RISI

US Recovered Paper Price Assessment Methodology

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Summary: Key things to know about RISI's recovered paper price assessments

- Prices are delivered to subscribers of PPI Pulp & Paper Week via email on the 5th of each month at
 3pm ET. If the 5th is a weekend or holiday, prices will be reported the next business day.
- Prices represent an assessment of the open market price at which mills or exporters have purchased tonnage for delivery in the indicated month. For instance, prices published on January 5 represent purchases agreed through January 5 for shipment in January.
- Prices represent the "open market" and exclude transactions whose price is specifically determined by a contract.
- Prices are determined based on a survey of buyers and sellers of recovered paper, conducted by experienced editors.
- Price assessments are based on **completed transactions**, not forecasts or speculation.
- Price assessments represent gross prices, i.e. prices excluding premiums.

When and where prices are available

RISI publishes monthly US prices for recovered paper in *PPI Pulp & Paper Week (PPW)*. These prices can be accessed by subscribers in these ways:

- Via email alert: Prices are delivered via email on the 5th of each month at 3pm ET. If the 5th is a weekend or holiday, prices will be reported the next business day.
- In issues of PPW: PPW is published each Friday evening. If the 5th of the month is a Friday, prices are published in that issue. Otherwise, prices appear in the next issue after the 5th.
- Latest price table online: Prices are posted in an article on RISI's subscriber website. (To find these prices, search for "US recovered paper prices" in the Search box in the upper right.)
- **Historical prices online:** Current and historical prices are available in the interactive Price Watch online.



What prices represent

RISI prices represent an assessment of the open market price at which mills or exporters have purchased tonnage for delivery in the indicated month. For instance, prices published on January 5 represent purchases agreed to through January 5 for shipment in January.

"Open market price" is defined as the price for all transactions except those whose price is specifically determined in whole or in part by a contract that is more than one month long.

Price assessments are based on completed transactions, not forecasts or speculation.

Price assessments represent gross prices, i.e. prices excluding market-wide premiums that may prevail in a given region. In some markets, overall average net market prices are higher than RISI's reported prices because market participants add premiums to reported prices. Because consistency is of utmost importance in assessing prices over time, RISI prices do not reflect such premiums. However, the month-to-month \$ change in RISI prices matches the month-to-month change in overall, average-net-market prices.

How prices are assessed

Prices are determined based on a survey of buyers and sellers of recovered paper, conducted by experienced editors. Market participants are asked to report the prices of agreed transactions agreed and are asked a series of questions to validate and substantiate their response.

Prices are determined based on the work of more than one editor working together to confirm and check prices.

Calculation

Published prices (except for legacy OBM prices, labeled "OBM" in the price table) represent the range in which the large majority of the market activity takes place. Responses from market participants are weighted according to the following factors:

- "Better" information counts more in final assessment. "Better" information is determined by the application of expert judgment based on years of reporting on and studying these markets, and includes these factors:
 - o Contacts with a history of reliability
 - o Contacts whose information stands up best to journalistic scrutiny
 - o Contacts who give more detailed info (e.g. not just market changes, but actual prices; info on how much volume has been transacted at a given price; even specific POs)
- · Responses are weighted roughly by volume

Legacy OBM prices (see below for details on OBM): Prices represent the mode, i.e. the most common value. For prices where high side is <100, the range between the low and high published prices is \$5. For prices with high side >100, range is \$10.

Premiums: To maintain consistency over time, RISI prices are gross prices excluding premiums but seek to capture the month-to-month change in overall average net market prices. In other words, RISI reports gross prices that hold the premium constant from month to month.

For instance, say that a reported price one month was \$150 and the average premium was \$10. The next month, if a market participant reported that prices were unchanged but that premiums had gone up by \$15, resulting in a net price of \$165, this would be interpreted in our price assessment as an increase in price of \$5.

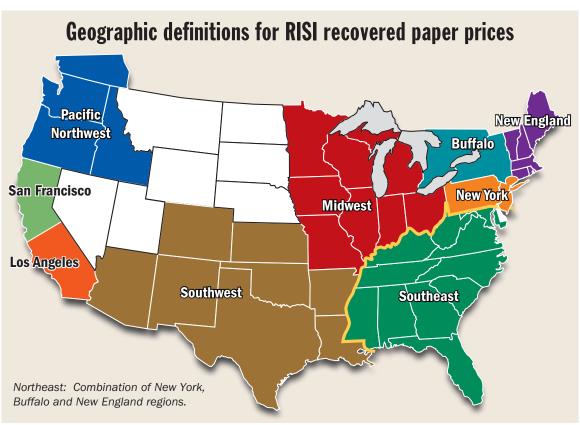
How we ensure accuracy

- Thorough representation of buyers and sellers, large and small players
- Input from a large number of contacts
- All prices assessments are vetted by another editor for reasonableness and sufficiency of sources
- Investigative journalism method: Seasoned editors, with an understanding of each player's biases and incentives, ask appropriate questions to verify information, confirm from multiple sources and identify the most reliable sources over time. This process is similar to an investigative journalism approach to reporting on government and other institutions that are difficult to penetrate.

Specifications

Following are the specifications for transactions that are considered in price assessments:

- Grades and preparation requirements are as defined in the current ISRI Scrap Specifications Circular
- Domestic prices represent mill purchases, FOB seller's dock
- Export prices are FAS port or CFR, as indicated
- "Open market" transactions, i.e. all transactions except transactions whose price is specifically determined in whole or in part by a contract that is more than one month long.
- Deals for delivery in the indicated month
- Baled
- Full truckload quantities
- Standard quality; no distressed lots
- Arm's-length transactions (i.e. no internal transfers)
- Exclusive of delivery charges, premium or distress lots, and of all subsequent charges for packing, handling, destination considerations, or other special charges
- Region definitions:



Grade names are abbreviated in PPI Pulp & Paper Week. Following are the full names for all grades. Numbers in () are designations from the current ISRI Scrap Specifications Circular.

Grade name in PPI Pulp & Paper Week Full grade name

MIXED PAPER

Mixed (2) Soft mixed paper (2)

BROWN GRADES

Boxb cutt (4)

OCC (11)

Boxboard cuttings (4)

Corrugated containers (11)

DLK (13) New double-lined kraft corrugated cuttings (13)

GROUNDWOOD

ONP (6) News (6)

ONP (8) Special news, deink quality (8)

OMG (10) Magazines (10)

CGS (44) Coated groundwood sections (44)

WBN (24) White blank news (24)

HIGH GRADES

SOP (37) Sorted office paper (37)
MCL (39) Manifold colored ledger (39)
CBS (43) Coated book stock (43)

SBS heavy print (45) Bleached board cuttings (45) - heavily printed

SWL (40) Sorted white ledger (40) MWL (41) Manifold white ledger (41)

SBS light print (45) Bleached board cuttings (45) - lightly printed

Ctd SWS (28) Coated soft white shavings (28)

PULP SUBSTITUTES

SBS unprinted (47)

HWS (30)

Unprinted bleached board (47)

Hard white shavings (30)

HWEC (31) Hard white envelope cuttings (31)

Other safeguards and provisions

Independence of RISI

RISI is completely independent in its assessment of prices. It has no affiliation with buyers or sellers of recovered paper.

Absence of financial interest

RISI prohibits its employees who conduct price assessments from having a financial interest in companies whose values are directly and substantially affected by prices they report. (The exception is financial interest in such companies issued by or through a mutual fund or similar arrangement under which the employee does not control the purchase or sale of such interest.)

Separation from forecasting

RISI keeps its recovered paper forecasting activities separate from price assessments to ensure that there is no conflict of interest.

- Price assessments exclude forecasted prices (whether RISI's or anyone else's forecasts) from consideration
- Editors responsible for price assessment and economists report to different supervisors
- Editors and economists are located in different offices
- Editors have no financial or other incentives (including criteria in their job performance evaluations) that would encourage them to consider price forecasts when making price assessments
- Editors have no financial or other incentives based on the performance of RISI's forecast products (except for a small portion of their bonus based on the financial performance of the entire company)
- Editors and economists do not discuss prices in the week during which editors are assessing prices

As evidence of the independence of price reporting from forecasting, reported prices have, in fact, diverged from forecasts.

Non-disclosure of information

All RISI price surveys are confidential. Names of individuals and companies participating in the survey are never disclosed to the public or to other survey participants. RISI's policy is to neither confirm nor deny either directly or indirectly the participation of any individual or company at any time. Confidential or proprietary information that is collected as part of the survey process, including prices reported by individual survey participants, is not shared with the public or with other survey participants.

Commercial usage

RISI price assessments are copyrighted information. Any commercial use, including hedging or settling of contracts or trades, requires a subscription. For more information, please contact info@risi.com.

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.

Feedback and complaints

RISI welcomes feedback on its price methodology and proposed changes to recovered paper price assessments.

Feedback (including complaints) should be directed to the editor in charge of recovered paper price assessments, Greg Rudder at grudder@risi.com.

Formal complaints regarding price assessments should be made via email to the non-editorial executive in charge of price assessments (VP of News, Markets & Prices) at price.complaint@risi.com. Receipt of such a complaint will be acknowledged as soon as possible, generally within 24 hours. The executive will investigate the matter promptly, aiming to come to a resolution within one week. The executive will communicate the resolution of the matter to the complainant.

All documents relating to a formal complaint will be retained for a minimum of five years.

Log of changes to methodology and specifications

This list was started in October 2012 and will log all changes going forward.

October 2012 – Changes in region/location names for OBM and PPW prices

In order to standardize regions between OBM and PPW, and also to better reflect the geographic regions that prices represent, region/location names have been changed as follows:

OBM		PPW	
existing name	new name	existing name	new name
New York			
New England		New York	Northeast
Buffalo			
East	Northeast		
Chicago	Midwest	Chicago	Midwest
Southeast		Atlanta	Southeast
Southwest		Dallas-Houston	Southwest
LA		San Francisco-LA	
SF		Sali Fiailuscu-la	
Pacific NW		Seattle-Portland	Pacific NW

This change does NOT reflect a change in what the prices represent, but is just a change of label reflecting current practice. For instance, even though OBM's OCC price was labeled "Chicago" previous to October 2012, it has always reflected prices in the Midwest beyond just the city of Chicago, as shown in the region definitions map.

October 2012 - Integration of OBM prices into PPW

PPI Pulp & Paper Week (PPW) and Official Board Markets (OBM) were two separate publications that merged on October 1, 2012.

PPW and OBM reported prices for many of the same grades. Until December 31, 2012, the combined PPW will publish the full set of legacy PPW prices and legacy OBM prices, each reported in such a way to maintain continuity with historical prices. As of January 1, 2013, prices for the grades marked "X" will be discontinued. From that point on, PPW will publish a single price series for each grade/region.

Continuity of prices: What is changing and what is not changing

From January 2013 forward, for prices where OBM is the legacy source of the ongoing price series, the price series will be designated as an "OBM" price series to clarify that the price series is a continuation of the prices originally published in OBM. For example, OCC will be labeled as "OCC (11) - OBM". RISI's intention is to maintain continuity in those price series so users understand that prices from January 2013 are comparable to prices prior to RISI's acquisition of OBM.

What is changing

- 1. The **combined resources of PPW and OBM will improve reliability**. Whereas PPW and OBM editors conducted separate surveys prior to the integration, they now conduct a combined survey that will enhance accuracy and reliability of reported prices because:
 - a. The combined team collects many more data points than each did on their own
 - b. PPW's editor supervises the former OBM editor, and the two editors collaborate and check each others' work

2. Timing: Prices are now published the **5th of each month at 3pm ET**. PPW prices were previously published on the 10th of each month, and OBM prices were published the Wednesday before the first Saturday of the month.

What is not changing

1. **The basic methodology and specifications will not change**. The methodology detailed above represents how prices were assessed by both PPW and OBM prior to being acquired by RISI, and it represents how prices will be assessed going forward.

In particular, **premiums will continue NOT to be reflected**. As always, OBM prices represent gross prices whose monthly change is determined by the change in the net market price each month. See above for further discussion of premiums.