

Index Methodology Guide for the FactSet U.S. Business Services Index™

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Index Introduction and Objective

1.1 Index Overview

The FactSet U.S. Business Services Index is designed to provide an equity benchmark to track the performance of companies involved in the U.S. service-oriented economy. It includes industries that service the needs of companies, consumers, social organizations and the government, particularly in the areas of Technology Consulting, Software, Healthcare, Industrials, Real Estate Investment Services, and Commercial Professional Services.

The FactSet U.S. Business Services Index is a float-adjusted modified market capitalization weighted index reconstituted on a semi-annual basis.

The FactSet U.S. Business Services Index is calculated and maintained by the Solactive AG based on a methodology developed by FactSet. It is calculated on a price and total return basis in U.S. dollars (USD). Both price and total returns of the index are calculated continuously, and on an end-of-day basis, from Monday to Friday 9:30am to 4:30 p.m. EST. Index values are distributed via various data channels and market data vendors, including the price marketing services of Boerse Stuttgart AG. End-of-day price and total return values of the index may also be obtained from FactSet upon request.

Whenever possible, constituent changes to the index are announced at least two trading days before becoming effective.

1.2 Inception Date and Base Value

The Index Inception Date is January 20, 2012 with a Base Value of 100. The inception date refers to when the first back-tested index value is calculated. The back-test is based on a similar methodology used to calculate the index when it is officially launched on May 4, 2017.

1.3 Index Valuation Days

Index Valuation Days are business days, Monday to Friday, where constituents of the Index are scheduled to be open for their regular trading session. Index will not be published on a day for which none of the constituents has scheduled trading session.

1.4 Commencement Date

The index commencement date is May 4, 2017. Commencement date refers to when the index is officially launched with end-of-day calculation on a same-day basis.

1.5 Reconstitution Schedule

The index is reconstituted semi-annually after the close of the third Friday on January and July each year ("Reconstitution Day"). If the Reconstitution Day is a holiday, it will occur on the next immediately following business day.

The data used to reconstitute the index is as of the close of business on the second Friday in January and July (“Selection Day”). Subsequent adjustment to the index composition may be made to account for corporate actions that occur between the Selection Day and the Reconstitution Day.

Index Construction

2.1 Constituent Selection and Weighting Schema

The following rules are used for the initial constituent selection and ongoing reconstitution.

1. The securities are listed on the New York Stock Exchange or NASDAQ exchange.
2. The securities are common stocks.
3. The securities are ranked by their total market capitalization from highest to lowest, and the top 3000 ranked securities would be kept. All securities ranked below 3000th would be excluded.

Existing constituents may remain if they ranked between 3001st to 3150th on Selection Day.

4. The securities are classified to one of the **45** Business Services-related industries (level of industry depth in parentheses) as defined by FactSet RBICS (Reverse Business Industry Classification System)
 - Business Support Services (L3)
 - Delivery and Logistics Services (L3)
 - Marketing and Printing Services (L3)
 - Other Professional Services (L3)
 - Personal Professional Services (L3)
 - Technology Consulting Services (L3)
 - Waste Management Services (L3)
 - Home and Office Software (L4)
 - Ambulance (Transportation) (L5)
 - Auction Houses and Authentication Services (L5)
 - Clinical Laboratory Patient Diagnostics (L5)
 - Healthcare Business Management Services (L5)
 - Healthcare Consulting (L5)
 - Healthcare Staffing and Recruiting (L5)
 - Home Healthcare (L5)

- Healthcare General Support Services (L5)
- Other Long-Term Care Facilities (L5)
- Metal Processing and Recycling Services (L5)
- Office/Institution Furniture and Accessory Makers (L5)
- Other Ambulatory and Outpatient Diagnostic Care (L5)
- Other Healthcare Administrative Services (L6)
- Other Office Equipment Manufacturing (L5)
- Point-of-Sale (POS) Terminal Manufacturing (L5)
- Publishing (L5)
- School, Art and Office Supplies Manufacturing (L5)
- Specialized Ambulatory and Outpatient Patient Care (L5)
- Veterinary Services (L5)
- Electronic Transaction Processing/Clearinghouses (L5)
- Commercial Real Estate Services and Brokerage (L5)
- Other Real Estate Investment and Services (L5)
- Finance Industry Software (L5)
- Communications Infrastructure Software (L5)
- Securities Exchanges and ECNs (L5)
- Enterprise Resource Planning Software (L5)
- General Enterprise Management Software (L5)
- Other Enterprise Management Software (L5)
- Business Intelligence Software (L5)
- Content Management Software (L5)
- Customer Service Software (L6)
- Aerospace and Defense IT Services (L6)
- Air Freight Transportation Operators (L6)
- Transportation Industry Software (L6)
- Multi-Type Financial Data Content Providers/Sites (L6)
- Institutional Financial and Research Content Sites (L6)
- Financial Reference Data Content Providers/Sites (L6)

5. Securities that are Master Limited Partnership (MLP), royalty trust, Business Development Company (BDC), or American Depository Receipt (ADR) are excluded.

6. Securities with price < USD \$1 or total market capitalization < USD \$20 million are excluded.
7. Apply the float-adjusted modified market capitalization weighting methodology to securities that remain after Steps 1 to 6 by dividing their individual float-adjusted market capitalization to the sum total market capitalization all securities.

Individual security weights are capped at 5.0%, and excess weights are redistributed proportionally among remaining uncapped securities. If this redistribution leads to additional security weights exceeding 5.0%, the aforementioned redistribution process is repeated iteratively until no security weight exceeds 5.0%.

In addition to adhering to the above constituent selection process, FactSet may at its discretion exclude certain constituents from the index if they are deemed to be non-Business Services related.

2.2 Index Return Formulas

The price and total returns of the index are calculated using the following formulas.

Price Returns Formula:

$$I_{(t)} = \frac{\sum_{i=1}^n S_{i(t)} \times P_{i(t)}}{D_{(t)}}$$

where:

- $I_{(t)}$ = Price Returns Index value at on Index Valuation Day (t)
- $D_{(t)}$ = Divisor at on Index Valuation Day (t)
- n = Number of stocks in the index
- $P_{i(t)}$ = Closing Price of stock (i) on Index Valuation Day (t)
- $S_{i(t)}$ = Number of allocated shares of stock (i) on Index Valuation Day (t)

and on Inception Date, where (t) = 0, the initial Divisor is calculated as follows:

$$D_{(0)} = \frac{\sum_{i=1}^n S_{i(0)} \times P_{i(0)}}{I_{(0)}}$$

where:

- $I_{(0)}$ = Price Returns Index value on Index Inception Date
- $D_{(0)}$ = Divisor on Index Inception Date
- n = Number of stocks in the index on Index Inception Date
- $P_{i(0)}$ = Price of stock (i) on Index Inception Date
- $S_{i(0)}$ = Number of allocated shares of stock (i) on Index Inception Date

Allocated shares (“S”) are the number of shares required for each constituent such that all constituents are float-adjusted modified market capitalization weighted. Allocated shares (“S”) would be adjusted accordingly to account for Corporate Actions.

2.3 Index Divisor Adjustments

From time to time, the index divisor is adjusted to account for corporate actions that could distort index value and continuity using the following formula:

$$D_{(t+1)} = D_{(t)} \times \frac{\sum_{i=1}^n AS_{i(t+1)} \times AP_{i(t+1)}}{\sum_{i=1}^n S_{i(t)} \times P_{i(t)}}$$

where:

- $D_{(t+1)}$ = Divisor for Index Valuation Day (t+1) after CA and Rebal Adjustment.
- $D_{(t)}$ = Divisor for Index Valuation Day (t)
- $AP_{i(t+1)}$ = Adjusted Price of stock (i) calculated for Open on Index Valuation Day (t+1) after CA adjustment.
- $P_{i(t)}$ = Closing Price of stock (i) on Index Valuation Day (t)
- $S_{i(t)}$ = Number of allocated shares of stock (i) on Index Valuation date (t)
- $AS_{i(t+1)}$ = Adjusted Number of allocated shares of stock (i) for Open on Index Valuation Day (t+1) after CA adjustment.

Divisor adjustments are generally implemented on the date the corporate action becomes effective, such that for example, the ex-dividend date rather than the payment date is used to time the divisor adjustment.

Find below detailed calculation for AP, AS and S in case of corporate actions and rebalancing.

- $AP_{i(t)}$ = Adjusted Price of stock (i) is determined for the Open on Index Valuation Day (t) shall mean:
 - If index constituent opens ex-date in respect of the corporate action, then $AP_{i(t)}$ is determined as per Corporate Action Adjustment Section.

- Otherwise

$$AP_{i(t)} = P_{i(t-1)}$$

- $S_{i(t)}$ = Number of allocated shares of stock (i) on Index Valuation date (t) is determined as

$$S_{i(t)} = AS_{i(t)}$$

- $AS_{i(t)}$ = Adjusted Number of allocated shares of stock (i) for Open on Index Valuation Day (t) after CA adjustment is determined as:

- If such day opens immediately following the Rebalancing Day(t-1) and if:

- index constituent opens ex-date in respect to corporate action, then $AS_{i(t)}$ is determined as per Corporate Action Adjustment Section with $S_{i(t-1)}$ replace with:

$$S_{i(t-1)} = \frac{I_{(t-1)} \times Weight_{i(t-1)}}{P_{i(t-1)}}$$

- index constituent does not open ex-date in respect to corporate action, then $AS_{i(t)}$ is determined as:

$$AS_{i(t)} = \frac{I_{(t-1)} \times Weight_{i(t-1)}}{P_{i(t-1)}}$$

-On any other day:

- index constituent opens ex-date in respect to corporate action, then $AS_{i(t)}$ is determined as per Corporate Action Adjustment Section.
- Otherwise:

$$AS_{i(t)} = S_{i(t-1)}$$

Where $Weight_{i(t-1)}$ is determined as per Section 2.1.

2.4 Corporate Action Adjustments

Special Cash Dividend:

$$AP_{i,t} = P_{i,t-1} - D_{i,t}$$

Where

t = Index Valuation Date (t) is ex-date for Corporate Action.

$D_{i,t}$ = Dividend amount corresponding to stock i with ex-date t.

Spin-off Adjustment

On effective date, the spun-off security will be added to Index with a Price of 0 and the price of the parent company will remain unchanged.

$$AP_{i,t,s} = P_{i,t-1} - P_{f,t-1} \times Share\ Ratio_{f,t}$$

Where

$P_{f,t-1}$ = Closing price of Spinoff stock on Index Valuation Date (t-1).

Rights Issue Adjustment

$$AP_{j,t} = \frac{P_{j,t-1} + C_{j,t} \times \text{Share Ratio}_{j,t}}{1 + \text{Share Ratio}_{j,t}}$$

$$AS_{j,t} = S_{j,t-1} \times (1 + \text{Share Ratio}_{j,t})$$

Where

$C_{j,t}$ = Official tender price.

Stock Splits Adjustment

$$AP_{j,t} = \frac{P_{j,t-1}}{\text{Share Ratio}_{j,t}}$$

$$AS_{j,t} = S_{j,t-1} \times \text{Share Ratio}_{j,t}$$

Stock distribution

$$AP_{j,t} = P_{j,t-1} \times \frac{1}{1 + \text{Share Ratio}_{j,t}}$$

$$AN_{j,t} = N_{j,t-1} \times (1 + \text{Share Ratio}_{j,t})$$

Index Maintenance

Constituent changes may occur between review periods due to corporate events that disqualify their eligibility for index inclusion. Adjustments to be made for each category of corporate events are described below:

3.1 Corporate Actions – Delisting

A constituent is removed immediately after being delisted from its primary markets.

3.2 Corporate Actions – Merger or Acquisition

If a merger or acquisition results in one constituent acquiring another, the acquiring company remains a constituent, and the acquired company is removed. If a non-constituent acquires a constituent, the acquired constituent is removed. If a constituent acquires a non-constituent, the acquiring constituent remains a constituent.

3.3 Corporate Actions – Spin-off

If a constituent spins or splits off a portion of its business, both the spun-off companies and the parent companies (with the highest market value relative to the spun-off companies) will be kept in the index,

and be considered for removal from the index at the next Reconstitution or Rebalance Day should they fail to meet the eligibility criteria in Section 2.1.

3.4 Corporate Actions – Bankruptcy

If a constituent is delisted after bankruptcy, it will be removed immediately with a price of 0 from the index.

Index Calculation

4.1 Index Calculation

Price and total return values for the FactSet U.S. Business Services Index are calculated by Solactive AG. The price and total return values are calculated on a continuous and end-of-day basis by using the trading price for each component in the index from relevant exchanges and markets. Index values are rounded to 2 decimal places and divisors are rounded to 6 decimal places.

If trading in a stock is suspended prior to the market opening, the stock's adjusted closing price from the previous day will be used in the index calculation until trading commences. If trading in a stock is suspended while the relevant market is open, the official closing price published by relevant exchange for that stock will be used for all subsequent index calculations until trading resumes.

In case of exceptional market conditions disrupting normal closing auction, or causing official closing prices not being available, Solactive and FactSet reserve the right to utilize other prices in the calculation of the official closing level.

4.2 Data Correction

Incorrect index constituent data, corporate action data, or Index Divisors will be corrected upon detection. If such errors are discovered within five days of occurrence, they will be corrected retroactively on the day of discovery. If discovered after five days, corrective actions will be decided based on the errors' significance and feasibility of a correction.

4.3 Decision Making in Undocumented Events

A FactSet Index Oversight Committee consisting of select employees of FactSet Research Systems Inc. is responsible for amending rules as documented in the Index Methodology Guide due to undocumented or extraordinary events.

Additional Information

5.1 Contact Information

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5.2 Version History

Version	Release Date	Notes
Version 1.0	March 9, 2017	First release.