Invesco Defensive Equity Index Methodology

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Index Overview

Description

The Invesco Defensive Equity Index (the "Index") is designed to mitigate market risk and improve risk-adjusted returns. The companies selected have potentially superior risk-return profiles during periods of stock market weakness while still offering the potential for gains during periods of market strength. Instead of the traditional approach to defensive equity portfolios – focusing solely upon low-beta stocks – the Index uses a rules-based quantitative approach, selecting stocks based on beta, down market volatility, and the probability of delivering the required revenue growth to support current market expectations.

Index Universe

The Index Universe includes all constituents of the S&P 500® Index.

Security Selection

For each stock in the Index Universe, the probability of delivering the revenue growth required to support market expectations is calculated. Probabilities are computed using forecasted sales growth and by benchmarking these growth expectations against management's ability to deliver revenue growth historically. Stocks in the top 80% of probability scores are selected.

Within the group of stocks that offer the highest probability of meeting growth expectations, the stocks with more attractive risk profiles receive further consideration. First, stocks with the lowest 75% of betas are included. Next, of the remaining stocks, those that rank in the bottom 50% on down market volatility, or downside deviation, are eligible. Finally, the 100 stocks with a higher probability of delivering required revenue growth to support current market expectations while minimizing any differences in industry exposures relative to the S&P 500® Index are selected.

Securities are excluded if pricing data is not available from the Calculator (see Index Calculation and the Role of the Calculation Agent on page 7).

Security Weighting

Each security in the Index is equally weighted.

All security weighting criteria are applied on the Reference Date of an Index update (see Updates on page 4).

History

The Index was launched on July 25, 2016 under the name Guggenheim Defensive Equity Index. Invesco Indexing acquired the Index in April 2018 and the Index was renamed Invesco Defensive Equity Index. History is available for the Index since its base date of December 31, 1999. The base value of the Index is 1000.

Updates

The Index is rebalanced quarterly in March, June, September and December (collectively, "Rebalance Months").

Index Rebalance

During each Index Rebalance, the Index Universe is selected, and resulting Index constituents and weights are determined according to the Security Selection and Security Weighting methodologies described in the Index Overview section (see page 3). The timing of the June Index Rebalance is aligned with the annual reconstitution of the underlying Invesco Indexing Investable (III) Universe, while the March, September, and December Index Rebalances are aligned with the III Universe rebalances at that time. For full details on the III Universe, see Invesco Indexing Investable Universe Methodology at www.InvescoIndexing.com.

Index Key Dates

The key dates are as follows. The Index Review Team (see Governance on page 7) may change these dates for reasons including market holidays. Any such changes will be publicly announced with as much advance notice as possible under the circumstances. All events take place after the close.

Event	Day	Description
Reference Date	First business day of Rebalance Month	Data is captured for Index construction
Announcement Date	One business day before second Friday of Rebalance Month	Summary of Index rebalance changes are announced to public
Pro-Forma Date	Second Friday of Rebalance Month	Preliminary Index weights begin to be distributed to Index subscribers
Effective Date	Third Friday of Rebalance Month	Rebalanced Index weights are finalized

Index Calculation and the Role of the Calculation Agent

The calculation agent for the Index ("the Calculator") is S&P Dow Jones Indices. The Calculator evaluates the closing value of the Index, updates the Index at Rebalance Months based on constituent selections and weightings determined either by Invesco Indexing LLC or the Calculator (with appropriate oversight and review by Invesco Indexing), taking into account Corporate Events (see Corporate Events on page 6), and disseminates the values of the Index to Invesco Indexing LLC and major index data distribution partners (see Index Information and Data Dissemination on page 9).

Calculator Input Data Used and Hierarchy of Input Data

The Index is calculated using closing prices or last transacted prices of underlying constituent securities from exchanges or exchange equivalents. Should this type of data be unavailable, the Index may be calculated using quotes or evaluated data or, in case when continued availability of transacted security prices from security exchanges is suspended, the Calculator reserves the right to exercise a judgement call, including carrying forward the latest available closing price.

Use of Discretion and/or Expert Judgement

No discretion or expert judgement is exercised by Invesco Indexing LLC in the determination of daily index pricing. Rules-based index methodologies, which cover index construction, maintenance and calculation, provide that discretion is not used in the daily pricing of the indexes except in unusual cases not effectively addressed by the methodology, which could be exercised by the Calculator. These include, but may not be limited to:

- Corporate events not previously encountered,
- Structural changes to the underlying markets,
- Operational issues at security exchanges,
- Geo-political events,
- Technological problems / failures, or
- Natural disaster or other business continuity process-related event.

In such circumstances, the calculating agent will inform Invesco Indexing LLC of any discretion being used.

Potential Limitations of the Methodology and Benchmark Calculation

The potential limitations of daily Index calculation include circumstances where the prices of constituent elements of the Index are not available, either because there are insufficient participants or because the exchange(s) / exchange equivalent(s) suffers an unexpected outage or closure or Invesco and/or the Calculator is denied permission to use such data for determining the Index. In such circumstances an announcement will be made to notify clients, including whether the Index will not be published or delayed in publication.

Corporate Events

The Calculator identifies and adjusts for corporate events based on the following policy.

Corporate Events	Index Adjustments
Rights Offer	If the rights are in the money, the Index shares of the underlying security will be adjusted on the ex-date to offset the price adjustment of the underlying in the market due to the rights offering. The Index divisor will not be adjusted as the index market cap of the index constituent will not change.
Spin-off	Standard SPDJI zero price spinoff policy for US stocks applies. All spin-off companies are added to the Index at the zero price on the ex-date of the event with no divisor adjustment. If the spin-off will not remain in the parent S&P 500® index: The spin-off will be dropped from the Index on the trading date following the ex-date of the event and its weight will be redistributed to the parent company. If the spin-off is replacing the parent company in the parent S&P500® index: On the effective date of the replacement, the weight of the parent is redistributed to the spin-off. *For more information on the Spin-offs, please refer to the Treatment of Spin-Offs in the S&P Dow Jones Indices' Equity Indices Policies & Practices document.*
Deletion	Companies delisted as a result of merger, acquisition or other corporate actions are removed at the time they are removed from the S&P 500®, normally at the close of the last day of trading or expiration of a tender offer. There is no replacement to the index. The weights are redistributed among remaining companies across the entire index.
Special Dividends	Price of 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.
Stock Split	Index shares are multiplied by and price is divided by the split factor.

As mentioned above in the Index Calculation and the Role of the Calculation Agent section, the Calculator manages corporate events for this Index using its standard corporate event framework and its divisor index methodology.

Index Policy

All Index constituents are evaluated daily for data needed to calculate Index levels and returns. The Index follows the general Index policies of the Calculator as described below.

Announcements

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 corporate events or short notice of an event may be communicated via email to Index clients. Best efforts are made to announce any changes to Index methodology well ahead of time via the Invesco Indexing website and via email to all Index clients.

Pro-Forma Files

Invesco Indexing provides constituent pro-forma files (PRO.SDC) each time the Index rebalances. The pro-forma file is typically provided daily in advance of the rebalancing date and contains all constituents and their corresponding weights effective for the upcoming rebalancing. The actual weight of each security at the Index rebalance typically differs from the pro-forma weights due to market movements.

Holiday Schedule

The Index is calculated daily, throughout the calendar year. The only days the Index is not calculated are on days when all exchanges where the Index's constituents are listed are officially closed.

Governance

The Index is managed by the Index Review Team (IRT). The IRT consists solely of members of Invesco Indexing. The IRT meets at least annually to review and revise Index methodology described in this document as appropriate. The IRT meets at least annually to review additions and deletions to the Index. All changes to the Index on Rebalance Months are subject to the approval of the IRT, and the IRT may make adjustments to the Index at its discretion when such changes are reasonable.

Index Methodology Update and Cessation Policy

Invesco Indexing periodically, at least annually, reviews each Index and its accompanying methodology, in addition to periodic rebalancing (if applicable), in an effort to ensure the Index continues to accurately represent that portion of the market it was originally intended to, and delivers the outcomes one would expect from the Index's exposures.

The procedures for the internal review of the methodologies, changes to the methodologies and procedures performed when the Index administered is ceasing publication are described in detail in the Changes to Benchmark Methodology and Cessation Policy.

Return Types and Tickers

The Calculator computes two return types for the Index on a daily basis: price return and total return. The total return Index assumes dividends are reinvested in the Index after the close on the ex-date.

Return Type	Ticker
Price Return	IIDEF
Total Return	IIDEFTR

Index Information and Data Dissemination

Data Vendors

Daily Index levels for all return types are available from major quote vendors and at www.invescoindexing.com. Intraday Index levels are available for the price return Index only.

FTP

Daily constituent data and Index level data are available via the Invesco Indexing secure FTP site for Index subscribers. Please contact Invesco Indexing customer service at IndexSupport@invesco.com for more information.

File Types

The Invesco Indexing secure FTP site for Index subscribers will distribute the standard overnight Index files from the Calculator. These include:

File Description	File Extension
Index Levels	.SDL
Constituent Details Close	CLS.SDC
Constituent Details Adjusted Close	ADJ.SDC
Constituent Details Pro-forma	PRO.SDC
Corporate Events	.SDE

The data on these files is provided directly by the Calculator, and no descriptive information contained in these files is used by Invesco Indexing at any stage of the Index creation process. In addition, security characteristics are available upon request. The characteristics are created by Invesco Indexing periodically and are updated as necessary. The characteristics data contribute to the creation of the Index or otherwise help to describe the Index constituents. These data include sector, country, region, size classification and developed/emerging classification. Please contact Invesco Indexing customer service at IndexSupport@invesco.com for more information.

Website

Index information is available on the Invesco Indexing website at www.invescoindexing.com.

Definitions of Key Terms

Terms used in this document but not otherwise defined are defined in the following table. Definitions, that are marked with a (*) are sourced from Regulation (EU) 2016/1011 ("EU Benchmark Regulation") Article 3. Definitions, that are marked with a (**) are sourced from IOSCO Principles for Financial Benchmarks[1].

Term	Definition
Administrator *	'Administrator' means a natural or legal person that has control over the provision of a benchmark;
Benchmark *	'Benchmark' means any index by reference to which the amount payable under a financial instrument or a financial contract, or the value of a financial instrument, is determined, or an index that is used to measure the performance of an investment fund with the purpose of tracking the return of such index or of defining the asset allocation of a portfolio or of computing the performance fees;
Calculation Agent **	A legal entity with delegated responsibility for determining a Benchmark through the application of a formula or other method of calculating the information or expressions of opinions provided for that purpose, in accordance with the Methodology set out by the Administrator;
Contribution of Input Data *	'Contribution of input data' means providing any input data not readily available to an administrator, or to another person for the purposes of passing to an administrator, that is required in connection with the determination of a benchmark, and is provided for that purpose.
Corporate Action	A Corporate Action occurs when there is a change to a company's capital structure. Unlike Corporate Events, Corporate Actions have a prescribed ex-date. The share price will be subject to an adjustment on the ex-date and Invesco Indexing and/or the calculating agent will adjust the index to counteract the effect that the price change would otherwise have on the index. Examples of corporate actions include rights or entitlement issues, consolidations, stock splits and capital repayments.
Expert Judgment *	'Expert judgement' means the exercise of discretion by an administrator or a contributor with respect to the use of data in determining a benchmark, including extrapolating values from prior or related transactions, adjusting values for factors that might influence the quality of data such as market events or impairment of a buyer or seller's credit quality, and weighting firm bids or offers greater than a particular concluded transaction;
Index*	'Index' means any figure: (a) that is published or made available to the public; (b) that is regularly determined: (i) entirely or partially by the application of a formula or any other method of calculation, or by an assessment; and (ii) on the basis of the value of one or more underlying assets or prices, including estimated prices, actual or estimated interest rates, quotes and committed quotes, or other values or surveys;
Input Data *	'Input data' means the data in respect of the value of one or more underlying assets, or prices, including estimated prices, quotes, committed quotes or other values, used by an administrator to determine a benchmark;
Material Change to Methodology	In determining whether a change to an Index is material, the following factors shall be taken into account: • Economic impact of the change; • Whether the change affects the original purpose of the Index.
Methodology **	The written rules and procedures according to which information is collected and the Benchmark is determined;
Rebalance	The regular process (typically quarterly, semi-annually or annually) in which the eligibility and weights of constituent elements of indexes are reassessed;
Subscriber **	A person or entity that purchases Benchmark determination services from an Administrator;
Transaction Data *	'Transaction data' means observable prices, rates, indices or values representing transactions between unaffiliated counterparties in an active market subject to competitive supply and demand forces;

[1] http://www.iosco.org/library/pubdocs/pdf/IOSCOPD415.pdf