Description

The S&P CoreLogic Case-Shiller 20-City Composite Home Price NSA Index seeks to measures the value of residential real estate in 20 major U.S. metropolitan areas: Atlanta, Boston, Charlotte, Chicago, Cleveland, Dallas, Denver, Detroit, Las Vegas, Los Angeles, Miami, Minneapolis, New York, Phoenix, Portland, San Diego, San Francisco, Seattle, Tampa and Washington, D.C.

Index Attributes

Calculated monthly, the index is included in the S&P CoreLogic Case-Shiller Home Price Index Series, a family of indices designed to be consistent benchmarks of housing prices in the U.S. The indices track the total value of existing single-family housing within the U.S.

Based on the pioneering research of Robert J. Shiller and Karl E. Case, the S&P CoreLogic Case-Shiller Home Price Indices are generally seen as the leading measure of U.S. residential real estate prices. This family of indices is designed to measure changes in housing market prices, given a constant level of quality in the homes.

Methodology Construction

The following methodology summary is provided for convenience purposes only. For complete details, please view the methodology document at https://www.spglobal.com/spdji/en/documents/methodologies/methodology-sp-corelogic-cs-home-price-indices.pdf.

- **Repeat Sales Method.** The repeat sales pricing technique that is used is widely recognized as the most appropriate way to measure price changes for real estate.

- **Index Approach.** The S&P CoreLogic Case-Shiller Home Price Indices are based on observed changes in home prices and are designed to measure increases or decreases in the market value of residential real estate in 20 defined MSAs and three price tiers—low, middle and high.

- **Creation of Sales Pairs.** The movement in the price of single-family homes is measured by collecting data on actual sale prices. When a home is resold, months or years later, the new sale price is matched to its first sale price. These two data points are called a "sale pair," and the difference in the sale pair is measured and recorded. Sales pairs are designed to yield the price change for the same house, while holding the quality and size of each house constant.

- **Weighting of Sales Pairs.** The indices are value-weighted and designed to control for quality change in the homes being measured. Sales pairs are assigned weights to account for fluctuations in price that can be attributed to factors such as extensive home remodeling, adding a home addition or extreme neglect. Time intervals between sales are also considered.

- **Three-Month Moving Average.** The indices are calculated monthly, using a three-month moving average algorithm. Home sales pairs are accumulated in rolling three-month periods. This averaging methodology is used to offset delays that can occur in the flow of sales price data from county deed recorders and to keep sample sizes large enough to create meaningful price change averages.

- **Data.** CoreLogic®, a leading provider of information technology services, serves as the calculation agent for the S&P CoreLogic Case-Shiller Home Price Indices. CoreLogic receives sale price information from multiple sources and crosschecks data points using its own proprietary methodology.
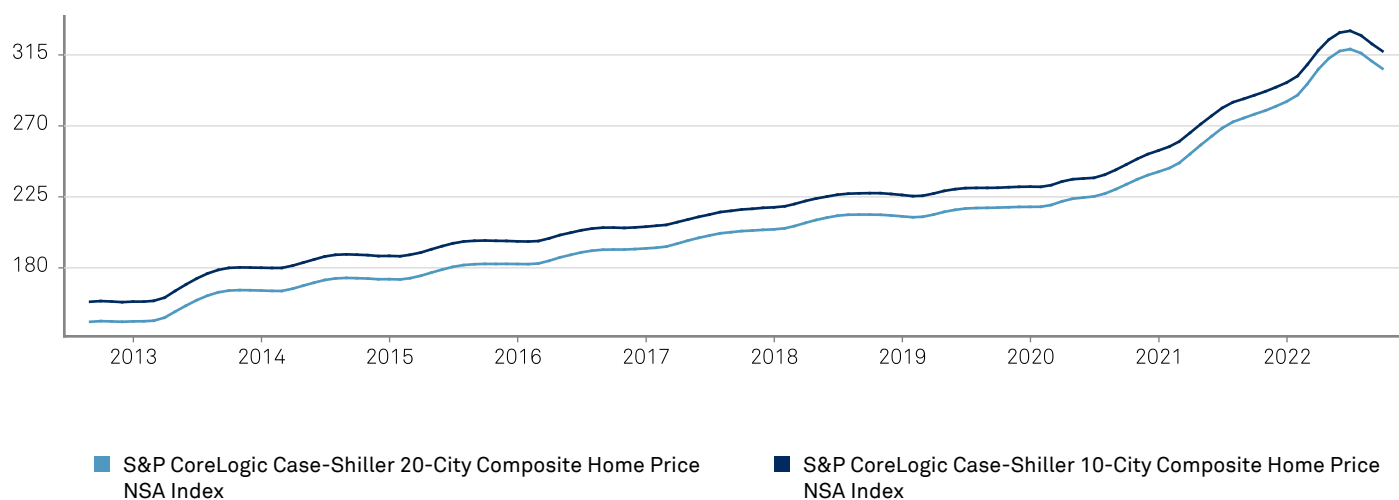
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Quick Facts

CALCULATION FREQUENCY	Monthly
CALCULATION CURRENCIES	USD
LAUNCH DATE	December 18, 2006
FIRST VALUE DATE	January 31, 2000

For more information, view the methodology document at https://www.spglobal.com/spdji/en/documents/methodologies/methodology-sp-corelogic-cs-home-price-indices.pdf.

All information for an index prior to its Launch Date is hypothetical back-tested, not actual performance, based on the index methodology in effect on the Launch Date. Back-tested performance reflects application of an index methodology and selection of index constituents with the benefit of hindsight and knowledge of factors that may have positively affected its performance, cannot account for all financial risk that may affect results and may be considered to reflect survivor/look ahead bias. Actual returns may differ significantly from, and be lower than, back-tested returns. Past performance is not an indication or guarantee of future results. This back-tested data may have been created using a "Backward Data Assumption". For more information on "Backward Data Assumption" and back-testing in general, please see the Performance Disclosure at the end of this material.

Historical Performance

Depending on index launch date, all charts below may include back-tested data.

- ■ S&P CoreLogic Case-Shiller 20-City Composite Home Price NSA Index
- ■ S&P CoreLogic Case-Shiller 10-City Composite Home Price NSA Index

Performance

	EFFECTIVE DATE	RETURNS			ANNUALIZED RETURNS			
		1 MO	3 MOS	YTD	1 YR	3 YRS	5 YRS	10 YRS
Index Level								
306.29	Sep-2022	-1.49%	-3.87%	7.31%	10.43%	11.97%	8.54%	7.67%
BENCHMARK* Index Level								
317.35	Sep-2022	-1.43%	-3.9%	6.68%	9.65%	11.2%	7.9%	7.16%

* The index benchmark is the S&P CoreLogic Case-Shiller 10-City Composite Home Price NSA Index

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Calendar Year Performance

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Index Level										
	18.47%	10.18%	2.82%	4.04%	6.28%	5.42%	5.56%	4.35%	13.38%	6.94%
BENCHMARK* Index Level										
	16.93%	9.91%	2.33%	3.58%	5.96%	4.72%	4.93%	4.17%	13.54%	6.03%

* The index benchmark is the S&P CoreLogic Case-Shiller 10-City Composite Home Price NSA Index

Tickers

	TICKER	REUTERS
Index Level	SPCS20	.SPCS20

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PERFORMANCE DISCLOSURE

Source: S&P Dow Jones Indices LLC.

The launch date of the S&P CoreLogic Case-Shiller 20-City Composite Home Price NSA Index was December 18, 2006. The launch date of the S&P CoreLogic Case-Shiller 10-City Composite Home Price NSA Index was December 18, 2006.

All information presented prior to an index's Launch Date is hypothetical (back-tested), not actual performance, and is based on the index methodology in effect on the index launch date. However, when creating back-tested history for periods of market anomalies or other periods that do not reflect the general current market environment, index methodology rules may be relaxed to capture a large enough universe of securities to simulate the target market the index is designed to measure or strategy the index is designed to capture. For example, market capitalization and liquidity thresholds may be reduced. In addition, forks have not been factored into the back-test data with respect to the S&P Cryptocurrency Indices. For the S&P Cryptocurrency Top 5 & 10 Equal Weight Indices, the custody element of the methodology was not considered; the back-test history is based on the index constituents that meet the custody element as of the Launch Date. Complete index methodology details are available at www.spdji.com. Back-tested performance reflects application of an index methodology and selection of index constituents with the benefit of hindsight and knowledge of factors that may have positively affected its performance, cannot account for all financial risk that may affect results and may be considered to reflect survivor/look ahead bias. Actual returns may differ significantly from, and be lower than, back-tested returns. Past performance is not an indication or guarantee of future results.

Please refer to the methodology for the Index for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations. Back-tested performance is for use with institutions only; not for use with retail investors.

S&P Dow Jones Indices defines various dates to assist our clients in providing transparency. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the index is set to a fixed value for calculation purposes. The Launch Date designates the date when the values of an index are first considered live: index values provided for any date or time period prior to the index's Launch Date are considered back-tested. S&P Dow Jones Indices defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company's public website or its data feed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed "Date of introduction") is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index's public release date.

Typically, when S&P DJI creates back-tested index data, S&P DJI uses actual historical constituent-level data (e.g., historical price, market capitalization, and corporate action data) in its calculations. As ESG investing is still in early stages of development, certain datapoints used to calculate S&P DJI's ESG indices may not be available for the entire desired period of back-tested history. The same data availability issue could be true for other indices as well. In cases when actual data is not available for all relevant historical periods, S&P DJI may employ a process of using "Backward Data Assumption" (or pulling back) of ESG data for the calculation of back-tested historical performance. "Backward Data Assumption" is a process that applies the earliest actual live data point available for an index constituent company to all prior historical instances in the index performance. For example, Backward Data Assumption inherently assumes that companies currently not involved in a specific business activity (also known as "product involvement") were never involved historically and similarly also assumes that companies currently involved in a specific business activity were involved historically too. The Backward Data Assumption allows the hypothetical back-test to be extended over more historical years than would be feasible using only actual data. For more information on "Backward Data Assumption" please refer to the FAQ https://www.spglobal.com/spdji/en/education/article/faq-esg-back-testing-backward-data-assumption-overview/. The methodology and factsheets of any index that employs backward assumption in the back-tested history will explicitly state so. The methodology will include an Appendix with a table setting forth the specific data points and relevant time period for which backward projected data was used.

Index returns shown do not represent the results of actual trading of investable assets/securities. S&P Dow Jones Indices maintains the index and calculates the index levels and performance shown or discussed but does not manage actual assets. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the Index or investment funds that are intended to track the performance of the Index. The imposition of these fees and charges would cause actual and back-tested performance of the securities/fund to be lower than the Index performance shown. As a simple example, if an index returned 10% on a US $100,000 investment for a 12-month period (or US $10,000) and an actual asset-based fee of 1.5% was imposed at the end of the period on the investment plus accrued interest (or US $1,650), the net return would be 8.35% (or US $8,350) for the year. Over a three-year period, an annual 1.5% fee taken at year end with an assumed 10% return per year would result in a cumulative gross return of 33.10%, a total fee of US $5,375, and a cumulative net return of 27.2% (or US $27,200).

GENERAL DISCLAIMER

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