

PRICE ASSESSMENT METHODOLOGY AND SPECIFICATIONS

Recovered Paper – Latin America

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UNDERSTANDING RISI PRICE ASSESSMENTS

Each price assessment is...

RISI's assessment of the **open market price** for **recurring business** based on **actual transaction prices** and supporting data gathered from a **systematic survey of buyers and sellers** that has been **rigorously evaluated**.

Open market prices are those arrived at through negotiation, so exclude "indexed" transactions, i.e. transactions whose price is determined by a formula based on published prices (whether from RISI or other source) *(See "Grade detail and specifications" below)*

Recurring business: Reflects transactions in ongoing supply relationships and excludes one-off/spot transactions. *(See "Grade detail and specifications" below)*

Actual transaction prices form the bulk of data in each assessment; supporting data like price offers made or received is used to support transaction data. *(See "Types of data considered" below)*

Systematic survey of buyers and sellers: Survey has thorough representation of the market and includes both buyers and sellers, and a range of players from small to large. *(See "Data collection process" below)*

Rigorous evaluation: Assessment procedures include evaluation, verification, weighting and aggregation, plus confirmation of the assessment by a supervising editor. *(See "How prices are assessed" below)*

About this methodology

RISI Indices is the division of RISI responsible for price assessments. This document describes the procedures RISI Indices uses to determine its North American recovered paper price assessments. As of 2015, this methodology has been strengthened by application of the Principles for Oil Price Reporting Agencies published by IOSCO, the International Organization of Securities Commissions (www.iosco.org).

RISI has *voluntarily* chosen to adapt these principles to the markets we cover even though our markets fall outside of the governance of IOSCO and the Principles. That's because these guidelines represent the internationally recognized gold standard in price assessment. By adapting and implementing these principles, RISI demonstrates its commitment to providing the highest degree of reliability in price reporting.

For more on the Principles and how RISI has applied them, see "Implementation of IOSCO's Principles for Oil Price Reporting Agencies" at www.risi.com/iosco.

HOW PRICES ARE ASSESSED

Who assesses prices

Prices are assessed by a Latin American team of recovered paper editors who are part of the RISI Indices group, which is separate from the RISI Analytics group that is involved in price forecasting. Standards for training, experience and skills required for editors involved in price assessment, as well as supervision of editors, are described in the RISI Indices Price Assessment Procedures Manual.

Generators are included if they sell directly to mills, but otherwise are not included as sources.

Specifics are indicated in the "Grade Detail and Specifications" section below for each grade.

All market participants are encouraged to submit price data and supporting market information for inclusion in the assessment.

Data collection process

RISI makes price assessments based on a systematic survey of active market participants to find out agreed transaction prices and volumes as well as price offers made or received, and other supporting information such as supply and demand conditions.

The amount and type of information that a respondent provides each month varies across individuals and companies; data from respondents providing more complete information is weighted more heavily in the final assessment. Price data are also weighted roughly according to tonnage. (See "*Weighting of data*" below.)

Data providers

The survey includes both buyers and sellers, ensuring that the survey pool is balanced and representative of the overall market. Assessments represent prices paid by mills or exporters, so the sellers included in the survey include processors and brokers.

How data are provided

Each price period, the price assessor contacts data providers and collects data via phone interviews and emails.

Types of data considered

The following types of data may be included in an assessment, from most to least important. Each successive type of data is only considered if the volume of previous types is deemed insufficient to yield a reliable and representative market price assessment.

1. **Transaction prices**
 - a. Price levels
 - b. Change of price levels from previous period

2. **Market participants' estimates of market price levels**, based on price offers made or received and trigger prices (i.e. the price at which the participant would trade).

Assessment calculation

Criteria for exclusion of data

Data are excluded from the assessment in the following cases:

- The price of a transaction is indexed to published prices from RISI or another source.
A transaction price is considered to be "indexed" when it is entirely determined according to a formula based on a published price assessment.
- The transactions don't meet the assessment specifications. (See "Grade Detail and Specifications" section below.)
- The transaction has special circumstances that, in the price assessor's judgment, render it unrepresentative of the broader market and/or not repeatable. (This type of exclusion is rarely used.)

Normalization of data

Normalization is the process of adjusting data so that it can be properly compared to other data. For instance, prices for recovered corrugated board #1 and #3 in Brazil are normalized so they can be included in the recovered corrugated board #2 assessment. The typical upcharge for recovered corrugated board #1 is 10% over recovered corrugated board #2, while recovered corrugated board #3 is 10% below recovered corrugated board #2 charge.

CONTROLS AND COMPLIANCE

Ensuring consistency and quality of assessments

RISI Indices has in place a number of procedures to ensure the consistency and quality of price assessments, including:

Weighting of data

- Higher-quality data are weighted more heavily than lower-quality data. Higher-quality data includes:
 - Data with more detail, e.g. prices reported as separate transactions with accompanying volume rather than an overall average price.
 - Data whose credibility is supported by answers to the assessor's follow-up questions
 - Data from contacts with a history of reliability. Contacts are deemed more reliable if they:
 - Provide information that is corroborated by other sources
 - Provide complete and detailed information
 - Provide information regularly and consistently over time
 - Report price information that goes against their natural interests (e.g. a buyer reporting higher prices or a seller reporting lower prices)
- Data are weighted according to the type of information (see "Types of data considered" above).
- Larger transactions are given more weight than smaller ones. However, the weighting of any single data provider's data is limited so that it doesn't dominate the assessment.

- **Sign-off:** Prior to publication, each price assessment is reviewed by a senior price assessor other than the assessor primarily responsible for the assessment to ensure the assessment is accurate and has followed proper procedures.
- **Quality assurance audit:** A supervising editor is responsible for overseeing all price assessments. The supervisor will periodically do a detailed review of

decision-making for a given price assessment, reviewing price assessments in relation to assessments from similar markets, ensuring that the methodology has been followed consistently and that judgment has been applied appropriately.

- **Market review:** On a regular basis (i.e. annually for the main containerboard grades), Indices staff reviews markets and methodologies to ensure that assessment methodologies and the assessments they produce are appropriate for the market.

Independence and freedom from conflicts of interest

Please see RISI Indices' Conflicts of Interest Policy (www.risi.com/conflicts). Key points include:

Independence of RISI

RISI has no affiliation with buyers or sellers of forest products and therefore no vested interest in either higher or lower prices.

Absence of financial interest

RISI is free of ownership or other ties that would give it a financial interest in the movement of prices we report. RISI prohibits its employees who conduct price assessments from having a financial interest (excluding passive investments like mutual funds) in companies whose values are directly and substantially affected by prices on which they report.

Separation from forecasting

RISI Indices is a separate business unit from RISI Analytics, which carries out RISI's forecasting activities, ensuring that forecasting of future prices doesn't influence assessment of actual prices.

Confidentiality

Our data providers are essential to our work, so RISI Indices goes to great lengths to keep price survey data confidential. Confidential data include both the data collected and the names of individuals and companies who provide data. RISI's policy is to neither confirm nor deny the participation of any individual or company in our price surveys at any time, either directly or indirectly.

This confidentiality is essential to ensure the highest number of data contributors as well to ensure that contributing data to RISI cannot be used as a means for market players to unfairly communicate to each other.

RISI Indices' Confidentiality and Data Protection policy (www.risi.com/confidentiality) explains full details around how price assessors protect the confidentiality of their contacts and data. Each year, price assessors are trained in data protection procedures and must sign a compliance agreement.

Antitrust compliance

All price assessment methodologies from RISI Indices are explicitly designed to comply with antitrust rules. See RISI Indices' Antitrust Compliance Policy (www.risi.com/antitrust) for further details.

Disclaimer of warranty

Although RISI collects information from sources who are believed to be reliable, RISI does not warrant or guarantee the accuracy or completeness of its price assessments. Actual transaction prices will often vary from the assessed level.

Changes and feedback

Changes to methodology and specifications

RISI Indices periodically reviews the markets it covers to ensure that our methodology and specifications are still appropriate for that market.

Understanding that some RISI Indices price assessments are used in long-term contracts, RISI Indices seeks to minimize changes that will affect the continuity of its price assessment over time.

Prior to implementing any material changes to the methodology and specifications, these changes will be announced in draft form and open for comment from all stakeholders. RISI Indices will review all comments and seek to balance the views of all players as much as possible while ensuring the reliability of price assessments.

Based on comments received, RISI Indices will finalize the changes and announce them to the market, specifying exactly what will change and when.

Feedback and complaints

RISI Indices welcomes feedback on its price assessment methodology as well as on specific price assessments published. We greatly value such feedback and the dialogue that it generates.

In general, such feedback is most effectively dealt with by the editor directly in charge of the price assessment in question. We invite you to speak with or email any of your existing contacts within the editorial team, or view a list of contacts at www.risi.com/EditorialContacts.

If working with the editor does not adequately address your issue, please view our procedures for submitting complaints at www.risi.com/complaints.

GRADE DETAIL AND SPECIFICATIONS

Where published	PPI Latin America: <ul style="list-style-type: none"> • Newsletter (pdf) • Online (interactive database)
Frequency	Every 2 months
Schedule	On the 2 nd or 3 rd week of the last month of the 2-month period
Assessment time window	Orders taken in the month to date for shipment in the current month.
Transaction types reflected	Open market transactions. Excludes contract transactions whose price is indexed to published prices (whether from RISI or other source).
Arms-length transactions	Only transactions between unaffiliated parties are reflected. Transfers by recycling companies to their own mills are excluded.
Point in supply chain	Seller: Processor or broker Buyer: Paper/board mill
Normal terms of payment	Price estimates assume normal and customary payment terms.
Physical specifications	Recovered paper definitions are based on the Brazilian standard ABNT NBR 15483:2007 for Brazil and current ISRI Scrap Specifications Circular for grades exported from US to Mexico.
IOSCO categories	All grades: Category 2 <i>See implementation of IOSCO's Principles for Price Reporting Agencies (www.risi.com/iosco) for definition of categories.</i>

Grade	RISI Price ID	Location	Currency	Units	Terms	Physical Specifications
Brown grades						
Corrugated board # 1 (OCC 12)	1062	Brazil	BRL	tonne	Delivered to Southeast and Southern Brazil	post-consumer used corrugated boxes; no other papers included
Corrugated board # 2 (OCC 11)	1063	Brazil	BRL	tonne	Delivered to Southeast and Southern Brazil	post-consumer used corrugated boxes; up to 5% of other papers included
Corrugated board # 3	1066	Brazil	BRL	tonne	Delivered to Southeast and Southern Brazil	post-consumer used corrugated boxes; up to 20% of other papers included
Uncoated boxboard	1248	Brazil	BRL	tonne	Delivered to Southeast and Southern Brazil	post-consumer boxboard with predominance of hardwood and with no insoluble coating
Old corrugated containers (OCC11) – imports from US	1058	Mexico	USD	ton	FOB seller's dock in Southwestern US	
Domestic corrugated containers	1126	Mexico	MXN	tonne	Delivered to Mexico DF, Monterrey and nearby regions	
Medium grades						
White # 1	1068	Brazil	BRL	tonne	Delivered to Southeast and Southern Brazil	pre-consumer trimmings from white paper rolls, not printed or coated
White # 2	1069	Brazil	BRL	tonne	Delivered to Southeast and Southern Brazil	post-consumer trimmings from uncoated white printed office papers, data sheet forms, textbooks and books without covers, no carbon coating; up to 5% of coated papers
White # 3	1070	Brazil	BRL	tonne	Delivered to Southeast and Southern Brazil	post-consumer trimmings from coated and uncoated white printed office papers, data sheet forms, textbooks and books without covers, no carbon coating

Grade	RISI Price ID	Location	Currency	Units	Terms	Physical Specifications
White # 4	1071	Brazil	BRL	tonne	Delivered to Southeast and Southern Brazil	post-consumer trimmings from coated and uncoated office papers and form bonds, textbooks and books with or without covers.
Groundwood						
Newspaper # 2	1067	Brazil	BRL	tonne		post-consumer newspapers from news desks and newsstands
Coated groundwood sections (CGS) – imports from US	1121	Mexico	USD	ton	FOB seller's dock in Southwestern US	
Special news, deink quality (ONP) (8) – imports from US	1057	Mexico	USD	ton	FOB seller's dock in Southwestern US	
High grades						
Sorted office papers (SOP) (37) – imports from US	1060	Mexico	USD	ton	FOB seller's dock in Southwestern US	
Pulp substitutes						
Hard white envelope cuttings (HWEC) (31) – imports from US	1059	Mexico	USD	ton	FOB seller's dock in Southwestern US	

REVISION HISTORY

Changes to methodology and specifications are tracked here.