CoStar Group™

CCRSI

CoStar Commercial Repeat-Sale Indices

FAQs

About the CoStar Commercial Repeat-Sale Indices

The CoStar Commercial Repeat-Sale Indices (CCRSI) serves as the most comprehensive and accurate measure of commercial real estate prices in the United States. In addition to the national CCRSI Composite Index (presented in both equal-weighted and value-weighted versions), the CCRSI also includes a national Investment-Grade Index and a national General Commercial Index, released each month. In addition, we report quarterly on 30 sub-indices in the CoStar index family. The sub-indices include breakdowns by property sector (office, industrial, retail, multifamily, hospitality and land), by region of the country (Northeast, South, Midwest and West), by transaction size and quality (general commercial, investment-grade), and by market size (composite index of the prime market areas in the country).

The CoStar indices are constructed using a repeat sales methodology, widely considered the most accurate measure of price changes for real estate. This methodology measures the movement in the prices of commercial properties by collecting data on actual transaction prices. When a property is sold more than once, a sales pair is created. The prices from the previous and most-recent sales are then used to calculate price movement for the property. The aggregated price changes from all of the sales pairs are used to create a price index.

Additional information on the CoStar Commercial Repeat-Sale Indices can be found in the responses to the following list of frequently asked questions:

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14) Are distressed property sales included in the CCRSI calculation? And if so, what constitutes a distressed sale?

1) How are the CCRSI computed?

The CCRSI indices are based on observed changes in individual property prices. Price data are gathered and confirmed by CoStar researchers for commercial property sale transactions across the country. For each transaction, the most recent sales price is compared with the price from the previous sale of the same property. When an earlier transaction is found, the two transactions are matched into a "sale pair." Sale pairs are designed to yield the price change for the same property while holding the quality and size of each building constant. More detailed technical description of the CCRSI methodology can be found in the Methodology document posted on the CCRSI website.

2) How often will the CCRSI be reported?

National-level indices are published monthly. Sectoral and regional indices are published quarterly. To provide a suitable research period for confirming and including the vast majority of property sales in the analysis, the indices are released approximately four weeks following the last day of the month being analyzed. This timeframe ensures that any revisions can be kept to a minimum as new property sales data are collected. Given this timeframe, the CCRSI releases in January, April, July and October each year will include the quarterly sectoral and regional indices in addition to the monthly national indices. Monthly updates for CCRSI's national indices are included in each release.

3) Is the CCRSI dataset available and is there a cost?

The dataset used to calculate the monthly and quarterly CCRSI indices is available in spreadsheet format and can be downloaded from the **CCRSI web site**. The CCRSI dataset and release containing expert analysis and commentary are both available free of charge.

4) Are CCRSI indices equal-weighted or value-weighted?

The monthly U.S. Composite Index consists of both equal-weighted and value-weighted versions. All other indices in the CCRSI release, i.e. sectorial and regional, are equal-weighted. Value-weighted versions of the sectorial and regional indices are available upon request.

5) What is the difference between equal-weighted and value-weighted indices? Why the need for two weighting schemes?

Equal-weighted and value-weighted indices offer investors and analysts different ways of observing price changes in the same market, yielding different insights. In an equal-weighted index, every transaction is weighted equally, regardless of the value of the transaction, whereas the value-weighted index weights price changes by the value of each transaction. As a result, an equal-weighted index is heavily influenced by low-value deals where transaction frequency is the highest, and therefore is considered more relevant for measuring the performance of average properties. A value-weighted index, on the other hand, is most sensitive to price variations of high-value properties, and is often used for analyzing capital flows.

In general, the broader the coverage area, and the greater number and more diversity of properties included in the analysis, the more noticeable difference in the results between the two weighting schemes. At a more granular level, the benefit and usefulness of using two weighting schemes diminishes. For instance, there is little difference between equal-weighted and value-weighted indices for industrial property prices because there is a much higher degree of homogeneity at the sector level. This is the primary reason we address both equal- and value-weighted CCRSI indices only at the national level in our accompanying commentary.

6) What is the difference between the Investment Grade Index and General Commercial Index? Are they equal- or value-weighted?

Different investors have different investment strategies. Some are focused on higher quality and more expensive properties. Others focus on the other end of the spectrum. To more effectively capture price movement of low-end and high-end market segments, CoStar provides two equal-weighted indices by market tiers or segments, both determined by the physical characteristics of properties. CoStar's U.S. Investment Grade index reflects the high-end of the market and the U.S. General Commercial index focuses on the lower end of the market. Because these two indices provide information on the two price ends of the commercial property spectrum, they are analogous to two weighting schemes. However, they are more directly related to physical characteristics of the properties.

7) How are Investment Grade and General Commercial Properties Defined?

Investment Grade properties as a group consist of larger-sized, reasonable-quality properties that match the type most often purchased by institutional investors. More specifically, this category includes 4-Star and 5-Star office properties that have more than 35,000 square feet of RBA (rentable building area), or industrial buildings larger than 80,000 square feet of RBA, flex buildings larger than 55,000 square feet of RBA, retail properties larger than 25,000 square feet of RBA, multifamily buildings with 90,000 square feet of RBA, and more than 125,000 square feet of RBA for hotels.

Any properties not meeting the Investment Grade criteria belong to the General Commercial category.

8) What is the difference between CCRSI and Moody's CPPI?

While both the CoStar CCRSI and Moody's CPPI are repeat-sale indices, each uses different methodologies and sales data sources resulting in important differences between the two. Moody's CPPI tracks prices for commercial property based on the Real Capital Analytics (RCA) database, which collects price information for commercial property that sells for more than a certain dollar value, $5 million before 2005 and $2.5 million from 2005 onward. This incomplete data collection practice is likely to result in a biased sample and index. For instance, properties that increase in value and sell for prices greater than $2.5 million but which previously sold for less than $2.5 million are likely to be omitted from inclusion and result in a downward bias for the index.

CoStar collects commercial property transaction data at all points in the price range. Also, in order to differentiate price movement of the high end and low end of the market, CoStar uses physical characteristics instead of price to segment the market in order to avoid the potential for ambiguity and bias. For more detailed discussion of the CCRSI methodology and research approach, **please see the CoStar Commercial Repeat-Sales Indices Methodology**. For more information on the Moody's CPPI, **please refer to the paper by Geltner and Pollakowski published by the MIT Center for Real Estate**.

CCRSI also differs from CPPI in weighting methodology. CCRSI provides both equal- and value-weighted indices at the national, regional and sectoral levels. CPPI, on the other hand, was initially developed as an equal-weighted index only. Early in 2012, CPPI ceased publishing its index and altered its methodology. In its current iteration, CPPI's national index is now value-weighted aiming to capture capital flow, whereas all other indices remain equal-weighted. However, unlike CCRSI's value-weighted national Composite index, CPPI's national index is not weighted by the transaction value of each property sale over time. Rather, CPPI is structured as a combined sectoral equal-weighted index, with a sectoral weighting based on a moving average of historical transaction values. As a result of this so-called "smoothing" technique, the CPPI index is not sensitive to the ups and downs of capital flow.

9) Will the CCSRI history be revised?

Yes, CCRSI indexes will be revised monthly due to the addition of new month and new historical data. Unlike many other indices, CCRSI's history is not locked. Since it launched in 2010, CRRSI history has remained stable, with minor revisions reflected in each month's re-estimation. This historical stability suggests that CCRSI is statistically significant, and therefore an artificial lock-down of its historical data is not necessary. If the CCSRI becomes a traded index, then we will reconsider establishing a firm lock-down on the figures based on input from market players.

10) What are the top prime metro markets by property type?

Prime Office Metro Areas	Prime Industrial Metro Areas	Prime Retail Metro Areas	Prime Multifamily Metro Areas
CBSA Listed Alphabetically	CBSA Listed Alphabetically	CBSA Listed Alphabetically	CBSA Listed Alphabetically
BOSTON	ATLANTA	BOSTON	BOSTON
LOS ANGELES	CHICAGO	LOS ANGELES	CHICAGO
NEW YORK	DALLAS	NEW YORK	HOUSTON
ORANGE COUNTY, CA	HOUSTON	ORANGE COUNTY, CA	LOS ANGELES
SAN FRANCISCO	LOS ANGELES	SAN DIEGO	NEW YORK
SEATTLE	NO. NEW JERSEY	SAN FRANCISCO	ORANGE COUNTY, CA
WASHINGTON, D.C.	RIVERSIDE CNTY, CA	SAN JOSE/SOUTH BAY	SAN FRANCISCO
	SEATTLE	WASHINGTON, D.C.	SAN JOSE/SOUTH BAY
			SEATTLE
			WASHINGTON, D.C.

11) Which metros are included in each of the four CCRSI regional indices?

South	West	Northeast	Midwest
Asheville	Albuquerque	Albany/Schenectady/Troy	Chicago
Atlanta	Bakersfield	Boston	Cincinnati/Dayton
Augusta/Richmond County	Boise City/Nampa	Buffalo/Niagara Falls	Cleveland
Austin	Bremerton/Silverdale	Erie	Columbus
Baltimore	Colorado Springs	Hartford	Davenport/Moline/Rock Island
Baton Rouge	Denver	Long Island (New York)	Des Moines
Beaumont/Port Arthur	East Bay/Oakland	New York City	Detroit
Birmingham	Fresno	Northern New Jersey	Duluth
Brownsville/Harlingen	Hawaii	Philadelphia	Evansville
Charleston WV	Inland Empire (California)	Pittsburgh	Fort Wayne
Charleston/N Charleston	Las Vegas	Portland/South Portland	Green Bay
Charlotte	Los Angeles	Providence	Indianapolis
Chattanooga	Marin/Sonoma	Rochester	Kansas City
Columbia	Olympia	Syracuse	Lincoln
Corpus Christi	Orange (California)	Utica/Rome	Milwaukee/Madison
Dallas/Ft Worth	Phoenix	Westchester/So Connecticut	Minneapolis/St Paul
Deltona/Daytona Beach	Portland		Omaha/Council Bluffs
El Paso	Reno/Sparks		Peoria
Fayetteville	Sacramento		South Bend/Mishawaka

South	West	Northeast	Midwest
Fayetteville/Springdale/Rogers	Salinas		Springfield
Fort Smith	Salt Lake City		St. Louis
Greensboro/Winston-Salem	San Diego		Toledo
Greenville/Spartanburg	San Francisco		West Michigan
Hampton Roads	San Luis Obispo/Paso Robles		Wichita
Houston	Santa Barbara/St. Maria/ Goleta		Youngstown/Warren/ Boardman
Huntington/Ashland	Santa Cruz/Watsonville		
Huntsville	Seattle/Puget Sound		
Jackson	South Bay/San Jose		
Jacksonville (Florida)	Spokane		
Killeen/Temple/Fort Hood	Stockton/Modesto		
Kingsport/Bristol/Bristol	Tucson		
Knoxville	Visalia/Porterville		
Lafayette			
Lexington/Fayette			
Little Rock/N Little Rock			
Louisville			
Lubbock			
McAllen/Edinburg/Pharr			
Memphis			
Mobile			
Montgomery			
Myrtle Beach/Conway			
Nashville			
New Orleans/Metairie/Kenner			
Ocala			
Oklahoma City			
Orlando			
Pensacola			
Port St Lucie/Fort Pierce			
Raleigh/Durham			
Richmond VA			
Roanoke			
San Antonio			
Savannah			
Shreveport/Bossier City			
South Florida			
Southwest Florida			
Tallahassee			
Tampa/St Petersburg			
Tulsa			
Washington DC			
Wilmington (North Carolina)			

12) What filters and exclusions are used in the development of the set of indices?

Filters

a. "Flipped" property is filtered out based on eliminating properties that are sold twice within 12 months.

b. Extreme price movements are filtered out. If the annual average price change between two sales reveals changes in excess of 50% per year or -40% per year these sales are excluded. For land the filter is for anything exceeding 60% per year and or -50% per year on the downside.

Exclusions and Rules

a. Sold land of less than 1/10th acre in size.

b. Public recording sale that was not verified by CoStar.

c. Sales where no price was stated.

d. Any property smaller than 2500 sq. ft. (other than multifamily)

e. Any multifamily with less than 10 units.

f. Any property sale marked with the following conditions are excluded:

- Ground Lease (Leased Fee) existed
- Ground Lease (Leasehold) existed
- Direct Exchange Property was part of an Assemblage
- Business Value was Included in the sale
- Build to Suit
- Estate/Probate Sale
- Building or Land Contamination Issue was present
- Deferred Maintenance was noted
- Excess Land was included in the sale
- Land Contract sale (seller financing)
- Partial Interest Transfer
- Redevelopment Project
- Building in Shell Condition

h. Portfolio sales are excluded unless the entire portfolio sells twice with no change in the properties involved.

i. If a property is recorded more than once in the same day, double/triple escrow for instance, the first recorded sale is used.

13) Will the underlying sales pair data be released?

While all national indices, regional and sectoral indices are available to public free of charge, the underlying sales-pair data from which the indices are constructed will not be released.

14) Are distressed property sales included in the CCRSI calculation? And if so, what constitutes a distressed sale?

Distressed property sales are included in all CCRSI indices, composite and sector/property indices alike. Because these sales are part of the property sales market dynamic, an index that did not include them would be biased upward. With that said, we do provide both distressed and non-distressed versions for two of our equal-weighted composite indices, equal-weighted U.S. Composite index and the Investment Grade index, mainly to facilitate impact analysis of distressed sales.

We define a property sale as being distressed if any of the following sale conditions are flagged for that property sale in the CoStar COMPS database:

- Auction Sale (Sale Condition)
- Deed In Lieu Of Foreclosure (Below Market Reason)
- Distress Sale (Sale Condition)
- Foreclosure (Below Market Reason)
- REO Sale (Sale Condition)
- Short Sale (Sale Condition)

Also, to further clarify, for a property sales pair to be considered distressed in the CCRSI, only the most recent sale of the property must have one of the above sale conditions, the condition of the previous sale is not a factor in determining if the sale qualifies as distressed.

For more information about CoStar's repeat-sale index, please **contact TTrainor@CoStar.com**.

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