

PRICE ASSESSMENT METHODOLOGY AND SPECIFICATIONS

Paper for Recycling – Europe

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KEY CONCEPTS

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 price assessments for European paper for recycling (PFR). 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

RISI Indices creates price assessments in accordance with this methodology document and our internal Price Assessment Procedures Manual.

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

Who assesses prices

Prices are assessed by a European team of paper for recycling editors. 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.

How data are provided

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

Data collection process

RISI Indices 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.

Data providers

The survey includes both buyers and sellers, ensuring that the survey pool is balanced and representative of the overall market. See "Grade Detail and Specifications" section below for details for each grade.

Types of data considered

Directly considered data

The following types of data may be included in an assessment.

1. **Transaction prices**
 - a. Price levels
 - b. Change of price levels from previous period
2. **Participants' estimates of market levels**, based on price offers made/received and ongoing negotiations.

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 “indexed” when it is entirely determined according to a formula based on a published price assessment, whether that assessment is from RISI or any other source.
 - 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.)
- 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 producer reporting lower prices)
 - Data are weighted according to the type of information (see “Relative importance of data types” under “Grade Detail and Specifications” below).

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.

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.

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:

- **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 an annual basis, Indices staff reviews markets and methodologies to ensure that assessment methodologies and the assessments they produce are appropriate for the market.

- **External audit:** In accordance with the standards of IOSCO’s PRA Principles, Category 1 price assessments (see “Grade Detail and Specifications” below for categories by assessment) are audited to ensure that assessments comply with this methodology and with IOSCO’s PRA Principles.

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 as 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 dialog 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

These are specifications that apply to all grades of paper for recycling. Specifications unique to each grade are detailed below.

Where published	<p>PPI Europe</p> <ul style="list-style-type: none"> • Newsletter (pdf) • Online (interactive database)
Frequency	<p>Monthly (Germany, UK, France, Italy)</p> <p>Quarterly (Spain) : Prices are reported in the last month of each quarter. When prices are reported, monthly prices for that quarter are reported retroactively. For instance, no prices are published in January or February. In March, prices for January, February and March are published.</p>
Schedule	See www.risi.com/schedule
Assessment window	Each assessment reflects prices agreed in the month to date.
Transaction types reflected	<p>Open market transactions in ongoing supply relationships (i.e. excluding internal transfer prices and spot transactions)</p> <p>Open market transactions are defined as those whose price is arrived at through negotiation, so excluded are “indexed” transactions, i.e. transactions whose price is determined by a formula based on published prices (whether from RISI or other source).</p>
Price levels reflected	<p>Reference prices, i.e. the price negotiated each month that may serve as a basis from which customer-specific discounts are given based on the customer’s volume or long-term relationship with a supplier.</p> <p>Assessments are presented as a range in which the bulk of transactions take place.</p>
Arms-length transactions	Only transactions between unaffiliated parties are reflected.
Point in supply chain	<p>Unless otherwise noted:</p> <p>Seller: Processor or broker</p> <p>Buyer: Paper/board mill</p>
Normal terms of payment	Price estimates assume normal and customary payment terms.
Currency/units	Euro/tonne except for UK, which is £/tonne
IOSCO categories	<p>All grades: Category 2</p> <p>See <i>implementation of IOSCO’s Principles for Price Reporting Agencies</i> (www.risi.com/iosco) for definition of categories.</p>

Grade	RISI Price ID	Location	Currency	Terms	Notes
Ordinary Grades					
1.01 - mixed P&B (unsorted)	497	Spain	EUR	ex works	
1.02 - mixed P&B (sorted)	107	France	EUR	ex works	
	106	Germany	EUR	free delivered	
	109	Italy	EUR	free delivered	
	108	United Kingdom	GBP	ex works	
	498	Spain	EUR	ex works	
1.04 - supermarket corrugated P&B	499	Spain	EUR	ex works	
	110	Germany	EUR	free delivered	
1.04 - supermarket corrugated P&B (export)	528	Germany	EUR	FAS, to main-port Asia	Buyer is an export broker
1.05 - old corrugated containers	460	France	EUR	ex works	
	452	Italy	EUR	free delivered	
	441	United Kingdom	GBP	ex works	
1.11 - sorted graphic paper for deinking	115	France	EUR	ex works	
	114	Germany	EUR	free delivered	
	117	Italy	EUR	free delivered	
	116	United Kingdom	GBP	ex works	
Medium Grades					
2.01 - newspapers	118	Germany	EUR	free delivered	
	121	Italy	EUR	free delivered	
	500	Spain	EUR	ex works	

Grade	RISI Price ID	Location	Currency	Terms	Notes
	120	United Kingdom	GBP	ex works	
2.02 - unsold newspapers	119	France	EUR	ex works	
2.08 - colored woodfree magazines	513	France	EUR	ex works	
	501	Spain	EUR	ex works	
	506	United Kingdom	GBP	ex works	
High Grades					
3.05 - white woodfree letters	505	Italy	EUR	free delivered	
	502	Spain	EUR	ex works	
3.10 - multi printing	509	Germany	EUR	free delivered	
3.14 - white newsprint	510	Germany	EUR	free delivered	
3.18 - white woodfree shavings	512	France	EUR	ex works	
	503	Spain	EUR	ex works	
3.18.01 - white uncoated woodfree shavings	511	Germany	EUR	free delivered	
Multigrade	1050	United Kingdom	GBP	ex works	This grade is a blend of coated and uncoated woodfree paper and its quality is not covered by the EN 643 standard developed by CEPI and BIR

REVISION HISTORY

Changes to methodology and specifications will be tracked here.