

Index Methodology Guide for the FactSet Big Data Refiners Index™

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Index Introduction and Objective

1.1 Index Overview

The FactSet Big Data Refiners Index is an equity benchmark designed to track the performance of companies that provide analytics, software, hardware, and other computing infrastructure for managing and extracting information from large structured and unstructured data sets.

The FactSet Big Data Refiners Index is a modified market capitalization weighted index reconstituted and rebalanced semi-annually.

The FactSet Big Data Refiners Index is calculated and maintained by Solactive AG based on a methodology developed by FactSet. It is calculated on a price, gross, and net total return basis in U.S. dollars (USD). The price, gross, and net total returns of the index are calculated continuously and on an end-of-day basis, from Monday to Friday 9:30 a.m. to 4:30 p.m. EST (Eastern Standard Time) following the U.S. market calendar. 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, gross, and net total return values of the index may also be obtained from FactSet upon request.

Whenever possible, constituent changes to the index are announced three business days before becoming effective.

1.2 Inception Date and Base Value

The Index Inception Date was June 15, 2018 with a base value of 1000.00. The inception date refers to when the first back-tested index value was calculated. The back test is based on a similar methodology used to calculate the index when it was officially launched on September 2, 2021.

1.3 Commencement Date

The index commencement date was September 2, 2021. Commencement date refers to when the index was officially launched with continuous and end-of-day calculations.

1.4 Reconstitution and Rebalance Schedule

The index is reconstituted and rebalanced semi-annually after the close of the 3rd Friday of June and December each year ("Reconstitution Day" and "Rebalance Day"). If the Reconstitution Day or Rebalance Day is a holiday, it will occur on the next business day.

The data used to reconstitute and rebalance the index is as of the close of 1st Friday of June and December ("Selection Day"). Adjustment to the index composition may be made to account for corporate actions that occur between the Selection Day and the Reconstitution Day or Rebalance Day.

Index Construction

2.1 Constituent Selection and Weighting Schema

1. The securities are primarily listed in one of the following **48** exchanges:

- | | |
|-------------------------------|------------------------------|
| • Athens Exchange | • Mexican Stock Exchange |
| • Australia Stock Exchange | • NASDAQ |
| • BM&F Bovespa | • NASDAQ Dubai |
| • Bolsa de Valores de Lima | • New York Stock Exchange |
| • Bombay Stock Exchange* | • New Zealand Stock Exchange |
| • Borsa Istanbul | • NYSE American |
| • Borsa Italiana | • OMX Nordic Copenhagen |
| • Budapest Stock Exchange | • OMX Nordic Helsinki |
| • Bursa Malaysia | • OMX Nordic Stockholm |
| • Colombia Stock Exchange | • Oslo Stock Exchange |
| • Cyprus Stock Exchange | • Philippine Stock Exchange |
| • Deutsche Borse Xetra | • Prague Stock Exchange |
| • Euronext Amsterdam | • Qatar Stock Exchange |
| • Euronext Brussels | • Santiago Stock Exchange |
| • Euronext Dublin | • Singapore Exchange |
| • Euronext Lisbon | • SIX Swiss Exchange |
| • Euronext Paris | • Stock Exchange of Thailand |
| • Hong Kong Exchange | • Taipei Exchange |
| • Indonesia Stock Exchange | • Taiwan Stock Exchange |
| • JASDAQ | • Tel Aviv Stock Exchange |
| • Johannesburg Stock Exchange | • Tokyo Stock Exchange |
| • Korea Stock Exchange | • Toronto Stock Exchange |
| • London Stock Exchange | • Vienna Stock Exchange |
| • Madrid Stock Exchange | • Warsaw Stock Exchange |

*Securities listed in Bombay Stock Exchange must also be listed in the National Stock Exchange of India (NSE) to be eligible. In addition, NSE listed securities prices would be used for index return calculation.

2. The securities are common stocks, ADR, GDR.
3. The securities have a minimum float-adjusted market capitalization of U.S. \$500 million or greater, and three-month Average Daily Trading Value (ADTV) of U.S. \$1 million or greater.
Existing constituent may remain in the index if it has a minimum float-adjusted market capitalization of U.S. \$375 million or greater, and three-month Average Daily Trading Value (ADTV) of U.S. \$0.75 million or greater.
4. The securities have aggregated revenue of 75% or greater from one or more of the nine (9) following Big Data Refiners related RBICS** Level 6 sub-industries:

RBIC L6 Name	RBIC L6 ID
Business Intelligence Software	552015151510
Business Intelligence/Data Warehousing Consulting	552020201015
Customer Service Software	552015152510
Data Storage Infrastructure Software	552015351510
Enterprise Middleware Software	552015352510
Government and Public Service Industry Software	101015102010
Information Storage Systems	551520202015
Network Administration Software	552015353010
Peripheral and Other Commerce Equipment Makers	551510101010

**If final index constituents are less than 25 securities, then aggregated % revenue requirement shall be reduced from 75% to 50% and rank from highest to lowest, the top 25 ranked securities will be included.

5. If a company has multiple share classes, only include the most liquid issue based on the highest three-month ADTV on Selection Day.
6. Apply the float-adjusted modified market capitalization weighting methodology to securities that remain by dividing their individual float-adjusted market capitalization to the sum float-adjusted market capitalization of all securities. Individual security weights are capped at 4.5% with excess weights redistributed proportionally among remaining uncapped securities.

In addition to the above selection schema, FactSet may at its discretion modify one or more selection criterion to ensure relevant and timely capture of the theme. Whenever possible, any modifications shall be announced 30 days prior to annual Reconstitution Day.

2.2 Index Return Formulas

The price gross, and net total returns levels of the index are calculated using the following formulas.

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

where:

$I_{(t)}$ = Index value on Index Valuation Day (t)

$D_{(t)}$ = Divisor 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)

$FX_{i(t)}$ = WM Reuters FX rate published at 4:00 p.m. London time on Index Valuation Day (t) required to convert closing price of stock (i) in index currency, USD.

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

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

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

$FX_{i(t)}$ = WM Reuters FX rate published at 4:00 p.m. London time on Index Inception Date required to convert closing price of stock (i) in index currency, USD.

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

Net total return is calculated to account for the effect of tax withholding on dividends by adjusting dividend taken out due to tax payment. **For U.S. listed securities, tax withholding is set to zero.**

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:

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

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 Day (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 a 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:

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

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

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

- 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:

$$AP_{i,t} = P_{i,t-1} - D_{i,t} \times FX_{d,t-1}$$

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).

FX_{d,t-1} = WM Reuters FX rate published at 4:00 p.m. London time fixing on Index Valuation Day (t) required to convert dividend amount in underlying stock currency, USD.

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.

$$AP_{i,t,s} = P_{i,t-1} - P_{f,t-1} \times \text{Share Ratio}_{f,t} \times FX_{j,t-1}$$

Where

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

FX_{j,t-1} = WM Reuters FX rate published at 4:00 p.m. London time on Index Valuation Day (t) required to convert price of spun-off company to constituent stock currency, USD.

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

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

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

Index Maintenance

Constituent changes may occur between review periods due to corporate events that disqualify their eligibility for index inclusion. Adjustments to 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. However, FactSet may at its discretion, remove the parent and/or the spun-off company immediately post spin-off, if it could determine the parent and/or the spun-off company fail 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 and Data Correction

4.1 Index Calculation

Price, gross, and net total return values for the FactSet Big Data Refiners Index are calculated by Solactive AG. The price, gross, and net 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 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 Sanctions Affecting Index Inclusion

Sanctions policies may affect investors' ability to transact or hold securities of certain issuers. FactSet monitors and reviews these sanctions' impact on its indices and amends the index rules as appropriate.

The following exclusionary rule is currently in effect:

- Russian Federation: All companies sanctioned by the United States (OFAC)¹ do not qualify for inclusion in FactSet equity indices. In addition, all companies with a Russian Federation country of risk as defined by FactSet, do not qualify for inclusion in FactSet equity indices.

¹ <https://home.treasury.gov/policy-issues/financial-sanctions/sanctions-programs-and-country-information/ukraine-russia-related-sanctions>

<https://home.treasury.gov/policy-issues/financial-sanctions/sanctions-programs-and-country-information/russian-harmful-foreign-activities-sanctions>

<https://home.treasury.gov/policy-issues/financial-sanctions/sanctions-programs-and-country-information/belarus-sanctions>

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5.3 Version History

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