

**S&P Monthly Australian
Consumer Price Indicator
*Methodology***

February 2023

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Introduction

Index Objective

The S&P Monthly Australian Consumer Price Indicator (the “indicator”) is a rules-based extrapolation of the Australian Consumer Price Index, published by the Australian Bureau of Statistics (ABS), and interpolated for the two months immediately prior to the subsequent quarter.

Supporting Documents

This methodology is meant to be read in conjunction with supporting documents providing greater detail with respect to the policies, procedures and calculations described herein. References throughout the methodology direct the reader to the relevant supporting document for further information on a specific topic. The list of the main supplemental documents for this methodology and the hyperlinks to those documents is as follows:

Supporting Document	URL
S&P Dow Jones Indices’ Fixed Income Policies & Practices Methodology	Fixed Income Policies & Practices

This methodology was created by S&P Dow Jones Indices to achieve the aforementioned objective of measuring the underlying interest of each indicator governed by this methodology document. Any changes to or deviations from this methodology are made in the sole judgment and discretion of S&P Dow Jones Indices so that the indicator continues to achieve its objective.

Index Construction

Data Sources

Data for the S&P Monthly Australian Consumer Price Indicator are obtained through Refinitiv and the original data source is from the ABS' quarterly release. The underlying data include the quarterly All Groups CPI index number (*ABS CPI*), All Groups CPI percentage change from corresponding quarter of previous year (*ABS CPI YoY*), and Trimmed mean percentage change from corresponding quarter of previous year (*ABS Trimmed mean YoY*).

The Australian Consumer Price Index is compiled by the ABS for quarters ending on March 31st, June 30th, September 30th, and December 31st of each year. The data are typically released on the fourth Wednesday after the end of the reference quarter, depending on public holidays, but no later than the last Friday of the month after the end of the reference quarter, in the publication Consumer Price Index, Australia (cat. no. 6401.0).

Calculation

The S&P Monthly Australian Consumer Price Indicator is calculated as follows:

CP Indicator YoY = *Trimmed mean YoY* + *Residual factor*

1. The rolling last four actual *ABS Trimmed mean YoY* percentage changes are used to fit a quadratic polynomial function:

$$f(x) = ax^2 + bx + c$$

The subsequent quarterly *S&P Trimmed mean YoY* (*S&P TM_{t+1}*) is extrapolated from the fitted curve accordingly.

2. The *Residual factor* for quarter *t+1* is approximated as the difference of the actual *ABS CPI YoY* and the actual *ABS Trimmed mean YoY* for quarter *t*.

$$RF'_{t+1} = ABS\ CPI\ YoY_t - ABS\ TM_t$$

3. The *S&P CP Indicator YoY* for quarter *t+1* is estimated by the sum of the estimated *S&P Trimmed mean* and the *residual factor*.

$$S\&P\ CP\ Indicator\ YoY'_{t+1} = S\&P\ TM'_{t+1} + RF'_{t+1}$$

4. The *S&P CP Indicator* level for quarter *t+1* is estimated as the actual *ABS CPI* level for quarter *t-3* multiplied by sum of one and the *S&P CP Indicator YoY* for quarter *t+1*.

$$S\&P\ CP\ Indicator'_{t+1} = ABS\ CPI_{t-3} * (1 + S\&P\ CP\ Indicator\ YoY'_{t+1})$$

5. The *S&P CP Indicator* level for the two months immediately prior to the end of quarter *t+1* are estimated by linear interpolating between the actual *ABS CPI* level for quarter *t* and the estimated *S&P CP Indicator* level for quarter *t+1*.

6. The percentage change of CPI over the trailing 12 months (*S&P CP Indicator YoY_m*) for each month is calculated as:

$$S\&P\ CP\ Indicator\ YoY'_m = (S\&P\ CP\ Indicator'_m / ABS\ CPI_{m-12}) - 1 \text{ if month } m-12 \text{ is a quarter end and } ABS\ CPI_{m-12} \text{ is available}$$

OR

$S\&P\ CP\ Indicator\ YoY'_m = (S\&P\ CP\ Indicator'_m / \text{Interpolated}\ ABS\ CPI_{m-12}) - 1$ if month $m-12$ is not a quarter end and $ABS\ CPI_{m-12}$ is not available

7. The monthly percentage change of CPI ($S\&P\ CP\ Indicator\ MoM'_m$) for each month is calculated as:

$S\&P\ CP\ Indicator\ MoM'_m = (S\&P\ CP\ Indicator'_m / S\&P\ CP\ Indicator'_{m-1}) - 1$ if month $m-1$ is not a quarter end

OR

$S\&P\ CP\ Indicator\ MoM'_m = (S\&P\ CP\ Indicator'_m / ABS\ CPI_{m-1}) - 1$ if month $m-1$ is a quarter end where:

<i>Trimmed mean</i>	= Underlying trend inflation
$S\&P\ TM'_{t+1}$	= Estimated Trimmed mean for quarter $t+1$
RF'_{t+1}	= Estimated residual factor for quarter $t+1$
$ABS\ CPI\ YoY_t$	= Actual CPI YoY for quarter t published by ABS
$ABS\ TM_t$	= Actual Trimmed mean YoY for quarter t published by ABS
$S\&P\ CP\ Indicator\ YoY'_{t+1}$	= Estimated Consumer Price Indicator YoY for quarter $t+1$
$S\&P\ CP\ Indicator'_{t+1}$	= Estimated CPI index number for quarter $t+1$
$ABS\ CPI_{t-3}$	= Actual CPI index number for quarter $t-3$ published by ABS
$S\&P\ CP\ Indicator\ YoY'_m$	= Estimated CPI percentage change over the trailing 12 months for month m
$S\&P\ CP\ Indicator'_m$	= Estimated Consumer Price Indicator index number for month m
$ABS\ CPI_{m-12}$	= Actual CPI index number for month $m-12$ published by ABS
<i>Interpolated ABS CPI_{m-12}</i>	= Linear interpolating value between the actual <i>ABS CPI</i> levels published for the quarter immediately preceding month $m-12$ and the quarter immediately following month $m-12$, when month $m-12$ is not a quarter end
$S\&P\ CP\ Indicator\ MoM'_m$	= Estimated monthly Consumer Price Indicator percentage change for month m
$ABS\ CPI_{m-1}$	= Actual CPI index number for month $m-1$ published by ABS
$S\&P\ CP\ Indicator'_{m-1}$	= Estimated Consumer Price Indicator index number for month $m-1$

S&P CP Indicator, *S&P CP Indicator YoY'*, and *S&P CP Indicator MoM'* are calculated and published for every month.

Rounding Conventions

Numbers for the S&P Monthly Australian Consumer Price Indicator are always published to the reference precision of the Australian Consumer Price Index (All Groups CPI index number) published by the ABS. As such, numbers are always published to one decimal place.

Index Data

Publication Schedule

The S&P Monthly Australian Consumer Price Indicator is a monthly data series published on a quarterly basis. It is typically released on the Friday after the publication of the official quarterly Australian Consumer Price Index by the ABS, which is no later than the last Friday of the month after the end of the reference quarter.

Interpretation

The S&P Monthly Australian Consumer Price Indicator is constructed by applying curve fitting and linear interpolation techniques to historical Australian Consumer Price Index data officially released by the ABS. No data inputs are used other than official Australian Consumer Price Index historical data. Therefore, the S&P Monthly Australian Consumer Price Indicator does not account for new price level developments for the upcoming quarter and is not a forecast of future official releases of the Australian Consumer Price Index by the ABS.

History Availability

Launch dates and first value dates are detailed in the table below.

Indicator	Launch Date	First Value Date
S&P Monthly Australian Consumer Price Indicator	01/27/2016	01/31/2006
S&P Monthly Australian Consumer Price Indicator YoY	01/27/2016	01/31/2006
S&P Monthly Australian Consumer Price Indicator MoM	01/27/2016	01/31/2006

Index Governance

Index Committee

An S&P Dow Jones Index Committee maintains the index. All committee members are full-time professionals at S&P Dow Jones Indices. Meetings are held regularly. The Index Committee has discretion to determine how the S&P Monthly Australian Consumer Price Indicator is calculated and the data are validated.

S&P Dow Jones Indices considers information about changes to its indices and related matters to be potentially market moving and material. Therefore, all Index Committee discussions are confidential. S&P Dow Jones Indices' Index Committees reserve the right to make exceptions when applying the methodology if the need arises. In any scenario where the treatment differs from the general rules stated in this document or supplemental documents, clients will receive sufficient notice, whenever possible.

The Committee may rely on any information or documentation submitted to it or gathered by it that the Index Committee believes to be accurate. The Index Committee reserves the right to reinterpret publicly available information and to make changes to the indices based on a new interpretation of that information at its sole discretion. All Index Committee discussions are confidential.

The Index Committee is separate from and independent of other analytical groups at S&P Global. In particular, the Index Committee has no access to or influence on decisions by S&P Global Ratings analysts.

S&P Dow Jones Indices' Index Committees reserve the right to make exceptions when applying the methodology if the need arises. In any scenario where the treatment differs from the general rules stated in this document or supplemental documents, clients will receive sufficient notice, whenever possible.

In addition to the daily governance of indices and maintenance of index methodologies, at least once within any 12-month period, the Index Committee reviews the methodology to ensure the indices continue to achieve the stated objectives, and that the data and methodology remain effective. In certain instances, S&P Dow Jones Indices may publish a consultation inviting comments from external parties.

For information on Quality Assurance and Internal Reviews of Methodology, please refer to S&P Dow Jones Indices' Fixed Income Policies & Practices Methodology.

Index Policy

Announcements

Announcements of changes in indicator policy, indicator methodology, or other matters besides routine indicator publication are posted on S&P Dow Jones Indices' web site at www.spglobal.com/spdji/.

Calculations and Data Disruptions

If a data source required for indicator calculation is unable to provide required data S&P Dow Jones Indices may decide to delay or not publish an indicator.

Recalculation Policy

For information on the recalculation policy please refer to S&P Dow Jones Indices' Fixed Income Policies & Practices Methodology.

For information on Calculations and Pricing Disruptions, Expert Judgment and Data Hierarchy, please refer to S&P Dow Jones Indices' Fixed Income Policies & Practices Methodology.

Contact Information

For questions regarding an index, please contact: index_services@spglobal.com.

Index Dissemination

S&P Australian Monthly Consumer Price Indicator values are available through S&P Dow Jones Indices' Web site at www.spglobal.com/spdji/, major quote vendors (see codes below), numerous investment-oriented Web sites, and various print and electronic media.

Tickers

The table below lists headline indices covered by this document. All versions of the below indices that may exist are also covered by this document. Please refer to the [S&P DJI Methodology & Regulatory Status Database](#) for a complete list of indices covered by this document.

Indicator	Bloomberg
S&P Monthly Australian Consumer Price Indicator	SPBACPI
S&P Monthly Australian Consumer Price Indicator YoY	SPBACPIY
S&P Monthly Australian Consumer Price Indicator MoM	SPBACPIM

Index Data

Monthly values and related data are available via subscription.

For product information, please contact S&P Dow Jones Indices, www.spglobal.com/spdji/en/contact-us.

Web site

For further information, please refer to S&P Dow Jones Indices' Web site at www.spglobal.com/spdji/.

Appendix

Methodology Changes

Methodology changes since 10/31/2021 are as follows:

Change	Effective Date (After Close)	Methodology	
		Previous	Updated
Calculation of the percentage change of CPI over the trailing 12 months (<i>S&P CP Indicator YoY_m</i>)	10/31/2021	if month <i>m-12</i> is not a quarter end, the S&P CP Indicator was used for month <i>m-12</i>	if month <i>m-12</i> is not a quarter end, the interpolated ABS CPI level is used for month <i>m-12</i>

Disclaimer

Performance Disclosure/Back-Tested Data

Where applicable, S&P Dow Jones Indices and its index-related affiliates (“S&P DJI”) 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 DJI 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.

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.

Information presented prior to an index’s launch date is hypothetical back-tested performance, not actual performance, and is based on the index methodology in effect on the 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. 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.

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 certain 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. 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 DJI maintains the index and calculates the index levels and performance shown or discussed but does not manage any 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).

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