

S&P Dow Jones Indices

A Division of **S&P Global**

S&P Buyback FCF and PE Indices *Methodology*

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Introduction

Index Objective and Family

The S&P 500 Buyback FCF and PE Indices comprise the following:

- **S&P 500 Buyback FCF Index.** The index is designed to measure the performance of the top 30 stocks with the highest free cash flow yields among the 50 most liquid stocks in the S&P 500 Buyback Index weighted by free cash flow yield.
- **S&P 500 Buyback PE Index.** The index is designed to measure the performance of the top 30 stocks with the highest earnings yields among the 50 most liquid stocks in the S&P 500 Buyback Index weighted by earnings yield.

For more information on the S&P 500 Buyback Index methodology, please refer to the S&P 500 Buyback Index Methodology document at www.spdji.com.

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' Equity Indices Policies & Practices Methodology	Equity Indices Policies & Practices
S&P Dow Jones Indices' Index Mathematics Methodology	Index Mathematics Methodology

This methodology was created by S&P Dow Jones Indices to achieve the aforementioned objective of measuring the underlying interest of each index 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 index continues to achieve its objective.

Eligibility Criteria

Index Eligibility

The index universe is drawn from the S&P 500 Buyback Index.

Data Availability. Data availability rules are as follows:

- **S&P 500 Buyback FCF Index.** Companies without free cash flow data as of the rebalancing reference period are not eligible for index inclusion.
- **S&P 500 Buyback PE Index.** Companies without price to earnings data as of the rebalancing reference period are not eligible for index inclusion.

Excluded Companies. All companies related to, and including, JPMorgan Chase & Co. and Visa, past or present, are excluded from the indices.

Multiple Share Classes and Dual Listed Companies. Each company is represented once by the Designated Listing. For more information regarding the treatment of multiple share classes, please refer to Approach B within the Multiple Share Classes section of the S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Index Construction

Approaches

There are two steps in the creation of the indices. The first is the selection of the companies; the second is the weighting of the index constituents.

Constituent Selection

For each index, the selection of index constituents is done as follows as of each rebalancing reference date:

- 1) If JPMorgan Chase & Co., Visa, and their past or present affiliated companies are in the S&P 500 Buyback Index, they are excluded from the universe.
- 2) For each index, the following is obtained:
 - a. **S&P 500 Buyback FCF Index.** Free Cash Flow data from the latest quarterly report is obtained for all companies not excluded in Step 1. Any company without available free cash flow data is not eligible.
 - b. **S&P 500 Buyback PE Index.** The Price to Earnings ratio is obtained for all companies not excluded in Step 1. Any company without available price to earnings data is not eligible.
- 3) The three-month Average Daily Value Traded (ADVT), as of the rebalancing reference date, is obtained for all remaining companies. The 50 companies with the highest ADVT are selected as the sub-universe.
- 4) For each index, the following is calculated:
 - a. **S&P 500 Buyback FCF Index.** Free Cash Flow Yield (FCFY) is calculated for the 50 companies in the sub-universe. FCFY is computed by taking the Free Cash Flow divided by the stock's closing price as of the applicable rebalancing reference date. The companies are then ranked by FCFY.
 - b. **S&P 500 Buyback PE Index.** Earnings Yield (EY) is calculated for the 50 companies in the sub-universe. EY is calculated by taking the inverse of the price to earnings ratio. The companies are then ranked by EY.
- 5) Following the FCFY and EY calculations, companies are selected for the index inclusion as follows:
 - **S&P 500 Buyback FCF Index.** The 30 companies with the highest FCFY.
 - **S&P 500 Buyback PE Index.** The 30 companies with the highest EY.

Constituent Weightings

S&P 500 Buyback FCF Index. At each rebalancing reference date, the initial weight, w , for each index constituent, i , is set proportional to its FCFY _{i} to the sum of all constituents' FCFY.

$$w_i = \frac{FCFY_i}{\sum_{i=1}^N FCFY}$$

S&P 500 Buyback PE Index. At each rebalancing reference date, the initial weight, w , for each index constituent, i , is set proportional to its EY_i to the sum of all constituents' EY .

$$w_i = \frac{EY_i}{\sum_{i=1}^N EY}$$

For each index, if the initial weight of any constituent is above 7.5%, the weight is capped at 7.5%, with the excess weight re-distributed to all non-capped constituents on a pro rata basis.

Index Calculations

The indices are all calculated using the divisor methodology used for all S&P Dow Jones' equity indices.

The index is maintained according to the modified market capitalization approach as detailed in the *Non-Market Capitalization Weighted Indices* section of *S&P Dow Jones Indices' Index Mathematics Methodology*.

Index Maintenance

Rebalancing

The index rebalances quarterly, effective after the close on the third Friday of January, April, July, and October. The rebalancing reference dates are after the close of the last business day of December, March, June and September, respectively.

Constituent index shares are calculated using closing prices on the Wednesday prior to the second Friday of the rebalancing month as the reference price. Index shares are calculated and assigned to each stock to arrive at the weights determined on the reference date.

Additions. Generally no companies are added to an index between quarterly rebalancings, except for major corporate actions, such as mergers and spin-offs. Any exceptions to this rule are announced to clients with ample lead time.

Deletions. Constituents removed from the S&P 500 Buyback Index are removed from the indices simultaneously.

Corporate Actions

Corporate actions (such as stock splits, stock dividends, spin-offs and rights offerings) are applied after the close of trading on the day prior to the ex-date. Share changes resulting from exchange offers are applied on the ex-date.

Corporate Action	Adjustment Made to the Index	Divisor Adjustment?
Spin-off	See below.	
Rights offering	The price is adjusted to the Price of the Parent Company minus (the Price of the Rights Offering/Rights Ratio). Index shares change so that the company's weight remains the same as its weight before the rights offering.	No
Stock Split	Index shares are multiplied by and the price is divided by the split factor.	No
Share issuance or share repurchase	None. Actual shares outstanding of the company play no role in the daily index calculation.	No
Special dividends	The price of the stock making the special dividend payment is reduced by the per share special dividend amount after the close of trading on the day before the dividend ex-date.	Yes
Delisting, acquisition or any other corporate action resulting in the deletion of the stock from the S&P 500 Buyback Index	The stock is dropped from the Index. This will cause the weights of the rest of the stocks in the index to change proportionately. Additions are made to the index only at the time of the quarterly rebalancing.	Yes

Spin-offs. The spun-off company is added to all the indices of which the parent is a constituent, at a zero price at the market close of the day before the ex-date (with no divisor adjustment). The spun-off company is then removed after at least one day of regular way trading (with a divisor adjustment). Please note this differs from the parent S&P 500 Buyback Index spin-off treatment.

For further information on Spin-offs and other Corporate Actions, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Other Adjustments

In cases where there is no achievable market price for a stock being deleted, it may be removed at a zero or minimal price at the Index Committee's discretion, in recognition of the constraints faced by investors in trading bankrupt or suspended stocks.

Currency of Calculation and Additional Index Return Series

Each index is calculated in U.S. dollars.

In addition to the indices detailed in this methodology, additional return series versions of the indices may be available, including, but not limited to: currency, currency hedged, decrement, fair value, inverse, leveraged, and risk control versions. For a list of available indices, please refer to [S&P DJI Methodology & Regulatory Status Database](#).

For information on various index calculations, please refer to S&P Dow Jones Indices' Index Mathematics Methodology.

For the inputs necessary to calculate certain types of indices, including decrement, dynamic hedged, fair value, and risk control indices, please refer to the Parameters documents available at www.spdji.com.

Base Date and History Availability

Index history availability, base dates, and base values are shown in the table below.

Index	Launch Date	First Value Date	Base Date	Base Value
S&P 500 Buyback FCF Index	03/17/2014	01/21/1994	01/21/1994	1000
S&P 500 Buyback PE Index	03/17/2014	01/21/1994	01/21/1994	1000

Index Data

Calculation Return Types

S&P Dow Jones Indices calculates multiple return types which vary based on the treatment of regular cash dividends. The classification of regular cash dividends is determined by S&P Dow Jones Indices.

- Price Return (PR) versions are calculated without adjustments for regular cash dividends.
- Gross Total Return (TR) versions reinvest regular cash dividends at the close on the ex-date without consideration for withholding taxes.
- Net Total Return (NTR) versions, if available, reinvest regular cash dividends at the close on the ex-date after the deduction of applicable withholding taxes.

In the event there are no regular cash dividends on the ex-date, the daily performance of all three indices will be identical.

For a complete list of indices available, please refer to the daily index levels file (".SDL").

For more information on the classification of regular versus special cash dividends as well as the tax rates used in the calculation of net return, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

For more information on the calculation of return types, please refer to S&P Dow Jones Indices' Index Mathematics Methodology.

Index Governance

Index Committee

An S&P Dow Jones Indices' Index Committee maintains the indices. All committee members are full-time professional members of S&P Dow Jones Indices' staff. The committee meets monthly. At each meeting, the Committee reviews pending corporate actions that may affect index constituents, statistics comparing the composition of the indices to the market, companies that are being considered as candidates for addition to an index, and any significant market events. In addition, the Index Committee may revise index policy covering rules for selecting companies, treatment of dividends, share counts or other matters.

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.

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' Equity Indices Policies & Practices Methodology.

Index Policy

Announcements

All index constituents are evaluated daily for data needed to calculate index levels and returns. All events affecting the daily index calculation are typically announced in advance via the Index Corporate Events report (.SDE), delivered daily to all clients. Any unusual treatment of a corporate action or short notice of an event may be communicated via email to clients.

For more information on S&P Dow Jones Indices' announcements, please refer to the Announcement Policy found on our Web site, www.spdji.com.

Pro-forma Files

In addition to the corporate events file (.SDE), S&P Dow Jones Indices provides constituent pro-forma files each time the indices rebalance. The pro-forma file is typically provided daily in advance of the rebalancing date and contains all constituents and their corresponding weights and index shares effective for the upcoming rebalancing. Since index shares are assigned based on prices prior to rebalancing effective date, the actual weight of each stock at the rebalancing will differ from these weights due to market movements.

Please visit www.spdji.com for a complete schedule of rebalancing timelines and pro-forma delivery times.

Holiday Schedule

The indices are calculated daily, throughout the calendar year. The only days an index is not calculated are on days when all exchanges where an index's constituents are listed are officially closed.

A complete holiday schedule for the year is available on S&P Dow Jones Indices' Web site at www.spdji.com.

Rebalancing

The Index Committee may change the date of a given rebalancing for reasons including market holidays occurring on or around the scheduled rebalancing date. Any such change will be announced with proper advance notice where possible.

Unexpected Exchange Closures

For information on Unexpected Exchange Closures, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Recalculation Policy

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

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

Contact Information

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

Index Dissemination

Index levels are available through S&P Dow Jones Indices' Web site at www.spdji.com, 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 [S&P DJI Methodology & Regulatory Status Database](#) for a complete list of indices covered by this document.

Index	Return Type	Bloomberg
S&P 500 Buyback FCF Index	Price Return	SPBUYFUP
	Total Return	SPBUYFUT
	Net Total Return	SPBUYFUN
S&P 500 Buyback PE Index	Price Return	SPBUYPUT
	Total Return	SPBUYPUT
	Net Total Return	SPBUYPUT

Index Data

Daily constituent and index level data are available via subscription.

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

Web site

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

Appendix I

Methodology Changes

Methodology changes since January 1, 2015 are as follows:

Change	Effective Date (After Close)	Methodology	
		Previous	Updated
Modification to Reference Price Date	12/30/2022	Constituent index shares are calculated using closing prices on the second Friday of the rebalancing month as the reference price. Index shares are calculated and assigned to each stock to arrive at the weights determined on the reference date	Constituent index shares are calculated using closing prices on the Wednesday prior to the second Friday of the rebalancing month as the reference price. Index shares are calculated and assigned to each stock to arrive at the weights determined on the reference date.
Clarification of treatment for Multiple Share Classes and Dual Listed Companies	11/20/2017	--	Some companies may have more than one share class line or listing in the respective underlying universe index. In the S&P Buyback FCF and PE Indices S&P Buyback FCF and PE Indices, each company is represented once by the most liquid share line. Liquidity is measured based on each listing's three-month ADVT.
Removal of Normalization step	11/20/2017	For the S&P 500 Buyback FCF Index , a normalized FCFY is calculated by subtracting the lowest FCFY in the sub-universe from the FCFY of all other companies. For the S&P 500 Buyback PE Index , a normalized EY is calculated by subtracting the lowest EY in the sub-universe from the EY of all other companies.	--
Treatment of Spin-offs	09/30/2015	Spin-offs are generally not added to the indices and there is no weight change to the parent stock. The price of the parent company is adjusted to the Price of the Parent Company minus (the Price of the Spun-off Company/Share Exchange Ratio). Index shares change so that the company's weight remains the same as its weight before the spin-off. There is no index divisor change. However, when the price of the spin-off is not known, the spun-off company is added to the index at a zero price. Once the spun-off company trades, the company is dropped from the index and the parent's index shares are adjusted so that the company's weight remains the same as the combined weight of	The spun-off company is added to all the indices of which the parent is a constituent, at a zero price at the market close of the day before the ex-date (with no divisor adjustment). The spun-off company is then removed after at least one day of regular way trading (with a divisor adjustment).

		parent and the spin-off, determined on the first day of trading.	
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Appendix II

EU Required ESG Disclosures

EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY¹	
1.	Name of the benchmark administrator. S&P Dow Jones Indices LLC.
2.	Underlying asset class of the ESG benchmark.² N/A
3.	Name of the S&P Dow Jones Indices benchmark or family of benchmarks. S&P DJI Equity Indices Benchmark Statement
4.	Do any of the indices maintained by this methodology take into account ESG factors? No
Appendix latest update: January 2021	
Appendix first publication: January 2021	

¹ The information contained in this Appendix is intended to meet the requirements of the European Union Commission Delegated Regulation (EU) 2020/1817 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards the minimum content of the explanation of how environmental, social and governance factors are reflected in the benchmark methodology.

² The 'underlying assets' are defined in European Union Commission Delegated Regulation (EU) 2020/1816 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards the explanation in the benchmark statement of how environmental, social and governance factors are reflected in each benchmark provided and published.

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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