Index Methodology Guide for the FactSet AVGO Value Chain Index™

Version 1.0 – March 31, 2025

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Index Introduction and Objective

1.1 Index Overview

The FactSet AVGO Value Chain Index ("Index") is an equity benchmark designed to track the performance of a group of U.S. listed Technology software, web application, and semiconductor companies that comprised of the value chain of Broadcom, Inc. (AVGO). The Index is modified market capitalization weighted, reconstituted and rebalanced semi-annual in April and October.

The Index is calculated and maintained by Solactive AG – the calculation agent – based on a methodology developed by FactSet. It is calculated on a price, gross and net total return basis in U.S. Dollar (USD). The price, gross, and net total return values of the index are calculated on a real-time and an end-of-day basis, Monday to Friday 9:00 a.m. to 3:55p.m. KST (Korea Standard Time). Index values are distributed via various data channels and market data vendors, including the price marketing services of Boerse Stuttgart AG. Index values of may also be obtained from FactSet upon request.

1.2 Inception Date and Base Value

The Index Inception Date was December 13, 2019, with a base value of 100.00. 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 completed on February 28, 2025.

1.3 Index Valuation Days

Index Valuation Days are business days according to the U.S. calendar, Monday to Friday.

1.4 Completion Date

The index completion date was February 28, 2025. Completion date refers to the stated date when the index was officially completed for launch.

1.5 Reconstitution and Rebalance Schedule

The index is reconstituted and rebalanced semi-annually after the close of the 2nd Friday of June and December each year ("Reconstitution Day" and "Rebalance Day").

If any of the existing or new index components is not trading on Reconstitution Day or Rebalance Day due to an exchange holiday, the reconstitution/rebalance is moved to the next business day.

The data used to reconstitute and rebalance the index is as of the close of last business day of May and November ("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 or Rebalance Day.

Index Construction

2.1 Constituent Selection and Weighting Schema

1. The securities are listed in the U.S. exchanges, including NASDAQ, New York Stock Exchange, and NYSE American.

2. The securities are common stocks, ADR, GDR.

3. The securities have a minimum total market capitalization of $500 Million USD, and a minimum three-month ADTV (Average Daily Trading Value) of $1 Million USD.

4. The security of Broadcom, Inc. (AVGO) is included, refer to as the target company.

5. First and second order suppliers, customers, and partners (hereafter refer to as 'value-chain companies') are identified for the Broadcom. These relationships include both direct relationships where the source companies disclosed the relationships and reverse relationships where the target company disclosed the relationships.

6. Value-chain companies identified in Step 5 must also be classified to one of the following RBICS Focus Level 4 industries to be eligible for inclusion in the index (Table 1).

   Table 1.

RBICS ID	RBICS L4 AME
55201510 (L4)	Design and Engineering Software
55102015 (L4)	Discrete Semiconductors
55102020 (L4)	General Semiconductors
55101020 (L4)	Optoelectronics Electronic Components
55102030 (L4)	Processor Semiconductors
55103010 (L4)	Semiconductor Manufacturing Capital Equipment
55103015 (L4)	Semiconductor Manufacturing Services
55102040 (L4)	Specialized Semiconductors
55201035 (L4)	Web-Based Data and Services
55151535 (L4)	Wide Area Networking Equipment

7. If a company has multiple share classes, only include the most liquid issue based on the largest three-month ADTV on Selection Day.

8. Rank securities of Step 7 by their total market cap from largest to smallest and select the top 29 largest market cap ranked securities (excluding Broadcom); Broadcom will also be included in the Index. The index shall have 30 constituents.

   If the aforementioned steps lead to less than 30 constituents on Reconstitution Day, the minimum total market capitalization for eligible securities is lowered to $200 Million USD, and the minimum three-month ADTV (Average Daily Trading Value) to $0.5 Million USD.

9. Weight constituents by (i) allocating 20% index weight to Broadcom, and (ii) 80% index weight to the other 29 constituents based on their individual Float Adjusted Market Capitalization to their sum Float Adjusted Market Capitalization. Aggregate total weights of all constituents that are greater than 5%, including Broadcom, should be capped at 45% of the index weights. In between index reconstitution, if the target company's weight exceeds 25% for 3 consecutive business days ("T"), it will be automatically reset back to 20% at the open on the fourth business day after T.

Furthermore, if the aggregate total weights of all constituents that are greater than 5% (including Broadcom) exceeds 50% on any business day, they will be automatically reset and capped at 45% at the close of the next business day by redistributing the weights proportionally and capping the securities until and in descending order at 5%.

In addition to the above selection schema, FactSet may at its discretion and in consultation with index users and the public, modify one or more selection criterion to ensure relevant and timely capture of the theme. Any modifications shall be announced 30 days prior to Reconstitution Day or as early as feasible.

2.2 Index Return Formulas

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

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

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)

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 weighted according to the index methodology. 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.

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 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.

$AP_{i(t)}$ mean:
= Adjusted price of stock (i) is determined for the open on Index Valuation Day (t) shall

    - 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 opens ex-date in respect to corporate action, then $AS_{i(t)}$ is determined as:

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

- 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

If an index constituent (i.e. the parent company) distributes part of its business into a spun-off company, the spun-off company will be added to the Index according to the transaction terms on the ex-date.

The parent company will remain in the Index with unchanged calculation parameters. The spun-off company will remain in the Index until the next ordinary rebalancing.

The spun-off company will be added to the Index with an open price of zero on ex-date.

If the spun-off company does not start to trade on the effective date (i.e. ex-date), a theoretical price for the spun-off company will be implemented (**see the equation below**) as a fixed price until it commences trading, from which time official prices will be used.

$$P_{f(t)}=[P_{i(t-1)} - AP_{i(t)}] \times ShareRatio_{i(t)}$$

Where

$P_{i(t-1)}$ = Closing price of Parent Company on Index Valuation Date (t-1).
$AP_{i(t)}$ = Open price of Parent Company on Index Valuation Date (t).
$P_{f(t)}$ = Price of Spun-off Company on Index Valuation Date (t).

Rights Issue Adjustment

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

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

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

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

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

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 and Fast Entry

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

3.2 Corporate Actions – Merger/Acquisition and Fast Entry

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, unless it is determined the spun-off company's primary business has little relevance to the theme of the index, in which case it will be removed immediately following completion of the spin-off.

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 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 Contact Information

FactSet Research Systems Inc.
One Sansome St. Suite 900
San Francisco, CA 94104
Contact: GoIndexing@factset.com

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