

**S&P Dow Jones
Indices**

A Division of **S&P Global**

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

August 2018

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
Sub-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, Currency Hedged, and Risk Control Indices	11
Other Adjustments	11
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
Rebalancing	15
Unexpected Exchange Closures	15
Recalculation Policy	15
Real-Time Calculation	15
Contact Information	16

Index Dissemination	17
Tickers	17
Index Data	17
Web site	17
Appendix	18
Methodology Changes	18
Disclaimer	19

Introduction

Index Objective

The Dow Jones U.S. Thematic Market Neutral Indices are a family of strategy indices that each reflect the performance of long/short allocations in two sub-indices. The index universe for each sub-index is comprised of all stocks in the Dow Jones U.S. Index.

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 the performance of 200 low beta companies based on their beta volatility over the past 12 months.
- **Dow Jones U.S. High Beta Index.** The index measures the performance of 200 high beta companies based on their beta volatility 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 the performance of 200 high momentum companies based on their 12-month historical total return.
- **Dow Jones U.S. Low Momentum Index.** The index measures the performance of 200 low momentum companies based on their 12-month historical total 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 the 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 the 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-cap companies and short positions in large-cap 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 the performance of 200 small-cap companies based on their float-adjusted market capitalization.
- **Dow Jones U.S. Thematic Short Size Index.** The index measures the 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 low relative value ranks and short positions in stocks with high 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 the 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 the 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

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 sub-indices. At each rebalancing, the weights of these positions in the index are set to +/- 100% as detailed in the table below.

Index	Sub-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.

Sub-Index Construction

Sub-index Universe. The index universe for each of the sub-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 index series is equal-weighted and 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. The largest 1,000 stocks remain eligible. In addition, current index constituents ranked between 1001 and 1100 remain eligible.
3. Non-constituents with a six-month average daily trading volume of less than US\$ 10 million are excluded. Current constituents with a six-month average daily trading volume of less than US\$ 7.5 million are excluded.
4. If the remaining eligible universe is greater than 1000 stocks, the smallest non-constituent by float-adjusted market capitalization is deemed ineligible until the eligible universe equals exactly 1000 stocks. The remaining stocks are separated into 10 sectors as defined by the proprietary sector classification system used by S&P Dow Jones Indices. A description of the proprietary sector classification system can be found at www.spdji.com.
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 52 weeks.
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 float-adjusted market capitalization. The largest 1,000 stocks remain eligible. In addition, current index constituents ranked between 1001 and 1100 remain eligible.
3. Non-constituents with a six-month average daily trading volume of less than US\$ 10 million are excluded. Current constituents with a six-month average daily trading volume of less than US\$ 7.5 million are excluded.
4. If the remaining eligible universe is greater than 1000 stocks, the smallest non-constituent by float-adjusted market capitalization is deemed ineligible until the eligible universe equals exactly 1000 stocks.
5. The remaining stocks are separated into 10 sectors as defined by the proprietary sector classification system used by S&P Dow Jones Indices. A description of the proprietary sector classification system can be found at www.spdji.com.
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 total 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 float-adjusted market capitalization. The largest 1,000 stocks remain eligible. In addition, current index constituents ranked between 1001 and 1100 remain eligible.
3. Non-constituents with a six-month average daily trading volume of less than US\$ 10 million are excluded. Current constituents with a six-month average daily trading volume of less than US\$ 7.5 million are excluded.
4. If the remaining eligible universe is greater than 1000 stocks, the smallest non-constituent by float-adjusted market capitalization is deemed ineligible until the eligible universe equals exactly 1000 stocks.
5. The remaining stocks are separated into 10 sectors as defined by the proprietary sector classification system used by S&P Dow Jones Indices. A description of the proprietary sector classification system can be found at www.spdji.com.
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 float-adjusted market capitalization. The largest 1,000 stocks remain eligible. In addition, current index constituents ranked between 1001 and 1100 remain eligible.
2. Non-constituents with a six-month average daily trading volume of less than US\$ 10 million are excluded. Current constituents with a six-month average daily trading volume of less than US\$ 7.5 million are excluded. If a stock does not have a full six months of trading volume, the average daily trading volume of the available history is considered.
3. If the remaining eligible universe is greater than 1000 stocks, the smallest non-constituent by float-adjusted market capitalization is deemed ineligible until the eligible universe equals exactly 1000 stocks.
4. The remaining stocks are separated into 10 sectors as defined by the proprietary sector classification system used by S&P Dow Jones Indices. A description of the proprietary sector classification system can be found at www.spdji.com.
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 float-adjusted market capitalization.
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 float-adjusted market capitalization. The largest 1,000 stocks remain eligible. In addition, current index constituents ranked between 1001 and 1100 remain eligible.
3. Non-constituents with a six-month average daily trading volume of less than US\$ 10 million are excluded. Current constituents with a six-month average daily trading volume of less than US\$ 7.5 million are excluded.
4. If the remaining eligible universe is greater than 1000 stocks, the smallest non-constituent by float-adjusted market capitalization is deemed ineligible until the eligible universe equals exactly 1000 stocks.
5. The remaining stocks are separated into 10 sectors as defined by the proprietary sector classification system used by S&P Dow Jones Indices. A description of the proprietary sector classification system can be found at www.spdji.com.
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.
 - Projected earnings per share to price ratio.
 - Trailing 12-month operating cash flow to price ratio.
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.

S&P Dow Jones Indices believes turnover in index membership should be avoided when possible. At times a company may temporarily violate one or more of the addition criteria. However, the addition criteria are used for addition to an index, not for continued membership. As a result, an index constituent that appears to violate criteria for addition to that index is not deleted unless ongoing conditions warrant an index change.

Additions

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.

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, 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.

Corporate Actions

For information on Corporate Actions, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices document.

Currency, Currency Hedged, and Risk Control Indices

The indices are calculated in U.S. dollars.

Additional currency, currency hedged, and risk control versions of the indices may be available. For a list of available currency, currency hedged, and risk control indices, please contact Client Services at index_services@spglobal.com.

For more information on currency, currency hedged, and risk control indices, please refer to S&P Dow Jones Indices' Index Mathematics Methodology.

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 document.

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

Index Governance

Index Committee

The Dow Jones U.S. Thematic Neutral Indices are maintained by the Americas Thematic and Strategy Indices Index Committee. All committee members are full-time professional members of S&P Dow Jones Indices' staff. The committee meets monthly. 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 document.

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 via ftp to all clients. Any unusual treatment of a corporate action or short notice of an event may be communicated via email to clients.

Index methodology is constantly under review for best practices, and any changes are announced well ahead of time via the Web site and email to all clients.

For more information, please refer to the Announcements section of S&P Dow Jones Indices' Equity Indices Policies & Practices document.

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.spdji.com.

Rebalancing

S&P Dow Jones Indices provides rebalancing results for the indices via the corporate events file (.SDE). The changes are typically provided daily starting four business days in advance of the rebalancing date and contain any additions and deletions effective for the upcoming rebalancing. Index shares are calculated as of the close of the day prior to the rebalancing effective date and are reflected in the .SDE file.

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 document.

Recalculation Policy

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

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 document.

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 currency, currency hedged, risk control, and return type versions of the below indices that may exist are also covered by this document. Please contact index_services@spglobal.com for a complete list of indices covered by this document.

Index	Return Type	Bloomberg	Reuters
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 DJTLSSST	.DJTLSS .DJTLSSST
Dow Jones U.S. Thematic Short Size Index	Price Return Total Return	DJTSSS DJTSSST	.DJTSSS .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 DJTLSVT	.DJTLSV .DJTLSVT
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.spdji.com/contact-us.

Web site

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

Appendix

Methodology Changes

Methodology changes since January 1, 2015 are as follows:

Change	Effective Date (After Close)	Previous	Methodology Updated
Rebalancing Schedule	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.

Disclaimer

Copyright © 2018 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved. STANDARD & POOR'S, S&P, SPDR, S&P 500, S&P EUROPE 350, S&P 100, S&P 1000, S&P COMPOSITE 1500, S&P MIDCAP 400, S&P SMALLCAP 600, GIVI, GLOBAL TITANS, S&P RISK CONTROL INDICES, S&P GLOBAL THEMATIC INDICES, S&P TARGET DATE INDICES, S&P TARGET RISK INDICES, DIVIDEND ARISTOCRATS, STARS, GICS, HOUSINGVIEWS, INDEX ALERT, INDEXOLOGY, MARKET ATTRIBUTES, PRACTICE ESSENTIALS, S&P HEALTHCARE MONITOR, SPICE, and SPIVA are registered trademarks of Standard & Poor's Financial Services LLC, a division of S&P Global ("S&P"). DOW JONES, DJ, DJIA and DOW JONES INDUSTRIAL AVERAGE are registered 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, reproduction and/or photocopying in whole or in part are prohibited without written permission. This document does not constitute an offer of services in jurisdictions where S&P Dow Jones Indices LLC, Dow Jones, S&P or their respective affiliates (collectively "S&P Dow Jones Indices") do not have the necessary licenses. All information provided by S&P Dow Jones Indices is impersonal and not tailored to the needs of any person, entity or group of persons. S&P Dow Jones Indices receives compensation in connection with licensing its indices to third parties. Past performance of an index is not a guarantee of future results.

It is not possible to invest directly in an index. Exposure to an asset class represented by an index is available through investable instruments based on that index. S&P Dow Jones Indices 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 Dow Jones Indices makes no assurance that investment products based on the index will accurately track index performance or provide positive investment returns. S&P Dow Jones Indices LLC is not an investment advisor, and S&P Dow Jones Indices 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. Prospective investors are advised to make an investment in any such fund or other vehicle only after carefully considering the risks associated with investing in such funds, as detailed in an offering memorandum or similar document that is prepared by or on behalf of the issuer of the investment fund or other investment product or vehicle. S&P Dow Jones Indices LLC is not a tax advisor. A tax advisor should be consulted to evaluate the impact of any tax-exempt securities on portfolios and the tax consequences of making any particular investment decision. Inclusion of a security within an index is not a recommendation by S&P Dow Jones Indices to buy, sell, or hold such security, nor is it considered to be investment 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 Dow Jones Indices. The Content shall not be used for any unlawful or unauthorized purposes. S&P Dow Jones Indices 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" BASIS. S&P DOW JONES INDICES PARTIES DISCLAIM 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.

S&P Global keeps certain activities of its various divisions and business units separate from each other in order 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 non-public 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.