

## PRICE ASSESSMENT METHODOLOGY AND SPECIFICATIONS

# Graphic Papers – North America

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## KEY CONCEPTS

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Each price assessment is...

RISI's assessment of the **open market reference 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)*

A **reference price** assessment represents 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. *(See "Grade detail and specifications" 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 graphic paper assessments. As of mid-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](http://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](http://www.risi.com/iosco).

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## 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 North America team of graphic papers 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. 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. See "Grade Detail and Specifications" below for details on the relative importance of data types used in each specific price 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.
3. **Prices for comparable grades or basis weights** that can substitute for the grade in question and that have relatively consistent historical spreads against the grade in question.

## Influencing data

These types of data aren't price points that enter directly into an assessment. Rather, these data can serve to either corroborate or cast doubt on directly considered data points, thus leading the assessor to increase or reduce the weight attached to that data point.

For instance, given that higher inventories tend to be associated with downward pressure on prices, knowledge that inventory levels at mills are substantially above normal would cause us to assign a relatively lower weight to transaction data that show an increase in prices vs. the last period and that aren't supported by other criteria.

1. **Spot prices** for the grade in question.
2. **Other market data**, including import data.

Transaction prices are the most important data source for all assessments. See "Grade Detail and Specifications" below for details on the relative importance of data types used in each specific price assessment.

## 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.)

## Normalization of data

Normalization is the process of adjusting data so that it can be properly compared to other data. For instance, since domestic prices are reported on a delivered basis, transactions subject to unusually high or low freight are normalized to eliminate the effect of these freight extremes.

## 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 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).

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. For Category 1 prices (e.g. 20-lb repro bond, 92 bright cutsizes) this cap is more formal: no single data provider's data will be weighted so that it contributes more than 25% of the final 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 (e.g. 20-lb copy paper, 92 bright – see specifications below) 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](http://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. Because RISI's Paper Trader has historically been used as a key source of price assessments, particularly for the North American market, RISI's graphic paper economists (who are in the RISI Analytics unit) retain a role in gathering market data that informs price assessments. However, as of December 2015, final determination of assessments will be done exclusively by RISI Indices staff.

### 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](http://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](http://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](http://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](http://www.risi.com/complaints).

## GRADE DETAIL AND SPECIFICATIONS

RISI publishes separate price assessments in PPI Pulp & Paper Week and Paper Trader. These assessments overlap for many grades. As of late 2015, RISI is in a process of determining whether and how to rationalize the overlapping series in these sources.

	PPW	Paper Trader
Where published	PPI Pulp & Paper Week Price Watch <ul style="list-style-type: none"> <li>• Newsletter (pdf)</li> <li>• Online (interactive database)</li> </ul>	Paper Trader
Frequency	Monthly	Monthly
Schedule	3 <sup>rd</sup> Friday of the current month (e.g. January prices published the 3 <sup>rd</sup> Friday of January)	1 <sup>st</sup> of the next month (e.g. January prices published February 1)
Assessment window	Orders taken in the month to date for shipment in the current or following month	Orders taken in the indicated month for shipment in that month or the following month
Transactions included	Contract/regular business Excludes spot/secondary market transactions	
Price levels reflected	Range that represents the range of prices at which the bulk of transactions take place except: <ul style="list-style-type: none"> <li>• Newsprint price is published as single point price.</li> <li>• SC prices represent printer list prices. Prices for large retail program tonnage will be lower</li> </ul>	Single point price
Increment	Prices vary in increments of \$5	Prices vary in increments of \$5, except newsprint where prices vary in increments of \$1
Location	As indicated. "US East" = East of the Rocky Mountains	
Arms-length transactions	Only transactions between unaffiliated parties are reflected.	
Point in supply chain	Seller: Producer, producer's agent or merchant Buyer: Printer or converter  <i>Copy paper (cutsizes):</i> Seller: Producer or a producer's agent Buyer: Retailer or office products distributor	
Normal terms of	Price estimates assume normal and customary payment terms.	

	PPW	Paper Trader
payment		
Indexed tonnage excluded	Transactions whose price is indexed to published paper prices (whether from RISI or other source) are excluded from our price survey. (See more above under "How prices are assessed – Exclusion of data ".)	
Delivery terms	All prices include delivery to the customer	
IOSCO categories	See implementation of IOSCO's Principles for Price Reporting Agencies for definition of categories 20-lb copy paper, 92 bright: Category 1 All others: Category 2	

Grade name	PPW Price ID	Paper Trade mnemonic	Notes	Data considered in assessing prices			
				Directly considered data <i>(*** to * = most to least important)</i>			Indirectly considered data <i>(+++ to + = most to least important)</i>
				Transaction prices	Participants' market estimates	Comparable grades (which grade)	
<b>NEWSPRINT</b>							
45-g (27.7-lb) East	1001	prnew45_us		***	***		++ Spot prices
45-g (27.7-lb) West	1002	prnew45_uwt		***	***		++ Spot prices
48.8-g (30-lb) East	191	prnews_us		*	*	*** 45-g (27.7-lb) newsprint	++ Spot prices
48.8-g (30-lb) West	192	prnews_uwt		*	*	*** 45-g (27.7-lb) newsprint	++ Spot prices
<b>UNCOATED MECHANICAL</b>							
20.9-lb white directory	1336	nagp'prumedir2_2_us	Spot tonnage only (10% to 20% of market). Assessment based on limited market sources.	***			+ Import volumes

				Data considered in assessing prices			
				Directly considered data <i>(*** to * = most to least important)</i>			Indirectly considered data <i>(+++ to + = most to least important)</i>
Grade name	PPW Price ID	Paper Trade mnemonic	Notes	Transaction prices	Participants' market estimates	Comparable grades (which grade)	
35-lb machine-finished (MF) offset, 65 bright	188			***	***	** Newsprint	+ Spot prices + Import volumes
35-lb supercalendered (SC-A)	189	nagp'prumesc35_us	Prices represent printer list prices. Prices for large retail program tonnage will be lower.	***	***	*** Ctd mech No 5 34 lb	+ Spot prices + Import volumes
33-lb supercalendered (SC-B)	1177			***	***	*** SC-A	+ Spot prices + Import volumes
45-lb offset substitute, 83/84 bright	1048			***	***	** 50-lb offset, rolls	+ Spot prices + Import volumes
<b>COATED PAPERS</b>							
Premium 80-lb sheets	1244	nagp'prcprt02_us	Equivalent to No. 2	***	***		+ Spot prices + Import volumes
Economy 80-lb sheets	1245	nagp'prufsbu00_us	Equivalent to No. 3	***	***		+ Spot prices + Import volumes
No. 3, 50-lb rolls	182			***	***	**	+ Spot prices + Import volumes
No. 3, 60-lb rolls	183	nagp'prcprt03_us		***	***	**	+ Spot prices + Import volumes
No. 4, 50-lb gwd. rolls, 78/80 bright	184	nagp'prcprt04_us		***	***	** No 3.	+ Spot prices + Import volumes

				Data considered in assessing prices			
				Directly considered data <i>(*** to * = most to least important)</i>			Indirectly considered data <i>(+++ to + = most to least important)</i>
Grade name	PPW Price ID	Paper Trade mnemonic	Notes	Transaction prices	Participants' market estimates	Comparable grades (which grade)	
No. 5, 34-lb rolls	185	nagp'prcprt0534_us		***	***	** No. 5, 40-lb rolls	+ Spot prices + Import volumes
No. 5, 40-lb rolls	186	nagp'prcprt0540_us		***	***	** No. 5, 34-lb rolls	+ Spot prices + Import volumes
<b>UNCOATED FREESHEET</b>							
20-lb copy paper, 92 bright	175	nagp'prufsbu20_us	Former name: "20-lb repro bond, 92 bright (cutsizesize)"	***	**		+ Spot prices + Import volumes
20-lb copy paper, 30% PCW, 92 bright	1046		Former name: "20-lb repro bond, 30% PCW, 92 bright (cutsizesize)"	***	**	*** 20-lb repro bond, 92 bright (cutsizesize)	+ Spot prices + Import volumes
50-lb offset rolls, 92 bright	173	nagp'prufsofr50_us		***	**		+ Spot prices + Import volumes
24-lb white wove envelope rolls, 92 bright	11836			***	**	** 50-lb offset, rolls	+ Spot prices + Import volumes
20-lb forms bond, stock tab	11835	nagp'prufsfmb20_us		***	**	** 50-lb offset, rolls	+ Spot prices + Import volumes
50-lb trade book, offset, rolls	174			***	**	** 50-lb offset, rolls	+ Spot prices + Import volumes

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## REVISION HISTORY

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Changes to methodology and specifications will be tracked here.