in the price assessment process.

Transparency

Argus values transparency in energy markets. As a result, where available, we publish lists of deals in our reports that include price, basis, counterparty and volume information. The deal tables allow subscribers to cross check and verify the deals against the prices. Argus feels transparency and openness is vital to developing confidence in the price assessment process.

Swaps and forwards markets

Argus publishes forward assessments for numerous markets. These include forward market contracts that can allow physical delivery and swaps contracts that swap a fixed price for the average of a floating published price. Argus looks at forward swaps to inform physical assessments but places primary emphasis on the physical markets.

Publications and price data

Argus dry bulk logistics prices are published in the Argus Russian Dry Bulk Logistics report. Subsets of these prices appear in other Argus market reports and newsletters in various forms. The price data are available independent of the text-based report in electronic files that can feed into various databases. These price data are also supplied through various third-party data integrators. The Argus website also provides access to prices, reports and news with various web-based tools. All Argus prices are kept in a historical database and available for purchase. Contact your local Argus office for information

A publication schedule is available at www.argusmedia.com

Corrections to assessments

Argus will on occasion publish corrections to price assessments after the publication date. We will correct errors that arise from clerical mistakes, calculation errors, or a misapplication of our stated methodology. Argus will not retroactively assess markets based on new information learned after the assessments are published. We make our best effort to assess markets based on the information we gather during the trading day assessed.

Ethics and compliance

Argus operates according to the best practices in the publishing field, and maintains thorough compliance procedures throughout the firm. We want to be seen as a preferred provider by our subscribers, who are held to equally high standards, while at the same time maintaining our editorial integrity and independence. Argus has a strict ethics policy that applies to all staff. The policy can be found on our website at www.argusmedia.com. Included in this

policy are restrictions against staff trading in any energy commodity or energy related stocks, and guidelines for accepting gifts. Argus also has strict policies regarding central archiving of email and instant messenger communication, maintenance and archiving of notes, and archiving of spreadsheets and deal lists used in the price assessment process. Argus publishes prices that report and reflect prevailing levels for open-market arms length transactions (please see the Argus Global Compliance Policy for a detailed definition of arms length).

Consistency in the assessment process

Argus recognises the need to have judgment consistently applied by reporters covering separate markets, and by reporters replacing existing reporters in the assessment process. In order to ensure this consistency, Argus has developed a programme of training and oversight of reporters. This programme includes:

- A global price reporting manual describing among other things the guidelines for the exercise of judgment
- Cross-training of staff between markets to ensure proper holiday and sick leave backup. Editors that float between markets to monitor staff application of best practices
- Experienced editors overseeing reporting teams are involved in daily mentoring and assisting in the application of judgment for illiquid markets
- Editors are required to sign-off on all price assessments each day, thus ensuring the consistent application of judgment.

Review of methodology

The overriding objective of any methodology is to produce price assessments which are reliable and representative indicators of commodity market values and are free from distortion. As a result, Argus editors and reporters are regularly examining our methodologies and are in regular dialogue with the industry in order to ensure that the methodologies are representative of the market being assessed. This process is integral with reporting on a given market. In addition to this ongoing review of methodology, Argus conducts reviews of all of its methodologies and methodology documents on at least an annual basis.

Argus market report editors and management will periodically and as merited initiate reviews of market coverage based on a qualitative analysis that includes measurements of liquidity, visibility of market data, consistency of market data, quality of market data and industry usage of the assessments. Report editors will review:

- Appropriateness of the methodology of existing assessments
- Termination of existing assessments
- · Initiation of new assessments.

The report editor will initiate an informal process to examine viability. This process includes:

- Informal discussions with market participants
- Informal discussions with other stakeholders
- Internal review of market data



Should changes, terminations, or initiations be merited, the report editor will submit an internal proposal to management for review and approval. Should changes or terminations of existing assessments be approved, then formal procedures for external consultation are begun.

Changes to methodology

Formal proposals to change methodologies typically emerge out of the ongoing process of internal and external review of the methodologies. Formal procedures for external consultation regarding material changes to existing methodologies will be initiated with an announcement of the proposed change published in the relevant Argus report. This announcement will include:

- Details on the proposed change and the rationale
- Method for submitting comments with a deadline for submissions
- For prices used in derivatives, notice that all formal comments will be published after the given consultation period unless submitter requests confidentiality.

Argus will provide sufficient opportunity for stakeholders to analyse and comment on changes, but will not allow the time needed to follow these procedures to create a situation wherein unrepresentative or false prices are published, markets are disrupted, or market participants are put at unnecessary risk. Argus will engage with industry throughout this process in order to gain acceptance of proposed changes to methodology. Argus cannot however guarantee universal acceptance and will act for the good order of the market and ensure the continued integrity of its price assessments as an overriding objective.

Following the consultation period, Argus management will commence an internal review and decide on the methodology change. This will be followed by an announcement of the decision, which will be published in the relevant Argus report and include a date for implementation. For prices used in derivatives, publication of stakeholders' formal comments that are not subject to confidentiality and Argus' response to those comments will also take place.

Dry bulk transportation markets

Argus Russian Dry Bulk Logistics is a monthly Russian-language report on the logistics of dry bulk cargoes for export and within the domestic market. The publication includes railcar lease rates for dry bulk transportation, port handling costs for bulk and general cargoes, and freight rates for seagoing bulk carriers.

Railcar lease rates, handling costs and freight rate assessments published by Argus are the prevailing price of arms length trade. See the Argus Global Compliance Policy for more information.

Rail tariffs and railcar lease

Railway tariffs are calculated based on Russian and Kazakh tariff policies effective on the date of publication, for both owned and leased railcars. To assess railway tariffs, Argus uses a dedicated software program, Rail-Tariff.

Daily lease rates for gondola cars, mineral and grain hoppers, boxcars and flatcars in Russia and Kazakhstan, as well as daily coal transportation fees are determined monthly by polling major operators of rolling stock, as well as their customers.

The average market lease rates for rolling stock are published as a range of prices in roubles per day (Rbs/d, exclusive of VAT) in Argus Russian Dry Bulk Logistics.

Russian boxcars

The base lease rate for boxcars in Russia is for 138m³ and 158m³ boxcars rented on spot or within a term contract, in roubles, exclusive of VAT.

Russian flatcars

The base lease rate for flatcars in Russia is for 40ft, 60ft and 80ft flatcars rented on spot or within a term contract, in roubles, exclusive of VAT.

Russian grain hoppers

The base lease rate for grain hoppers in Russia is for a standard railcar with an axle load of 23.5 tf (tonne-force) rented on spot or within a term contract, in roubles, exclusive of VAT.

Other rail freight

Gondola cars in Russia: Spot and term contract prices, as well as daily coal transportation fees are published in Rbs/d (see the Argus Russian Coal methodology and the Argus Russian Generation Fuels and Power methodology).

Mineral hoppers and gondola cars in Russia: A single rate for spot and term contracts is published in Rbs/d (see the Argus Russian Fertilizer Netbacks methodology).

Gondola cars in Kazakhstan: Published in \$/d (see the Argus Caspian Transportation methodology).

Boxcars cars in Kazakhstan: Published in \$/d (see the Argus Caspian Transportation methodology).

Flatcars in Kazakhstan: published in \$/d (see the Argus Caspian Transportation methodology).

Port handling costs

Ferrous metals

Argus publishes the cost of port terminal services for the transhipment of ferrous metals (including wire rod, steel billet, pig iron) to sea transport. Storage and port handling rates for ferrous metals are set by terminal operators. Argus surveys shippers, operators and terminal owners and publishes rates biannually.



An analysis of the handling costs at terminals that load ferrous metals from Russian ports is published twice a year, usually at the beginning of the year and in the second half of the year based on a survey of shippers, operators and terminal owners.

Rates are published in \$/t for the following ports

- St. Petersburg
- Ust-Luga
- Novorossiysk
- Tuapse
- Nakhodka
- Vladivostok

Rates are published in €/t for the following ports (including rail transit costs)

Kaliningrad

Grain cargoes

Argus publishes the cost of port terminal services for the transhipment of grains (including wheat, corn and oilseed meal) to sea transport. Storage and port handling rates for grains are set by terminal operators. Argus surveys shippers, operators and terminal owners and publishes rates biannually.

An analysis of the handling costs at terminals that load grains from Russian and Baltic country ports is published twice a year, usually at the beginning of the year and in the second half of the year based on a survey of shippers, operators and terminal owners.

Rates are published in \$/t for the following ports

- Novorossiysk
- Taman
- Taganrog
- Yeysk

Rates are published in €/t for the following ports (including rail transit costs)

- Ventspils
- Riga
- Liepaja

Coal

Coal port handling costs are assessed and published in Argus Russian Coal and republished in Argus Russian Dry Bulk Logistics.

Ports for which costs are published are selected based on market activity and available information and are subject to change.

See the Argus Russian Coal methodology.

Far eastern ports

- · Vostochny Port
- East Ural Terminal
- · Vanino Commercial Sea Port
- Daltransugol, Vanino (for independent entities)
- Vaninotransugol
- Evraz Nakhodka Commercial Sea Port (for independent entities)

- Astafieva
- Vostochnye Vorota
- Livadia
- · Vladivostok Sea Fishing Port
- Vladivostok Commercial Sea Port
- Attis
- Dalmormontazh
- Port Vera

Northwestern ports

- · Rosterminalugol, Ust-Luga
- Multipurpose Reloading Complex, Ust-Luga
- Yug-2, Ust-Luga
- Ust-Luga Container Terminal
- · Ultramar, Ust-Luga
- Vysotsk
- Vyborg
- Murmansk Commercial Sea Port
- · Ventspils, Latvia

Southern ports

- Taman
- Novorossiysk
- Tuapse
- Rostov-on-Don
- Temryuk
- Azov
- Taganrog
- Kavkaz

Fertilizer storage and port handling costs are assessed and published annually in \$/t. Ports for which costs are published are selected based on market activity and available information and are subject to change.

See the Argus Russian Fertilizers methodology.

Costs are published for

- Kotka, Finland
- St Petersburg
- Ust-Luga
- Murmansk
- Novorossiysk
- Tuapse
- Kavkaz
- Taman

Freight rates for seagoing vessels

Metals

Argus publishes spot freight rates for dry bulk carriers for seaborne transportation of ferrous metals including steel billets, scrap, pig iron. Rates are assessed and published on the first and third Friday of the calendar month on the Argus Direct platform and in the Argus Dry Bulk Logistics report each month. If the first or third Friday of the month is a holiday, rates will be assessed and published on the next business day.



Assessments are of the average spot market rate at which vessels were or could have been chartered during the assessment period. Freight rates are assessed for loading within 90 days of the date the charter was agreed.

Rates are assessed and published in US dollars per tonne for the named route. Fixtures to other regional ports may be included in the absence of other relevant market information.

Steel billet rates		
Port of loading	Point of delivery	Cargo, '000t
Novorossiysk	Zonguldak (Turkey)	3-5
Novorossiysk	Diliskelesi, Sea of Marmara (Turkey)	3-5
Novorossiysk	Zonguldak (Turkey)	8-10
Novorossiysk	Alexandria (Egypt)	8-10
Novorossiysk	Iskenderun (Turkey)	8-10
Novorossiysk	Iskenderun (Turkey)	25-30
Novorossiysk	Manila (Philippines)	25-30
Novorossiysk	Singapore	40-50
Russian far east	Taiwan	25-30
Russian far east	north China	25-30

Ferrous scrap rates		
Port of loading	Point of delivery	Cargo, '000t
Rostov-on-Don/Yeysk	Diliskelesi, Martas, Sea of Marmara (Turkey)	3-5
St. Petersburg	Iskenderun (Turkey)	25-30

Pig iron rates		
Port of loading	Point of delivery	Cargo, '000t
Novorossiysk	Marghera (Italy)	8-10
Novorossiysk	Samsun (Turkey)	8-10
Novorossiysk	Iskenderun (Turkey)	20-25
Novorossiysk	Marghera (Italy)	25-30

Other dry bulk

Argus Russian Dry Bulk Logistics includes seaborne freight rates. Unless noted, freight rates are republished from Argus Russian Coal.

Rates are the weekly assessments published in Argus Russian Coal, and the daily assessments published on the last day of the week in Argus Dry Freight in the month before publication of Argus Russian Dry Bulk Logistics.

See the Argus Russian Coal methodology.

Panamax (voyage charter basis)

- Murmansk-Rotterdam*
- Vostochny Port's Universal Production and Transport Complex (PPK-1)-South Korea
- PPK-1-Taiwan
- PPK-1-Japan
- PPK-1-China
- PPK-1-India
- Vostochny Port's Special Coal Production and Transport Complex (PPK-3)-South Korea

- PPK-3-Taiwan
- PPK-3-Japan
- PPK-3-China
- · Vanino-China
- Vanino-Japan
- Vanino-Taiwan
- Vanino-South Korea
- · Vanino-India

*Republished from Argus Dry Freight - see the Argus Dry Freight methodology.

Panamax (annual time charter basis)

- Ust-Luga-Rotterdam
- Ust-Luga-Iskenderun
- · Ventspils-Rotterdam
- Taman-Rotterdam
- Taman-Isdemir/Iskenderun
- Taman-west coast India
- Taman-east coast India
- Taman-Vietnam
- Taman-South Korea
- Vostochny (PPK-3)-South Korea
- Vostochny (PPK-3)-China
- Vostochny (PPK-3)-Taiwan
- Vostochny (PPK-3)-Japan
- Vostochny (PPK-3)-Vietnam

Capesize (annual time charter basis)

- Taman-Eren/Zonguldak
- Taman-Iskenderun
- Vanino-South Korea
- · Vanino-China
- Vanino-Taiwan
- · Vanino-east coast India
- · Vostochny (PPK-3)-South Korea
- Vostochny (PPK-3)-China
- Vostochny (PPK-3)-Taiwan
- Taman-west coast IndiaTaman-east coast India
- Taman-South Korea

Russian coal freight

Argus Russian Dry Bulk Logistics includes freight rates for vessels carrying Russian coal. Rates are monthly averages of those published in Argus Dry Freight. See the Argus Dry Freight methodology.

- Ust-Luga to Iskenderun 75,000t
- Ust-Luga to west coast India 75,000t
- Ust-Luga to China 75,000t
- Taman to Iskenderun 75,000t
- Taman to west coast India 75,000t
- Taman to China 160,000t
- Murmansk to China 75,000t
- Vostochny to north China 75,000t
- Vostochny to South Korea 75,000t



Caspian freight rates

Argus Russian Dry Bulk Logistics includes Caspian freight rates republished from Argus Caspian Transportation. See the Argus Caspian Transportation methodology.

Dry bulk carriers (urea)

- Turkmen ports-Azerbaijan ports
- Turkmen ports-Marmara ports

Dry bulk carriers (grain)

- Aktau Iranian ports
- Astrakhan Iranian ports

Container indexes

Argus calculates Import Container Indexes for the combined transportation of a standard 20'DC (dry container) and a 40'HC (high cube container) from east Asian ports to Moscow.

The indexes are the average market cost of transporting a container by sea and rail on routes from the ports of China and South Korea to Moscow through the port of Vladivostok and Vostochny.

Indexes and their seaborne and rail components are published electronically on the first business day and on the 16th day of the calendar month and in the print edition of Argus Russian Dry Bulk Logistics. If these dates fall on a weekend or public holiday in Russia, the indexes are published on the next business day.

Each index is the cost of transportation on the date of publication for cargoes loading before the publication of the next index. For example, the index published on the first of the month is for cargoes loading during the first half of that calendar month and the index published on the 16th of the month is for cargoes loading during the second half of that calendar month.

Calculation method

Indexes are calculated as the sum of costs for transportation by sea and rail, in roubles per container, using the following formula:

I = S * X + R

where

- I the import container index in roubles per container
- S the cost of seaborne transportation in US dollars/container as described below
- X the official exchange rate of the US dollar against the rouble set by the Central Bank of the Russian Federation on the date of publication of the index
- R the cost of railway transportation in roubles/container as described below

Routes

Argus calculates and publishes the Indexes for routes from east Asian ports to Moscow via the ports of Vladivostok/Vostochny.

China

- Shanghai
- Ningbo
- Qingdao
- Xiamen
- Xingang
- Yantian

South Korea

• Busan

Transportation by sea

The cost of seaborne transportation of one container charged by shipping companies from the port of loading to Vladivostok/ Vostochny, including freight and handling charges at Vladivostok/ Vostochny and the cost of returning the empty container. Handling charges at the port of loading are not included.

Seaborne transportation costs include the "drop-off price" at Moscow — the cost of returning an empty container, owned by the carrier.

Container freight rates are the cost of transportation announced by shipping companies for the period including the date of the index. If no rate is available for that date, the calculation uses announced costs of seaborne transit on the nearest future date before the next index publication date.

Seaborne transportation costs are calculated and published in US dollars per container.

Transportation by rail

The cost of rail transportation for a standard 20'DC (cargo weight up to 24t) or a 40'HC container from Vladivostok/Vostochny terminals to Moscow, including customs clearance in Vladivostok/Vostochny, loading on a flatcar at the port terminal in Vladivostok/Vostochny, transportation to Moscow and discharge from the flatcar in Moscow. The cost of cargo protection during transportation is not included.

Rail transportation costs are an average of rates from companies that provide transport from Vladivostok/Vostochny to Moscow. Rail transportation costs are calculated and published in roubles per container.

Transportation by sea (freight only, no "drop off" costs)

Argus calculates and publishes freight rates for routes from east Asian ports to the port of Vladivostok/Vostochny in US dollars per container by shipping companies.

Routes

China

- Shanghai
- Ningbo
- Qingdao
- Xiamen
- Xingang
- Yantian

South Korea

• Busan