



Invesco Dynamic Growth Index Methodology

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Index Overview

Description

The Invesco Dynamic Growth Index (“the Index”) is a multi-asset, target volatility index. The Index provides exposure to equities that dynamically allocate among established factors in an effort to emphasize those characteristics expected to benefit from the current economic environment. The Index also provides exposure to fixed income through 10-year Treasury bond futures. Asset class allocation is dynamically updated daily to seek to provide a consistent volatility profile of 5%.

Index Universe

The Invesco Dynamic Growth Index is an Index of indexes comprised of the following:

- Russell 1000[®] Invesco Dynamic MultiFactor Index (“Equity”)
- Merrill Lynch 10-Year U.S. Treasury Futures Index (“10-year Treasuries”)
- Federal Funds Effective Rate Index (“Cash”)

10-year Treasuries, Cash, or a combination of 10-year Treasuries and Cash, are collectively referred to as “Fixed Income”.

Security Selection

Details on the security selection criteria for the Russell 1000[®] Invesco Dynamic MultiFactor Index can be found in its methodology document at www.ftserussell.com.

Security Weighting

An initial weight is established for Equity as the minimum of 100% or the ratio of the Index volatility target (5%) to the larger of the Russell 1000[®] Invesco Dynamic MultiFactor Index short-term or long-term historical volatility. Next, an initial Fixed Income weight is established as 100% less the Equity weight.

The initial Fixed Income weight either will be comprised entirely of 10-Year Treasuries, Cash, or a blend of 10-Year Treasuries and Cash. To determine the allocation, the recent performance of 10-year Treasuries is scaled by volatility. When this risk-adjusted performance ratio is below a minimum threshold, the 10-Year Treasuries weight is reduced by 25% and the Cash weight is increased by 25%. For every additional day below the minimum threshold, the 10-Year Treasuries weight is further reduced by 25% while the weight in Cash is further increased by 25% until a limit is reached in which 10-Year Treasuries constitute 0% and Cash constitutes 100% of the Fixed Income allocation. If the risk-adjusted performance ratio is above the minimum threshold but below zero, the weight of 10-Year Treasuries and Cash is held constant. If the risk-adjusted performance ratio reverts above zero, the weight of 10-Year Treasuries is increased by 25% and the Cash weight is reduced by 25%. For every additional day above zero, the 10-Year Treasuries weight is further increase by 25% while the weight in Cash is further decreased by 25% until a limit is reached in which 10-Year Treasuries constitute 100% and Cash constitutes 0% of the Fixed Income allocation

Using the combined Equity and 10-year Treasuries allocations based on their initial weights, the multi-asset historical volatility is then calculated. While keeping the proportionate weights between Equity and Fixed Income components constant, their aggregate weight is then raised or lowered to achieve the Index volatility target of 5%. The maximum weight of the combination of final Equity and Fixed Income is 150%.

All security weighting criteria are applied on the Reference Date of an Index update (see Updates on page 6).

History

The Index was launched on February 18, 2022. History is available for the Index since its base date of January 10, 2007. The base value of the Index is 1000.

Index Details

Return Adjustment

When calculating the Excess Return (ER) of the Index as described in the Return Types and Tickers section (see page 9), the performance of the Index is adjusted by the daily performance of the Bank of America P-Trend Index - US Series 2 ("Intraday Index") in proportion to the final Equity weight as follows:

$$\text{Intraday Index Return Adjustment}_t = W_{t-1}^{\text{EQUITY}} * \left(\frac{\text{Intraday Index}_t}{\text{Intraday Index}_{t-1}} - 1 \right)$$

where W_{t-1}^{EQUITY} is the weight of Equity in the Index on day $t-1$,

and Intraday Index_t ($\text{Intraday Index}_{t-1}$) is the Index level of the Intraday Index on day t ($t-1$).

The Intraday Index Return Adjustment is added to the Excess Return of the Index to arrive at the Index level on day t (Index_t) as follows:

$$\text{Index}_t = \text{Index}_{t-1} * (1 + ER_t + \text{Intraday Index Return Adjustment}_t)$$

where Index_{t-1} is the Index level of the Index on day $t-1$,

and ER_t is the excess return of the Index on day t .

Updates

The Index is rebalanced daily.

Index Rebalance

During the daily Index Rebalance, the Index Universe is selected, Index constituents are refreshed, and the new Index constituents are weighted according to the security weighting methodology described in the Index Overview section (see page 3).

Index Key Dates

The key dates are as follows. The Index Review Team (see Governance on page 8) 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	Each business day	Data is captured for Index construction
Effective Date	Each business day	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 each business day 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 8), 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 10).

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

FTSE Russell identifies and adjusts for corporate events in the underlying Russell 1000® Invesco Dynamic MultiFactor Index. For details on the corporate event policy for the Russell 1000® Invesco Dynamic MultiFactor Index please see its index methodology document at www.ftserussell.com.

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.

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 daily changes to the Index 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 one return type for the Index on a daily basis: excess return. The excess return reflects the contribution from Fixed Income and Equity less a reference rate¹, the Intraday Index Return Adjustment (see Index Details on Page 5), and an annual 0.85% Index performance reduction.

Return Type	Ticker
Excess Return	IIDGROW

¹ As of December 31, 2021, the reference rate is the Federal Funds Effective Rate.

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.

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 Weights	.SDCL

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.

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 Benchmarks².

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: <ul style="list-style-type: none"> • 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;

² <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD415.pdf>

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The Merrill Lynch 10-year U.S. Treasury Futures Total Return Index and BofA P-Trend Index - US Series 2 (each an "Index" and together the "Indices") have been created and are owned by BofA Securities, Inc. and its Affiliates, (collectively, "Licensors") and the Indices have been licensed to Invesco Indexing LLC ("Licensee"). Neither Licensee nor any index created by Licensee nor any product is sponsored, operated, endorsed, sold or promoted by Licensors. Obligations to make payments under any products are solely the obligation of the product issuer pursuant to the terms of the applicable contract, and are not the responsibility of Licensors. Licensors' indices and related information, the names of the Licensors, and related trademarks, are intellectual property licensed from Licensors, and may not be copied, used, or distributed without Licensors' prior written approval. The products have not been passed on as to their legality or suitability, and are not regulated, issued, endorsed, sold, guaranteed, or promoted by Licensors. LICENSORS MAKE NO WARRANTIES AND BEAR NO LIABILITY WITH RESPECT TO THE INDICES, ANY RELATED INFORMATION, THE TRADEMARKS, OR THE PRODUCT(S) (INCLUDING WITHOUT LIMITATION, THEIR QUALITY, ACCURACY, SUITABILITY AND/OR COMPLETENESS).

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