



# **Invesco Developed Markets ex-US Index Methodology**

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## Index Overview

### Description

The Invesco Developed Markets ex-US Index (“the Index”) is a broad-based benchmark measuring the aggregate performance of non-US developed market equities.

### Index Universe

The Index Universe includes all constituents of the Invesco Indexing Investable universe designated as non-US developed market securities. For full details on the Invesco Indexing Investable universe, see Invesco Indexing Investable Universe Methodology at [www.invescoindexing.com](http://www.invescoindexing.com).

### Security Selection

The Index includes all constituents of the Index Universe.

### Security Weighting

Each security in the Index is weighted proportionally to its float-adjusted market-capitalization. For securities with multiple liquid share classes (as defined in the Invesco Indexing Investable Universe Methodology), the security weight is scaled up to account for all liquid shares.

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 October 20, 2017. History is available for the Index since its base date of December 31, 2002. The base value of the Index is 1000.

### Related Indexes

Several other related Invesco broad equity benchmarks are available. Similar to the Invesco Developed Markets ex-US Index, these indexes are capitalization weighted; however, they differ in their regional and capitalization coverage. These indexes include:

Invesco US Large Mid Cap Index

Invesco US Small Cap Index

Invesco Emerging Markets Index

Invesco US Large Cap Index

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## Updates

The Index is updated in coordination with the Invesco Indexing Investable universe. There is an annual Index reconstitution in June and a quarterly rebalance in March, September and December. While reconstitutions are intended to reset the overall global equity universe, the rebalances ensure the universe and related indexes include new listings that have met the criteria for inclusion while eliminating illiquid securities. March, June, September, and December are all collectively referred to as “Rebalance Months.”

For full details on liquidity requirements and universe construction, see Invesco Indexing Investable Universe Methodology at [www.invescoindexing.com](http://www.invescoindexing.com).

### Index Reconstitution

During the reconstitution, the Invesco Indexing Investable universe is fully refreshed. Liquidity thresholds are determined based on the characteristics of the global equity market, and securities are added to or removed from the universe based on their ability to satisfy these liquidity requirements. Qualifying universe members are assigned to various segmentations based on characteristics including size and geography. Finally, securities are selected from the Invesco Indexing Investable universe to the Index, and the Index is reweighted. See Index Overview on page 3 for more information about security selection and weighting.

### Index Rebalance

During the quarterly Index rebalance, shares outstanding and float are updated. Initial Public Offerings (IPOs) and spinoffs may be added to the Index if they are sufficiently liquid, current Index constituents may be removed if they fail to meet liquidity requirements, and the Index is reweighted.

### Index Key Dates

The key dates surrounding each reconstitution and rebalance 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	Third Friday of month prior to Rebalance Month	Data is captured for Index construction
Announcement Date	Two business days 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

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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 Reconstitution and 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.

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## Corporate Events

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

Corporate Events	Index Adjustments
Rights Offer	The spot price of the underlying security will be adjusted and the shares will be increased with respect to rights offering ratio for in the money offers
Spin-Off	Spin-off stock is added to the Index after market close of ex-date at zero weight. Parent and spin-off will split the original weight proportional to market cap on first day of trading
Share Acquisition	The acquired company is deleted from the Index. The shares and weight of the acquirer will be adjusted with respect to the stock terms of the acquisition
Share changes	Index shares of affected stock increase/decrease
Addition	Except for spin-offs, there are no intra-rebalancing additions
Deletion	Delisting, acquisition or any other corporate event resulting in the deletion of the stock from the Index causes the weight of the rest of the stocks in the Index to change. Relative weights stay the same

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. For additional details, please refer to Invesco Indexing Corporate Event Methodology at [www.invescoindexing.com](http://www.invescoindexing.com).

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## **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.

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## **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.

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## **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.

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## Return Types and Tickers

The Calculator computes three return types for the Index on a daily basis: price return, total return, and net total return. The total return Index assumes dividends are reinvested in the Index after the close on the ex-date. The net total return Index reflects the return for which dividends are reinvested after the deduction of withholding tax. The tax rate applied is the rate to non-resident institutions that do not benefit from double taxation treaties.

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<b>Return Type</b>	<b>Bloomberg Ticker</b>
Price Return	IIDMP
Total Return	IIDMT
Net Total Return	IIDMN

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## 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](http://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](mailto: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:

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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, a characteristics file, II.CHR, is available upon request. The characteristics file is created by Invesco Indexing quarterly at the time of rebalance of the Invesco Indexing Investable universe and is updated throughout the quarter as necessary. It contains characteristics data used by Invesco Indexing in the creation of the Index or that otherwise helps 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](mailto:indexsupport@invesco.com) for more information.

### Website

Index information is available on the Invesco Indexing website at [www.invescoindexing.com](http://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<sup>1</sup>.

Term	Definition
<b>Administrator *</b>	‘Administrator’ means a natural or legal person that has control over the provision of a benchmark;
<b>Benchmark *</b>	‘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;
<b>Calculation Agent **</b>	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;
<b>Contribution of Input Data *</b>	‘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.
<b>Corporate Action</b>	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.
<b>Expert Judgment *</b>	‘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;
<b>Index*</b>	‘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;
<b>Input Data *</b>	‘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;
<b>Material Change to Methodology</b>	In determining whether a change to an Index is material, the following factors shall be taken into account: <ul style="list-style-type: none"> <li>• Economic impact of the change;</li> <li>• Whether the change affects the original purpose of the Index.</li> </ul>
<b>Methodology **</b>	The written rules and procedures according to which information is collected and the Benchmark is determined;
<b>Rebalance</b>	The regular process (typically quarterly, semi-annually or annually) in which the eligibility and weights of constituent elements of indexes are reassessed;
<b>Subscriber **</b>	A person or entity that purchases Benchmark determination services from an Administrator;
<b>Transaction Data *</b>	‘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;

<sup>1</sup> <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD415.pdf>

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