

**S&P Dow Jones
Indices**

A Division of **S&P Global**

Dow Jones U.S. Thematic Neutral Indices *Methodology*

December 2022

Table of Contents

Introduction	3
Index Objective	3
Highlights and Index Family	3
Supporting Documents	4
Index Construction	5
Dow Jones U.S. Thematic Market Neutral Indices	5
Component Index Construction	5
Dow Jones U.S. Low Beta and High Beta Indices	6
Dow Jones U.S. Low Momentum and High Momentum Indices	7
Dow Jones U.S. Thematic Long Quality and Short Quality Indices	8
Dow Jones U.S. Thematic Long Size and Short Size Indices	9
Dow Jones U.S. Relative Value and Short Relative Value Indices	10
Index Maintenance	11
Rebalancing	11
Additions	11
Deletions	11
Corporate Actions	11
Currency of Calculation and Additional Index Return Series	11
Other Adjustments	12
Base Dates and History Availability	12
Index Data	13
Calculation Return Types	13
Index Governance	14
Index Committee	14
Index Policy	15
Announcements	15
Holiday Schedule	15
Pro-forma Files	15
Rebalancing	15
Unexpected Exchange Closures	15
Recalculation Policy	15
Real-Time Calculation	15

Contact Information	15
Index Dissemination	16
Tickers	16
Index Data	16
Web site	16
Appendix I	17
Methodology Changes	17
Appendix II	18
EU Required ESG Disclosures	18
Disclaimer	19
Performance Disclosure/Back-Tested Data	19
Intellectual Property Notices/Disclaimer	20

Introduction

Index Objective

The Dow Jones U.S. Thematic Market Neutral Indices are a family of weighted return strategy indices that each reflect the performance of offsetting long/short allocations in two component indices.

For more information on the Dow Jones U.S. Index, please refer to Dow Jones Global Indices Methodology document available at www.spglobal.com/spdji/.

Highlights and Index Family

Dow Jones U.S. Thematic Market Neutral Low Beta Index. The index measures the performance of an investment strategy utilizing long positions in low beta companies and short positions in high beta companies. This is achieved by allocating a long position of 100% in the Dow Jones U.S. Low Beta Index and a short position of -100% in the Dow Jones U.S. High Beta Index. Beta is calculated using weekly returns for the past 12 months (52 weeks).

- **Dow Jones U.S. Low Beta Index.** The index measures equal weighted performance of 200 low beta companies based on their beta coefficient over the past 12 months.
- **Dow Jones U.S. High Beta Index.** The index measures equal weighted performance of 200 high beta companies based on their beta coefficient over the past 12 months.

Dow Jones U.S. Thematic Market Neutral Momentum Index. The index measures the performance of an investment strategy utilizing long positions in high momentum companies and short positions in low momentum companies. This is achieved by allocating a long position of 100% in the Dow Jones U.S. High Momentum Index and a short position of -100% in the Dow Jones U.S. Low Momentum Index. Momentum is calculated by ranking stocks by their 12-month historical total return, as of the rebalancing reference date.

- **Dow Jones U.S. High Momentum Index.** The index measures equal weighted performance of 200 high momentum companies based on their 12-month historical price return.
- **Dow Jones U.S. Low Momentum Index.** The index measures equal weighted performance of 200 low momentum companies based on their 12-month historical price return.

Dow Jones U.S. Thematic Market Neutral Quality Index. The index measures the performance of an investment strategy utilizing long positions in high quality companies and short positions in low quality companies. This is achieved by allocating a long position of 100% in the Dow Jones U.S. Long Quality Index and a short position of -100% in the Dow Jones U.S. Short Quality Index. Quality is assessed based on fundamentals and is calculated using a multi-factor ranking process based on trailing 12-month return on equity and debt-to-equity ratios.

- **Dow Jones U.S. Thematic Long Quality Index.** The index measures equal weighted performance of 200 high quality companies, with quality assessed based on trailing 12-month return on equity and debt-to-equity ratios.
- **Dow Jones U.S. Thematic Short Quality Index.** The index measures equal weighted performance of 200 low quality companies, with quality assessed based on trailing 12-month return on equity and debt-to-equity ratios.

Dow Jones U.S. Thematic Market Neutral Size Index. The index measures the performance of an investment strategy utilizing long positions in small market capitalization companies and short positions in large market capitalization companies. This is achieved by allocating a long position of 100% in the Dow Jones U.S. Long Size Index and a short position of -100% in the Dow Jones U.S. Short Size Index.

- **Dow Jones U.S. Thematic Long Size Index.** The index measures equal weighted performance of 200 small-cap companies based on their float-adjusted market capitalization.
- **Dow Jones U.S. Thematic Short Size Index.** The index measures equal weighted performance of 200 large-cap companies based on their float-adjusted market capitalization.

Dow Jones U.S. Thematic Market Neutral Value Index. The index measures the performance of an investment strategy utilizing long positions in stocks with high relative value ranks and short positions in stocks with low relative value ranks. This is achieved by allocating a long position of 100% in the Dow Jones U.S. Relative Value Index and a short position of -100% in the Dow Jones U.S. Short Relative Value Index. Value is calculated using a multi-factor ranking process based on book value to price, projected earnings per share to price, and trailing 12-month operating cash flow to price ratios.

- **Dow Jones U.S. Relative Value Index.** The index measures equal weighted performance of 200 stocks with high relative value ranks assessed based on book value to price, projected earnings per share to price, and trailing 12-month operating cash flow to price ratios.
- **Dow Jones U.S. Short Relative Value Index.** The index measures equal weighted performance of 200 stocks with low relative value ranks assessed based on book value to price, projected earnings per share to price, and trailing 12-month operating cash flow to price ratios.

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
S&P Dow Jones Indices' Global Industry Classification Standard (GICS®) Methodology	GICS 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.

Index Construction

Dow Jones U.S. Thematic Market Neutral Indices

Each of the Dow Jones U.S. Thematic Market Neutral Indices is made up of long and short positions in two component indices. At each rebalancing, the weights of these positions in the index are set to +/- 100% as detailed in the table below.

Index	Component Indices	Rebalancing Weight
Dow Jones U.S. Thematic Market Neutral Low Beta Index	Dow Jones U.S. Low Beta Index	100%
	Dow Jones U.S. High Beta Index	-100%
Dow Jones U.S. Thematic Market Neutral Momentum Index	Dow Jones U.S. High Momentum	100%
	Dow Jones U.S. Low Momentum	-100%
Dow Jones U.S. Thematic Market Neutral Quality Index	Dow Jones U.S. Thematic Long Quality Index	100%
	Dow Jones U.S. Thematic Short Quality Index	-100%
Dow Jones U.S. Thematic Market Neutral Size Index	Dow Jones U.S. Thematic Long Size Index	100%
	Dow Jones U.S. Thematic Short Size Index	-100%
Dow Jones U.S. Thematic Market Neutral Value Index	Dow Jones U.S. Relative Value Index	100%
	Dow Jones U.S. Short Relative Value Index	-100%

Please refer to the Weighted Return Indices section of S&P Dow Jones Indices' Index Mathematics Methodology for details on the index calculation methodology.

Component Index Construction

Component Index Universe. The index universe for each of the component indices is comprised of all stocks in the Dow Jones U.S. Index.

Multiple Classes of Stock. 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 S&P Dow Jones Indices' Equity Indices Policies & Practices document.

Approaches. The stocks included in the component indices are equal-weighted and the indices are calculated by the divisor methodology used in all S&P Dow Jones Indices' equity indices.

Index Calculations. The initial divisor is set to have a base index value as detailed in *Index Maintenance*.

Please refer to the Equal Weighted Indices section of S&P Dow Jones Indices' Index Mathematics Methodology for details on the index calculation methodology.

Dow Jones U.S. Low Beta and High Beta Indices

At each rebalancing, each index is constructed according to the following steps using data as of the rebalancing reference date:

1. Stocks without weekly returns for the past 52 weeks are excluded.
2. The remaining stocks are ranked in descending order by float-adjusted market capitalization (FMC). The largest 1,000 stocks remain eligible. In addition, current index constituents ranked between 1,001 and 1,100 remain eligible.
3. Non-constituents with a six-month average daily value traded (ADVT) of less than US\$ 10 million are excluded. Current constituents with a six-month ADVT of less than US\$ 7.5 million are excluded.
4. If the remaining eligible universe is greater than 1,000 stocks, the smallest non-constituent by FMC is deemed ineligible until the eligible universe equals exactly 1,000 stocks. The remaining stocks are separated into 11 sectors as defined by the Global Industry Classification Standard (GICS®). For further information on GICS, please refer to the GICS methodology.
5. Sector neutrality is maintained by determining a defined number of stocks from each sector based on the proportion that each sector makes up in the composition of the eligible 1,000 stock universe. The following steps are used to determine sector neutrality:
 - The total number of companies within each sector is divided by 1,000. This value represents the target percentage of constituents from each sector required for index inclusion.
 - The target percentage is multiplied by 200 in order to identify the target number of constituents from each sector.
6. The eligible stocks in each sector are sorted in descending order by their beta factor, calculated using weekly returns for the past 12 months (52 weeks) using the S&P 500 as the benchmark.
7. The stocks with the lowest betas in each sector are selected for inclusion in the Dow Jones U.S. Low Beta Index until the target number of constituents for that sector are selected, based on the target counts determined above in step 6. Current constituents are buffered in each sector to the target count times a factor of 1.5. This step is performed separately for each sector and then combined, resulting in 200 stocks in total selected for the Dow Jones U.S. Low Beta Index.
8. The stocks with the highest betas in each sector are selected for inclusion in the Dow Jones U.S. High Beta Index until the target number of constituents for that sector are selected, based on the target counts determined above in step 6. Current constituents are buffered in each sector to the target count times a factor of 1.5. This step is performed separately for each sector and then combined, resulting in 200 stocks in total selected for the Dow Jones U.S. High Beta Index.

Constituent Weightings. At each rebalancing, constituent stock weights are reset to equal weight.

Dow Jones U.S. Low Momentum and High Momentum Indices

At each rebalancing, each index is constructed according to the following steps using data as of the rebalancing reference date:

1. Stocks without 12 months of trading history on the last business day of the previous month as of the reference date are excluded.
2. The remaining stocks are ranked in descending order by FMC. The largest 1,000 stocks remain eligible. In addition, current index constituents ranked between 1,001 and 1,100 remain eligible.
3. Non-constituents with a six-month ADVT of less than US\$ 10 million are excluded. Current constituents with a six-month ADVT of less than US\$ 7.5 million are excluded.
4. If the remaining eligible universe is greater than 1,000 stocks, the smallest non-constituent by FMC is deemed ineligible until the eligible universe equals exactly 1,000 stocks.
5. The remaining stocks are separated into 11 sectors as defined by the Global Industry Classification Standard (GICS®). For further information on GICS, please refer to the GICS methodology.
6. Sector neutrality is maintained by determining a defined number of stocks from each sector based on the proportion that each sector makes up in the composition of the eligible 1,000 stock universe. The following steps are used to determine sector neutrality:
 - The total number of companies within each sector is divided by 1,000. This value represents the target percentage of constituents from each sector required for index inclusion.
 - The target percentage is multiplied by 200 in order to identify the target number of constituents from each sector.
7. The eligible stocks in each sector are sorted in descending order by their momentum factor, calculated as the 12-month historical price return from the rebalancing reference date.
8. The stocks with the lowest momentum in each sector are selected for inclusion in the Dow Jones U.S. Low Momentum Index until the target number of constituents for that sector are selected, based on the target counts determined above in step 6. Current constituents are buffered in each sector to the target count times a factor of 1.5. This step is performed separately for each sector and then combined, resulting in 200 stocks in total selected for the Dow Jones U.S. Low Momentum Index.
9. The stocks with the highest momentum in each sector are selected for inclusion in the Dow Jones U.S. High Momentum Index until the target number of constituents for that sector are selected, based on the target counts determined above in step 6. Current constituents are buffered in each sector to the target count times a factor of 1.5. This step is performed separately for each sector and then combined, resulting in 200 stocks in total selected for the Dow Jones U.S. High Momentum Index.

Constituent Weightings. At each rebalancing, constituent stock weights are reset to equal weight.

Dow Jones U.S. Thematic Long Quality and Short Quality Indices

At each rebalancing, each index is constructed according to the following steps using data as of the rebalancing reference date:

1. Stocks without 12-month return on equity or debt-to-equity ratios are excluded.
2. The remaining stocks are ranked in descending order by FMC. The largest 1,000 stocks remain eligible. In addition, current index constituents ranked between 1,001 and 1,100 remain eligible.
3. Non-constituents with a six-month ADVT of less than US\$ 10 million are excluded. Current constituents with a six-month ADVT of less than US\$ 7.5 million are excluded.
4. If the remaining eligible universe is greater than 1,000 stocks, the smallest non-constituent by FMC is deemed ineligible until the eligible universe equals exactly 1,000 stocks.
5. The remaining stocks are separated into 11 sectors as defined by the Global Industry Classification Standard (GICS®). For further information on GICS, please refer to the GICS methodology.
6. Sector neutrality is maintained by determining a defined number of stocks from each sector based on the proportion that each sector makes up in the composition of the eligible 1,000 stock universe. The following steps are used to determine sector neutrality:
 - The total number of companies within each sector is divided by 1,000. This value represents the target percentage of constituents from each sector required for index inclusion.
 - The target percentage is multiplied by 200 in order to identify the target number of constituents from each sector.
7. The eligible stocks in each sector are then sorted by their quality rank, which is calculated using a multi-factor ranking process. Stocks are ranked by the following two ratios. Each rank is equally weighted to determine the final quality rank:
 - Trailing 12-month return on equity, ranked in descending order.
 - Debt-to-equity ratio, ranked in ascending order.
8. The stocks with the best quality rank in each sector are selected for the Dow Jones U.S. Thematic Long Quality Index until the target number of constituents for that sector are selected, based on the target counts determined above in step 6. Current constituents are buffered in each sector to the target count times a factor of 1.25. This step is performed separately for each sector and then combined, resulting in 200 stocks in total selected for the Dow Jones U.S. Thematic Long Quality Index.
9. The stocks with the worst quality rank in each sector are selected for the Dow Jones U.S. Thematic Short Quality Index until the target number of constituents for that sector are selected, based on the target counts determined above in step 6. Current constituents are buffered in each sector to the target count times a factor of 1.25. This step is performed separately for each sector and then combined, resulting in 200 stocks in total selected for the Dow Jones U.S. Thematic Short Quality Index.

Constituent Weightings. At each rebalancing, constituent stock weights are reset to equal weight.

Dow Jones U.S. Thematic Long Size and Short Size Indices

At each rebalancing, each index is constructed according to the following steps using data as of the rebalancing reference date:

1. Stocks are ranked in descending order by FMC. The largest 1,000 stocks remain eligible. In addition, current index constituents ranked between 1,001 and 1,100 remain eligible.
2. Non-constituents with a six-month ADVT of less than US\$ 10 million are excluded. Current constituents with a six-month ADVT of less than US\$ 7.5 million are excluded. If a stock does not have a full six months of trading volume, the ADVT of the available history is considered.
3. If the remaining eligible universe is greater than 1,000 stocks, the smallest non-constituent by FMC is deemed ineligible until the eligible universe equals exactly 1,000 stocks.
4. The remaining stocks are separated into 11 sectors as defined by the Global Industry Classification Standard (GICS®). For further information on GICS, please refer to the GICS methodology.
5. Sector neutrality is maintained by determining a defined number of stocks from each sector based on the proportion that each sector makes up in the composition of the eligible 1,000 stock universe. The following steps are used to determine sector neutrality:
 - The total number of companies within each sector is divided by 1,000. This value represents the target percentage of constituents from each sector required for index inclusion.
 - The target percentage is multiplied by 200 in order to identify the target number of constituents from each sector.
6. The eligible stocks in each sector are sorted in descending order by their FMC.
7. The stocks with the smallest float-adjusted market capitalizations in each sector are selected for inclusion in the Dow Jones U.S. Thematic Long Size Index until the target number of constituents for that sector are selected, based on the target counts determined above in step 5. Current constituents are buffered in each sector to the target count times a factor of 1.25. This step is performed separately for each sector and then combined, resulting in 200 stocks in total selected for the Dow Jones U.S. Thematic Long Size Index.
8. The stocks with the largest float-adjusted markets capitalizations in each sector are selected for inclusion in the Dow Jones U.S. Thematic Short Size Index until the target number of constituents for that sector are selected, based on the target counts determined above in step 5. Current constituents are buffered in each sector to the target count times a factor of 1.25. This step is performed separately for each sector and then combined, resulting in 200 stocks in total selected for the Dow Jones U.S. Thematic Short Size Index.

Constituent Weightings. At each rebalancing, constituent stock weights are reset to equal weight.

Dow Jones U.S. Relative Value and Short Relative Value Indices

At each rebalancing, each index is constructed according to the following steps using data as of the rebalancing reference date:

1. Stocks without a book to price, projected earnings per share to price, or trailing 12-month operating cash flow to price ratios are excluded.
2. The remaining stocks are ranked in descending order by FMC. The largest 1,000 stocks remain eligible. In addition, current index constituents ranked between 1001 and 1,100 remain eligible.
3. Non-constituents with a six-month ADVT of less than US\$ 10 million are excluded. Current constituents with a six-month ADVT of less than US\$ 7.5 million are excluded.
4. If the remaining eligible universe is greater than 1,000 stocks, the smallest non-constituent by FMC is deemed ineligible until the eligible universe equals exactly 1,000 stocks.
5. The remaining stocks are separated into 11 sectors as defined by the Global Industry Classification Standard (GICS®). For further information on GICS, please refer to the GICS methodology.
6. Sector neutrality is maintained by determining a defined number of stocks from each sector based on the proportion that each sector makes up in the composition of the eligible 1,000 stock universe. The following steps are used to determine sector neutrality:
 - The total number of companies within each sector is divided by 1,000. This value represents the target percentage of constituents from each sector required for index inclusion.
 - The target percentage is multiplied by 200 in order to identify the target number of constituents from each sector.
7. The eligible stocks in each sector are then sorted by their value rank, which is calculated using a multi-factor ranking process. Stocks are ranked by the following three ratios. Each rank is equally weighted to determine the final value rank:
 - Book value to price ratio (ranked in descending order).
 - Projected earnings per share to price ratio (ranked in descending order).
 - Trailing 12-month operating cash flow to price ratio (ranked in descending order).If any of the three ratios is not available for a security, then the security is considered ineligible. Securities in the Financial sector do not include "Trailing 12-month operating cash flow to price ratio" in the final rank.
8. The stocks with the best value rank in each sector are selected for the Dow Jones U.S. Relative Value Index until the target number of constituents for that sector are selected, based on the target counts determined above in step 6. Current constituents are buffered in each sector to the target count times a factor of 1.25. This step is performed separately for each sector and then combined, resulting in 200 stocks in total selected for the Dow Jones U.S. Relative Value Index.
9. The stocks with the worst value rank in each sector are selected for the Dow Jones U.S. Short Relative Value Index until the target number of constituents for that sector are selected, based on the target counts determined above in step 6. Current constituents are buffered in each sector to the target count times a factor of 1.25. This step is performed separately for each sector and then combined, resulting in 200 stocks in total selected for the Dow Jones U.S. Short Relative Value Index.

Constituent Weightings. At each rebalancing, constituent stock weights are reset to equal weight.

Index Maintenance

Rebalancing

The indices are rebalanced quarterly, effective after the close of the last business day of February, May, August, and November. The reference date for the data used in each rebalancing is as of the close of the eighth business day prior to the rebalancing effective date. Constituents' index shares are calculated using closing prices three days prior to the last business day 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. Since index shares are assigned in advance, the actual weight of each stock at the rebalancing differs from these weights due to market movements.

Additions

Except for spin-offs, generally no companies are added to an index between quarterly rebalancings. Any exceptions to this rule are announced to clients with ample lead time.

Spin-offs. Companies added to an index due to a spin-off event will be removed after the first day of regular way trading. The weight is reinvested back to the parent company.

Deletions

Between rebalancings, a company can be deleted from an index due to corporate events such as mergers, acquisitions, delistings, or bankruptcies. If a constituent is deleted between rebalancings, it is not replaced until the next scheduled quarterly rebalancing. As such, the affected basket may fall below its target constituent count of 200 stocks.

Corporate Actions

For information on Corporate Actions, please refer to the Equal Weighted Indices Section within S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Currency of Calculation and Additional Index Return Series

The indices are 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 the following: currency, currency hedged, decrement, fair value, inverse, leveraged, and risk control versions. For a list of available indices, please refer to the [S&P DJI Methodology & Regulatory Status Database](#).

For more information on these types of indices, 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.spglobal.com/spdji/.

Other Adjustments

In cases where there is no achievable market price for a stock being deleted, it can 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.

Base Dates 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
Dow Jones U.S. Thematic Market Neutral Low Beta Index	08/22/2011	12/31/2001	12/31/2001	1,016.51
Dow Jones U.S. Low Beta Index	08/22/2011	12/31/2001	12/31/2001	602.48
Dow Jones U.S. High Beta Index	08/22/2011	12/31/2001	12/31/2001	780.22
Dow Jones U.S. Thematic Market Neutral Momentum Index	08/22/2011	12/31/2001	12/31/2001	995.64
Dow Jones U.S. High Momentum Index	08/22/2011	12/31/2001	12/31/2001	624.16
Dow Jones U.S. Low Momentum Index	08/22/2011	12/31/2001	12/31/2001	750.2
Dow Jones U.S. Thematic Market Neutral Quality Index	08/22/2011	12/31/2001	12/31/2001	888.46
Dow Jones U.S. Thematic Long Quality Index	08/22/2011	12/31/2001	12/31/2001	533.55
Dow Jones U.S. Thematic Short Quality Index	08/22/2011	12/31/2001	12/31/2001	601.44
Dow Jones U.S. Thematic Market Neutral Size Index	08/22/2011	12/31/2001	12/31/2001	540.80
Dow Jones U.S. Thematic Long Size Index	08/22/2011	12/31/2001	12/31/2001	572.91
Dow Jones U.S. Thematic Short Size Index	08/22/2011	12/31/2001	12/31/2001	807.18
Dow Jones U.S. Thematic Market Neutral Value Index	08/22/2011	12/31/2001	12/31/2001	502.41
Dow Jones U.S. Relative Value Index	08/22/2011	12/31/2001	12/31/2001	471.71
Dow Jones U.S. Short Relative Value Index	08/22/2011	12/31/2001	12/31/2001	779.09

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 regularly. At each meeting, the Index Committee may review 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, please refer to the Announcements section of S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Holiday Schedule

The indices are calculated when the U.S. equity markets are open.

A complete holiday schedule for the year is available at www.spglobal.com/spdji/.

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 in advance of the rebalancing date and contains all constituents as well as their corresponding weights and index shares effective for the upcoming rebalancing.

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.

Real-Time Calculation

Real-time, intra-day, index calculations are executed for certain Dow Jones U.S. Thematic Neutral Indices, whenever any of the index's primary exchanges are open. Real-time indices are not restated.

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.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.

Index	Return Type	Bloomberg	RIC
Dow Jones U.S. Thematic Market Neutral Low Beta Index	Price Return Total Return	DJTMNAB DJTMNABT	.DJTMNAB .DJTMNABT
Dow Jones U.S. Low Beta Index	Price Return Total Return	DJTLAB DJTLABT	.DJTLAB .DJTLABT
Dow Jones U.S. High Beta Index	Price Return Total Return	DJTSAB DJTSABT	.DJTSAB .DJTSABT
Dow Jones U.S. Thematic Market Neutral Momentum Index	Price Return Total Return	DJTMNMO DJTMNMOT	.DJTMNMO .DJTMNMOT
Dow Jones U.S. High Momentum Index	Price Return Total Return	DJTLMO DJTLMOT	.DJTLMO .DJTLMOT
Dow Jones U.S. Low Momentum Index	Price Return Total Return	DJTSMO DJTSMOT	.DJTSMO .DJTSMOT
Dow Jones U.S. Thematic Market Neutral Quality Index	Price Return Total Return	DJTMNQ DJTMNQUT	.DJTMNQ .DJTMNQUT
Dow Jones U.S. Thematic Long Quality Index	Price Return Total Return	DJTLQ DJTLQUT	.DJTLQ .DJTLQUT
Dow Jones U.S. Thematic Short Quality Index	Price Return Total Return	DJTSQ DJTSQUT	.DJTSQ .DJTSQUT
Dow Jones U.S. Thematic Market Neutral Size Index	Price Return Total Return	DJTMNSS DJTMSSST	.DJTMNSS .DJTMSSST
Dow Jones U.S. Thematic Long Size Index	Price Return Total Return	DJTLSS DJTSSST	.DJTLSS .DJTSSST
Dow Jones U.S. Thematic Short Size Index	Price Return Total Return	DJTSS DJTSSST	.DJTSS .DJTSSST
Dow Jones U.S. Thematic Market Neutral Value Index	Price Return Total Return	DJTMNSV DJTMNSVT	.DJTMNSV .DJTMNSVT
Dow Jones U.S. Relative Value Index	Price Return Total Return	DJTLSV DJTSSVT	.DJTLSV .DJTSSVT
Dow Jones U.S. Short Relative Value Index	Price Return Total Return	DJTSSV DJTSSVT	.DJTSSV .DJTSSVT

Index Data

Daily constituent and index level 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 I

Methodology Changes

Methodology changes since January 1, 2015, are as follows:

Change	Effective Date (After Close)	Methodology	
		Previous	Updated
Calculation of Index Shares during Rebalancings	08/24/2020	Constituents' index shares are calculated using the closing prices on the last business day of the rebalancing month as the reference price.	Constituents' index shares are calculated using closing prices three days prior to the last business day of the rebalancing month as the reference price.
Deletions	10/31/2019	If a constituent is deleted between rebalancings, the next highest non-constituent by rank in the corresponding sector, determined as of the most recent rebalancing, is selected as its replacement to ensure that the affected basket maintains its constituent count of 200 stocks.	If a constituent is deleted between rebalancings, it is not replaced until the next scheduled quarterly rebalancing. As such, the affected basket may fall below its target constituent count of 200 stocks.
Sector Classification System	11/30/2018	The indices use the proprietary Dow Jones Classification System (DJICS) for sector classification purposes.	The indices use the Global Industry Classification Standard (GICS®) for sector classification purposes.
Rebalancing Schedule for Dow Jones U.S. Thematic Market Neutral Indices	11/19/2018	The indices are rebalanced after the close of trading on the last business day of each month.	The indices are rebalanced quarterly, effective after the close of the last business day of February, May, August and November.
Rebalancing Schedule for the Sub-indices	07/20/2018	The indices are rebalanced after the close of trading on the last business day of each month.	The indices are rebalanced quarterly, effective after the close of the last business day of February, May, August and November.
Additions	09/30/2015	Generally no companies are added to an index between monthly rebalancings, except as a replacement for a deleted stock. Any exceptions to this rule are announced to clients with ample lead time.	Generally no companies are added to an index between monthly rebalancings, except for replacements of deleted stocks and/or qualified spin-offs. Any exceptions to this rule are announced to clients with ample lead time.

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).

Intellectual Property Notices/Disclaimer

© 2022 S&P Dow Jones Indices. All rights reserved. S&P, S&P 500, SPX, SPY, The 500, US500, US 30, S&P 100, S&P COMPOSITE 1500, S&P 400, S&P MIDCAP 400, S&P 600, S&P SMALLCAP 600, S&P GIVI, GLOBAL TITANS, DIVIDEND ARISTOCRATS, Select Sector, S&P MAESTRO, S&P PRISM, S&P STRIDE, GICS, SPIVA, SPDR, INDEXOLOGY, iTraxx, iBoxx, ABX, ADBI, CDX, CMBX, MBX, MCDX, PRIMEX, HHPI, and SOVX are registered trademarks of S&P Global, Inc. ("S&P Global") or its affiliates. DOW JONES, DJIA, THE DOW and DOW JONES INDUSTRIAL AVERAGE are trademarks of Dow Jones Trademark Holdings LLC ("Dow Jones"). These trademarks together with others have been licensed to S&P Dow Jones Indices LLC. Redistribution or reproduction in whole or in part are prohibited without written permission of S&P Dow Jones Indices LLC. This document does not constitute an offer of services in jurisdictions where S&P DJI does not have the necessary licenses. Except for certain custom index calculation services, all information provided by S&P DJI is impersonal and not tailored to the needs of any person, entity, or group of persons. S&P DJI receives compensation in connection with licensing its indices to third parties and providing custom calculation services. Past performance of an index is not an indication or guarantee of future results.

It is not possible to invest directly in an index. Exposure to an asset class represented by an index may be available through investable instruments based on that index. S&P DJI does not sponsor, endorse, sell, promote or manage any investment fund or other investment vehicle that is offered by third parties and that seeks to provide an investment return based on the performance of any index. S&P DJI makes no assurance that investment products based on the index will accurately track index performance or provide positive investment returns. S&P DJI is not an investment advisor, commodity trading advisor, fiduciary, "promoter" (as defined in the Investment Company Act of 1940, as amended) or "expert" as enumerated within 15 U.S.C. § 77k(a), and S&P DJI makes no representation regarding the advisability of investing in any such investment fund or other investment vehicle. A decision to invest in any such investment fund or other investment vehicle should not be made in reliance on any of the statements set forth in this document. S&P DJI is not a tax advisor. Inclusion of a security, commodity, crypto currency, or other asset within an index is not a recommendation by S&P DJI to buy, sell, or hold such security, commodity, crypto currency, or other asset, nor is it considered to be investment or trading advice.

These materials have been prepared solely for informational purposes based upon information generally available to the public and from sources believed to be reliable. No content contained in these materials (including index data, ratings, credit-related analyses and data, research, valuations, model, software or other application or output therefrom) or any part thereof ("Content") may be modified, reverse engineered, reproduced, or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of S&P DJI. The Content shall not be used for any unlawful or unauthorized purposes. S&P DJI and its third-party data providers and licensors (collectively "S&P Dow Jones Indices Parties") do not guarantee the accuracy, completeness, timeliness, or availability of the Content. S&P Dow Jones Indices Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Content. THE CONTENT IS PROVIDED ON AN "AS IS" "WHERE IS" BASIS. S&P DOW JONES INDICES PARTIES DISCLAIMS ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF

MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Dow Jones Indices Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special, or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related information and other analyses, including ratings, research and valuations are generally provided by licensors and/or affiliates of S&P Dow Jones Indices, including but not limited to S&P Global's other divisions such as S&P Global Market Intelligence. Any credit-related information and other related analyses and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact. Any opinion, analyses and rating acknowledgement decisions are not recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P Dow Jones Indices does not assume any obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P DJI does not act as a fiduciary or an investment advisor. While S&P DJI has obtained information from sources it believes to be reliable, S&P DJI does not perform an audit or undertake independent verification of any information it receives. S&P DJI reserves the right to vary or discontinue any index at any time for regulatory or other reasons. Various factors, including external factors beyond S&P DJI's control might necessitate material changes to indices.

To the extent that regulatory authorities allow a rating agency to acknowledge in one jurisdiction a rating issued in another jurisdiction for certain regulatory purposes, S&P Global Ratings reserves the right to assign, withdraw or suspend such acknowledgement at any time and in its sole discretion. S&P Dow Jones Indices, including S&P Global Ratings, disclaim any duty whatsoever arising out of the assignment, withdrawal, or suspension of an acknowledgement as well as any liability for any damage alleged to have been suffered on account thereof. Affiliates of S&P Dow Jones Indices LLC, including S&P Global Ratings, may receive compensation for its ratings and certain credit-related analyses, normally from issuers or underwriters of securities or from obligors. Such affiliates of S&P Dow Jones Indices LLC, including S&P Global Ratings, reserve the right to disseminate its opinions and analyses. Public ratings and analyses from S&P Global Ratings are made available on its Web sites, www.standardandpoors.com (free of charge), and www.ratingsdirect.com and www.globalcreditportal.com (subscription), and may be distributed through other means, including via S&P Global Ratings publications and third-party redistributors. Additional information about our ratings fees is available at www.standardandpoors.com/usratingsfees.

S&P Global keeps certain activities of its various divisions and business units separate from each other to preserve the independence and objectivity of their respective activities. As a result, certain divisions and business units of S&P Global may have information that is not available to other business units. S&P Global has established policies and procedures to maintain the confidentiality of certain nonpublic information received in connection with each analytical process.

In addition, S&P Dow Jones Indices provides a wide range of services to, or relating to, many organizations, including issuers of securities, investment advisers, broker-dealers, investment banks, other financial institutions, and financial intermediaries, and accordingly may receive fees or other economic benefits from those organizations, including organizations whose securities or services they may recommend, rate, include in model portfolios, evaluate, or otherwise address.

Some indices use the Global Industry Classification Standard (GICS®), which was developed by, and is the exclusive property and a trademark of, S&P Global and MSCI. Neither MSCI, S&P DJI nor any other party involved in making or compiling any GICS classifications makes any express or implied warranties or representations with respect to such standard or classification (or the results to be obtained by the use thereof), and all such parties hereby expressly disclaim all warranties of originality, accuracy,

completeness, merchantability, or fitness for a particular purpose with respect to any of such standard or classification. Without limiting any of the foregoing, in no event shall MSCI, S&P DJI, any of their affiliates or any third party involved in making or compiling any GICS classifications have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.

S&P Dow Jones Indices products are governed by the terms and conditions of the agreements under which they may be provided. A license is required from S&P Dow Jones Indices to display, create derivative works of and/or distribute any product or service that uses, is based upon and/or refers to any S&P Dow Jones Indices and/or index data.