



Syntax

Syntax[®] Stratified Indices

U.S. Equity Index Methodology

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I. Syntax U.S. Equity Indices

This methodology covers the following Syntax U.S. equity indices:

Index Name	Index Ticker	Total Return Index (TR) or Price Return Index (PR)
Syntax Stratified LargeCap Index	SYLC	PR
Syntax Stratified LargeCap Index (TR)	SYLCTR	TR
Syntax Stratified MidCap Index	SYMID	PR
Syntax Stratified MidCap Index (TR)	SYMIDTR	TR
Syntax Stratified Core Index	SYCORE	PR
Syntax Stratified Core Index (TR)	SYCORETR	TR
Syntax Stratified Financials Index	SYFIN	PR
Syntax Stratified Financials Index (TR)	SYFINTR	TR
Syntax Stratified Energy Index	SYENY	PR
Syntax Stratified Energy Index (TR)	SYENYTR	TR
Syntax Stratified Industrials Index	SYIND	PR
Syntax Stratified Industrials Index (TR)	SYINDTR	TR
Syntax Stratified Information Tools Index	SYIT	PR
Syntax Stratified Information Tools Index (TR)	SYITTR	TR
Syntax Stratified Information Index	SYINFO	PR
Syntax Stratified Information Index (TR)	SYINFOTR	TR
Syntax Stratified Consumer Index	SYCPS	PR
Syntax Stratified Consumer Index (TR)	SYCPSTR	TR
Syntax Stratified Food Index	SYFOOD	PR
Syntax Stratified Food Index (TR)	SYFOODTR	TR
Syntax Stratified Healthcare Index	SYHLTH	PR
Syntax Stratified Healthcare Index (TR)	SYHLTHTR	TR

II. Index Objectives

Syntax® Stratified Indices™ are a family of U.S. equity indices that weight constituents based on Syntax’s patented methodology to control exposure to related business risks (RBRs). Traditional indices do not control for related business risks and are thus vulnerable to poor performance when economic shocks impact companies that are exposed to the same business risks. Syntax stratification diversifies indices by establishing target weights for RBRs and rebalancing to these targets every quarter. This methodology is designed to mitigate the adverse effects of inadvertent over weightings of related businesses that regularly occur in the market without sacrificing upside potential.

A. Syntax Stratified LargeCap Index

The Syntax Stratified LargeCap Index is the stratified-weight version of the widely-used S&P 500® Index. The index holds the same constituents as the S&P 500, but the weight of each company in the Syntax Stratified LargeCap Index is based on Syntax’s patented methodology to control exposure to related business risks (RBRs).

B. Syntax Stratified MidCap Index

The Syntax Stratified MidCap Index is the stratified-weight version of the widely-used S&P MidCap 400® Index. The index holds the same constituents as the S&P MidCap 400, but the weight of each company in the Syntax Stratified MidCap Index is based on Syntax’s patented methodology to control exposure to related business risks (RBRs).

C. Syntax Stratified Core Index

The Syntax Stratified Core Index is the stratified-weight version of the S&P 900® Index, which combines the S&P 500 Index and S&P MidCap 400 Index. The index holds the same constituents as the S&P 900, but the weight of each company in the Syntax Stratified Core Index is based on Syntax’s patented methodology to control exposure to related business risks (RBRs).

D. Syntax Stratified Financials Index

The Syntax Stratified Financials Index is a stratified-weight index of S&P 900 companies that operate in the financial sector. It uses Syntax's patented methodology to control exposure to related business risks (RBRs). The Syntax Sector Indices hold the constituents of the S&P 900, with every constituent in the S&P 900 assigned to exactly one sector index.

E. Syntax Stratified Energy Index

The Syntax Stratified Energy Index is a stratified-weight index of S&P 900 companies that operate in the energy sector. It uses Syntax's patented methodology to control exposure to related business risks (RBRs). The Syntax Sector Indices hold the constituents of the S&P 900, with every constituent in the S&P 900 assigned to exactly one sector index.

F. Syntax Stratified Industrials Index

The Syntax Stratified Industrials Index is a stratified-weight index of S&P 900 companies that operate in the industrial sector. It uses Syntax's patented methodology to control exposure to related business risks (RBRs). The Syntax Sector Indices hold the constituents of the S&P 900, with every constituent in the S&P 900 assigned to exactly one sector index.

G. Syntax Stratified Information Tools Index

The Syntax Stratified Information Tools Index is a stratified-weight index of S&P 900 companies that operate in the IT sector. It uses Syntax's patented methodology to control exposure to related business risks (RBRs). The Syntax Sector Indices hold the constituents of the S&P 900, with every constituent in the S&P 900 assigned to exactly one sector index.

H. Syntax Stratified Information Index

The Syntax Stratified Information Index is a stratified-weight index of S&P 900 companies that operate in the information sector. It uses Syntax's patented methodology to control exposure to related business risks (RBRs). The Syntax Sector Indices hold the constituents of the S&P 900, with every constituent in the S&P 900 assigned to exactly one sector index.

I. Syntax Stratified Consumer Index

The Syntax Stratified Consumer Index is a stratified-weight index of S&P 900 companies that operate in the consumer products sector. It uses Syntax's patented methodology to control exposure to related business risks (RBRs). The Syntax Sector Indices hold the constituents of the S&P 900, with every constituent in the S&P 900 assigned to exactly one sector index.

J. Syntax Stratified Food Index

The Syntax Stratified Food Index is a stratified-weight index of S&P 900 companies that operate in the food sector. It uses Syntax's patented methodology to control exposure to related business risks (RBRs). The Syntax Sector Indices hold the constituents of the S&P 900, with every constituent in the S&P 900 assigned to exactly one sector index.

K. Syntax Stratified Healthcare Index

The Syntax Stratified Healthcare Index is a stratified-weight index of S&P 900 companies that operate in the healthcare sector. It uses Syntax's patented methodology to control exposure to related business risks (RBRs). The Syntax Sector Indices hold the constituents of the S&P 900, with every constituent in the S&P 900 assigned to exactly one sector index.

III. Universe Selection Process

The Syntax Stratified LargeCap Index licenses its constituents from the S&P 500 Index. As such, the Syntax Stratified LargeCap Index holds the exact constituents of the S&P 500 Index.

The Syntax Stratified MidCap Index licenses its constituents from the S&P 400 MidCap Index. As such, the Syntax Stratified MidCap Index holds the exact constituents of the S&P 400 MidCap Index.

The Syntax Stratified Core Index licenses its constituents from the S&P 900 Index. As such, the Syntax Stratified Core Index holds the exact constituents of the S&P 900 Index.

Combined, the eight Syntax Sector Indices hold the constituents of the S&P 900 Index, with every constituent in the S&P 900 assigned to exactly one Syntax Sector Index, as defined by Syntax's patented methodology.

IV. Index Information

Launch Date: December 27, 2016

First Value Date: December 20, 1991

Base Date: December 20, 1991

Base Value: 100

Currency: USD

Rebalancing: The Syntax U.S. Indices rebalance quarterly, at the close on the third Friday of the quarter-ending month (March, June, September, December). Index share counts are assigned using closing prices from the second Friday of the quarter-ending month (i.e. one week prior to rebalance). Therefore, the actual weight of each constituent at the rebalance differs from the target weight due to market movements.

Additions, Deletions, and Replacements: For the Syntax Stratified LargeCap, Syntax Stratified MidCap, and Syntax Stratified Core Indices:

The Syntax Stratified LargeCap Index follows the addition and deletion schedule of the S&P 500 Index. When a constituent enters the S&P 500 Index, that same constituent enters the Syntax Stratified LargeCap Index. When a constituent is deleted from the S&P 500 Index, that constituent is deleted from the Syntax Stratified LargeCap Index.

The Syntax Stratified MidCap Index follows the addition and deletion schedule of the S&P 400 MidCap Index. When a constituent enters the S&P 400 MidCap Index, that same constituent enters the Syntax Stratified MidCap Index. When a constituent is deleted from the S&P 400 MidCap Index, that

constituent is deleted from the Syntax Stratified MidCap Index.

The Syntax Stratified Core Index follows the addition and deletion schedule of the S&P 900 Index. When a constituent enters the S&P 900 Index, that same constituent enters the Syntax Stratified Core Index. When a constituent is deleted from the S&P 900 Index, that constituent is deleted from the Syntax Stratified Core Index.

For the Syntax Stratified LargeCap, MidCap, and Core, Indices, replacement constituents are added at the weight of the deleted constituent they replace. For example, if Company A is removed from the index at a weight of 3% and replaced by Company B, Company B is added to the index at a weight of 3%.

Because all intra-quarter deletions for the Syntax Stratified LargeCap, MidCap, and Core Indices are replaced using the methodology described above, intra-quarter replacements in these three indices do not trigger index divisor adjustments.

For the Syntax Sector Indices:

The Syntax Sector Indices follow the deletion schedule of the S&P 900. Because S&P 900 replacement constituents may be assigned to a different sector than the constituent that has been deleted, the Syntax Sector Indices do not add or replace constituents intra-quarter. However, each Syntax Sector Index rebalances to the constituents of the S&P 900 that correspond to each sector index.

When a company is deleted from the S&P 900 in the middle of a quarter, that company is also deleted from its Syntax Sector Index. A subsequent divisor adjustment takes place to that Syntax Sector Index where a deletion is occurring.

If a company is added to the S&P 900 in the middle of the quarter, it will not be added to its respective Syntax Sector Index until the quarterly rebalance.

V. Corporate Action Methodology

The Syntax U.S. Indices are calculated by S&P Dow Jones Indices Custom Index Group. Calculations are performed in accordance with the S&P U.S. Indices Methodology and constituents are weighted using Syntax's proprietary weighting methodology. Please see important disclaimers at the end of this document.

Corporate actions (including stock splits, stock dividends, spin-offs and rights offerings) that impact the Syntax Index constituents are applied after the close of trading on the day prior to the ex-date. Share changes resulting from exchange offers are made on the ex-date.

Spin-offs: The spun-off company is added to the index at a zero price at the market close of the day before the ex-date with no divisor adjustment.

1. If the spin-off is replacing a company that will be removed from the S&P Index: on the effective day of the replacement, the weight of the spin-off is redistributed to the parent company. After this redistribution occurs, the weight of the dropped company is redistributed to the spin-off. The spun-off stock (child) will be added at the open of the ex-date with a zero weight (no divisor change). At the open (equivalently, close of the day before) of the effective day of replacement, the weight of the spun-off stock (child) is reinvested into the parent stock, then the weight of the dropped stock is reinvested into the spun-off stock. As a result, there is no divisor change to the Index.
2. If the spin-off is replacing the parent company in the S&P Index: on the effective date of the replacement, the weight of the parent is redistributed to the spin-off. The spun-off stock (child) will be added with the same weight of the parent stock at the open of the ex-date. As a result, there is no divisor change to the Index.

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3. If the spin-off will not stay in the S&P Index: the spin-off will be removed from the Syntax Index on the trading date following the ex-date of the event. Its weight will be redistributed to the parent company. The spun-off stock (child) will be added at the open of the ex-date with a zero weight (no divisor change). At the close of the ex-date, the weight of the spun-off stock (child) is reinvested into the parent stock. As a result, there is no divisor change to the Index.

Dividends: Dividends are reinvested in the index after the close on the ex-date.

Special Dividends: The price of the stock making the special dividend payment is reduced by the per share special dividend amount after the close of trading on the day before the dividend ex-date.

Rights Offering: Rights issues are only enacted if they are in-the-money. In the event of an enacted rights issue, the price is adjusted for the value of the right before the open on the ex-date, and the shares are increased to maintain the constituent's existing weighting within the index.

Share Changes: Changes in the number of shares outstanding, typically due to share repurchases, tenders, or offerings, will not be reflected in the index.

Bankruptcy: Syntax removes bankrupt securities from its indices at the same time the security is removed from S&P Dow Jones Indices.

S&P gives a minimum of one day notice of a removal of a bankrupt security. Same day removals for bankruptcy do not occur.

If the security is trading on its usual or primary exchange at the close of the day it is removed, that price is used. If the

security is halted on or delisted from its usual exchange, the stock may be deleted from the index with a presumed market value of zero.

When a security is in FDIC Receivership, they are dropped from all Syntax indices at the earliest reasonable date.

Bonus Issues,
Stock Splits, and
Reverse Stock
Splits:

For bonus issues, stock splits, and reverse stock splits, the number of shares included in the index will be adjusted in accordance with the ratio given in the corporate action. Since such events will not change the value of the company included in the index, the divisor will not be adjusted when such corporate actions occur.

Mergers, and
Acquisitions:

Each Syntax Index follows the deletion/addition schedule of its respective S&P Index, and they will follow the same addition/deletion schedule when there are constituent changes as a result of mergers/acquisitions. See the Additions, Deletions, and Replacements sections for more details.

VI. Weight Generation and Rebalance

All Syntax Indices diversify constituents across groups of related business risks as defined by the patented FIS classification system. Syntax Indices use stratification, a common technique used in statistics, to control exposure to related business risks.

Each Syntax Index has a Syntax Stratification Architecture that outlines a hierarchy of related business risk groups that form the basis for each constituent's weight. Related business risk groups at each level of the Stratification Architecture are defined by a sequence of FIS tags, and every constituent is allocated to exactly one related business risk group at each level of the Syntax Stratification Architecture. This allocation takes place by matching the FIS tags applied to the company against the sequence of FIS tags that define the related business risk group.

At least two weeks prior to each quarterly rebalance, Syntax conducts a quality control review of each index's Stratification Architecture to verify that it continues to be representative of the relevant related business risks present in the set of constituents. Syntax also implements a quarterly review on constituents in the index that underwent a merger, acquisition, or spin-off to determine if these corporate actions necessitate a change to the function of the business and in turn, changed the constituent's FIS tags. Annually, Syntax conducts a review of the FIS tags.

VII. Index Calculations

Syntax Indices are calculated by S&P Dow Jones Indices. Below is a summary of the basic math used to calculate Syntax Indices.

P_i = price of shares of stock i in the index

Q_i = quantity of shares of stock i in the index

$Shares_i$ = number of shares of stock i in the index

The index value is the index market value divided by the index divisor:

$$Index\ Value = \frac{Index\ Market\ Value}{Divisor}$$

$$Index\ Market\ Value = \sum_i P_i * Shares_i$$

The index level can be written as:

$$Index\ Level = \frac{\sum_i P_i * Q_i}{Divisor}$$

To maintain the continuity of the index, it is also necessary to adjust the divisor at each rebalance:

$$Index\ Level\ (before\ rebalance) = Index\ Level\ (after\ rebalance)$$

Which means that:

$$Divisor\ (after\ rebalance) = \frac{Index\ Market\ Value\ (after\ rebalance)}{Index\ Value\ (before\ rebalance)}$$

Calculating the Divisor Adjustment:

As described Section V, some corporate actions will trigger a divisor adjustment in the index.

A divisor is a factor by which the total market value of an index is divided to give a scaled, and more easily handled, number.

The divisor allows continuous measurement of market valuation because it ensures that the value of the index does not fluctuate across events that do not stem from the performance of the index.

The following formula expands the original formula for calculating the Index Level to show the stock, r , which is being removed separately.

$$Index\ Level_{t-1} = \frac{(\sum_i P_i * Q_i) + P_r Q_r}{Divisor_{t-1}}$$

Similarly, rewriting the Index Level after the addition of stock s to show that stock separately:

$$Index\ Level_t = \frac{(\sum_i P_i * Q_i) + P_s Q_s}{Divisor_t}$$

Where $t-1$ is the moment immediately preceding the deletion of stock r and t is the moment immediately after the addition of stock s . By design, $IndexLevel_{t-1}$ exactly equals $IndexLevel_t$. This allows us to rewrite the above as:

$$\frac{(\sum_i P_i * Q_i) + P_r Q_r}{Divisor_{t-1}} = Index\ Level = \frac{(\sum_i P_i * Q_i) + P_s Q_s}{Divisor_t}$$

Let the left-most and right-most numerators be the Market Value, MV , of the index at times $t-1$ and t .

MV_t , MV_{t-1} , and $Divisor_{t-1}$ are all known values. Therefore, we can rearrange the formula to calculate the value of the new divisor:

$$Divisor_t = (Divisor_{t-1}) * \frac{MV_t}{MV_{t-1}}$$

Equivalently, we can write the new divisor as the old divisor plus the percentage change in index value from the event. Rearranging the formula for the Index Value:

$$Divisor = \frac{MV}{Index\ Level}$$

Let CMV be the change in market value from the addition and deletion. Because the Index Level will not change, the new divisor must be:

$$Divisor_{New} = \frac{MV + CMV}{Index\ Level}$$

Because $MV/IndexLevel$ is the divisor, we can rewrite this as:

$$Divisor_{New} = Divisor_{Old} + \frac{CMV}{Index\ Level}$$

VIII. Index Dissemination

Syntax U.S. Indices are calculated by S&P Dow Jones Indies. Daily levels can be found on us.spindices.com/custom-indices, as well as the websites of other major data providers.

IX. Disclaimers

The Syntax Stratified LargeCap Index, Syntax Stratified MidCap Index, Syntax Stratified Core Index, Syntax Stratified Financials Index, Syntax Stratified Energy Index, Syntax Stratified Industrials Index, Syntax Stratified Information Tools Index, Syntax Stratified Information Index, Syntax Stratified Consumer Index, Syntax Stratified Food Index, and Syntax Stratified Healthcare Index (“the Indices”) are the property of Syntax, LLC, which has contracted with S&P Opco, LLC (a subsidiary of S&P Dow Jones Indices LLC) to calculate and maintain the Index. The Index is not sponsored by S&P Dow Jones Indices LLC or its affiliates or its third party licensors, including Standard & Poor’s Financial Services LLC and Dow Jones Trademark Holdings LLC (collectively, “S&P Dow Jones Indices”). S&P Dow Jones Indices will not be liable for any errors or omissions in calculating the Index. “Calculated by S&P Dow Jones Indices” and the related stylized mark(s) are service marks of S&P Dow Jones Indices and have been licensed for use by Syntax, LLC. S&P® is a registered trademark of Standard & Poor’s Financial Services LLC, and Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC. Syntax®, Stratified®, Stratified Indices®, Stratified-Weight™, and Locus® are trademarks or registered trademarks of Locus Analytics, LLC.

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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. Syntax LLC is not an investment advisor, and Syntax 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. Syntax 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 Syntax LLC or S&P Dow Jones Indices to buy, sell, or hold such security, nor is it considered to be investment advice. Closing prices for Syntax U.S. Stratified Indices are calculated by S&P Dow Jones Indices based on the closing price of the individual constituents of the index as set by their primary exchange. Closing prices are received by S&P Dow Jones Indices from one of its third party vendors and verified by comparing them with prices from an alternative vendor. The vendors receive the closing price from the primary exchanges. Real-time intraday prices are calculated similarly without a second verification.

The complete S&P U.S. Indices Methodology can be found at:

<https://us.spindices.com/documents/methodologies/methodology-sp-us-indices.pdf>

The complete S&P U.S. Index Mathematic Methodology can be found at:

<http://us.spindices.com/documents/methodologies/methodology-index-math.pdf>