



**AlphaDEX® European Dividend  
Index™  
(EURADR)**

Version 2.0  
Valid from  
April 20, 2018

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### **Version History:**

#### **Version 2.0 (Effective April 20, 2018)**

This version incorporates language reflecting changes to the legal structure of the Index Administrator, introduces language codifying certain procedures relating to Index governance, consultation and index rule reviews and includes an updated Disclaimer.

#### **Version 1.0 (Effective January 31, 2014)**

The methodology document covers the newly-launched AlphaDEX® European Dividend Index™

## 1. Index summary

<b>Factsheet</b>	
<b>Full Names</b>	<ul style="list-style-type: none"> <li>AlphaDEX® European Dividend Index™</li> </ul>
<b>Index Types</b>	<ul style="list-style-type: none"> <li>AlphaDEX® European Dividend Index™ USD - Price Return: EURADR / Gross Total Return: EURADRTR</li> </ul>
<b>Index Description</b>	<p>The AlphaDEX® European Dividend Index™ is a modified, equal-dollar weighted index designed to objectively identify and select U.S. and Canadian listed American Depositary Receipts (ADRs) issued by Europe domiciled companies that have the potential for greater capital appreciation. The indices utilize the AlphaDEX® screening methodology by applying it to the universe of eligible ADRs. Index compositions and corporate actions, including rebalance information, can be accessed from NYSE Market Data at <a href="http://www.nyse.com/market-data/indices">www.nyse.com/market-data/indices</a>.</p>
<b>Eligible Stocks</b>	Securities within the BNY Mellon Europe ADR Index that meet the liquidity threshold
<b>Number of Constituents</b>	At each rebalance, the AlphaDEX® European Dividend Index™ will contain 75% of the number of eligible ADRs in the universe
<b>Weighting</b>	At each rebalance, eligible ADRs are assigned a selection score utilizing the AlphaDEX® methodology. The top 75% of ADRs is included in the index. That 75% is then split into quintiles, based upon each ADR's AlphaDEX® selection score. The top quintile receives a 5/15 (33.33%) weighting, with successive quintiles receiving weightings of 4/15 (26.67%), 3/15 (20.00%), 2/15 (13.33%) and 1/15 (6.67%), respectively. ADRs are equally weighted within each quintile.
<b>Review of Composition</b>	Announced semi-annually on the last business day of May and November.
<b>Effective Date of the Rebalance</b>	Effective semi-annually after the close of trading on the 6th U.S. trading day of June and December
<b>Calculation Frequency</b>	Price Return: 15 seconds between 09:30 & 18:00 ET Gross Total Return: Once-a-Day between 19:00 & 20:15 ET
<b>Base Date</b>	January 31, 2014
<b>Base Level</b>	1000.00
<b>Historic Data Available Since</b>	January 31, 2014
<b>Bloomberg Code</b>	EURADR INDEX / EURADRTR INDEX
<b>Reuters Code</b>	.EURADR / .EURADRTR
<b>Launch Date</b>	January 31, 2014

## **2. Governance**

### **Index Sponsor & Administrator**

ICE Data Indices, LLC (“IDI”) is the Index Sponsor and the Index Administrator.

IDI is responsible for the day-to-day management of the Index, including retaining primary responsibility for all aspects of the index determination process, including implementing appropriate governance and oversight, as required under the International Organization of Securities Commission’s Principles for Financial Benchmarks (the IOSCO Principles). The Governance Committee is responsible for helping to ensure IDI’s overall compliance with the IOSCO Principles, by performing the Oversight Function which includes overseeing the index development, design, issuance and operation of the indices, as well as reviewing the control framework. IDI is also responsible for decisions regarding the interpretation of these rules and the Governance Committee is responsible for reviewing all rule book modifications and index constituent changes with respect to the Index to ensure that they are made objectively, without bias, and in accordance with applicable law and regulation and IDI’s policies and procedures. Consequently, all IDI’s and the Governance Committee discussions and decisions are confidential until released to the public.

### **Cases not covered in rules**

In cases which are not expressly covered in these rules, operational adjustments will take place along the lines of the aim of the Index. Operational adjustments may also take place if, in the opinion of the Index Administrator, it is desirable to do so to maintain a fair and orderly market in derivatives on this Index and/or this is in the best interests of the investors in products based on the Index and/or the proper functioning of the markets.

Any such modifications described under this section or exercise of Expert Judgment will also be governed by any applicable policies, procedures and Guidelines in place by IDI at such time.

### **Rule book changes**

The Governance Committee reviews all rule book modifications and Index changes to ensure that they are made objectively, without bias and in accordance with applicable law and regulation and IDI’s policies and procedures. These rules may be supplemented, amended in whole or in part, revised or withdrawn at any time in accordance with applicable law and regulation and IDI applicable policies and procedures. Supplements, amendments, revisions and withdrawals may also lead to changes in the way the Index is compiled or calculated or affect the Index in another way.

### **Limitations of the Index**

All the NYSE Indices produced by IDI (the “NYSE Indices”) may be subject to potential limitations, such as a decline in the pool of available eligible securities due to advancements in technology, shifts in demographic spending or the economy, changes in regulation or accounting rules, consolidation in certain sectors or industries, or other factors. Other

limitations may include the ability of the Benchmark to operate in illiquid or fragmented markets.

IDI seeks to manage and mitigate these limitations through the Benchmark design, review and oversight process

### **3. Index Description**

The AlphaDEX® European Dividend Index™ is a modified, equal-dollar weighted index designed to objectively identify and select U.S. and Canadian listed American Depositary Receipts (ADRs) issued by Europe domiciled companies that have the potential for greater capital appreciation. The indices utilize the AlphaDEX® screening methodology by applying it to the universe of eligible ADRs.

The AlphaDEX® screening methodology is utilized under license from First Trust Portfolios, LP. More information on the methodology can be found at <https://www.ftportfolios.com/retail/etf/what-is-alphadex.aspx>.

The BNY Mellon Europe ADR Index is utilized under license from BNY Mellon. More information on that methodology can be found at <https://www.nyse.com/indices/rules>.

## **4. Publication**

### ***4.1 The opening, intraday and closing or daily publication of index values.***

#### **Opening**

The first index level is calculated and published around 09:30 ET, when the U.S. equity markets open for their regular trading session. The calculation of that level utilizes the most updated prices available at that moment. In the case of constituents that have a non-traded, halted or suspended status, or have not opened for the current day, the previous day's reference prices or estimated prices (for IPOs, buyouts and swap offers) are used.

#### **Dissemination frequency**

The level of the index is in principle published every 15 seconds to the ICE Data Global Index Feed (ICE Data GIF). The calculated index levels incorporate the latest traded price of each constituent from within the regular trading session, normally 09:30 to 16:00 ET. The index only holds equities listed and traded in the U.S. and the Toronto Stock Exchange (TSX), and thus, intraday calculations of the index would incorporate trades on a consolidated level, from all exchanges including those not designated as the official primary exchange.

The index is calculated from 09:30 until 18:00 ET on those days specified as index business days. Index business days will be classified as days on which the U.S. Equity Markets (NYSE®, NASDAQ, NYSE® AMERICAN) are open for a full or partial day of trading.

#### **Closing level**

The closing level is the last level disseminated on the trading day and uses the official close prices from the primary listing market for each constituent. For constituents that have non-traded, halted or suspended status, or have not opened for the current day, the previous day's reference prices or estimated prices (for IPOs, buyouts and swap offers) are used instead. In the case of exceptional market conditions, the Index Administrator reserves the right to utilize other prices in the calculation of the official closing level, as indicated below in Section 3.2.

#### **Sources of Data**

The Consolidated Tape (CTS/UDTF) is the primary market data source for U.S. equity real-time and closing prices. TMX Group and its affiliates are the primary market data source for real-time and closing prices of securities listed on the Toronto Stock Exchange (TSX). Additional sources of data less commonly used include other market data vendors, company announcements, exchange announcements, and other official sources.

## ***4.2 Exceptional market conditions and corrections***

The Index Administrator retains the right to delay the publication of the opening level of the index. Furthermore, the Index Administrator retains the right to suspend the publication of the level of the index if it believes that circumstances prevent the proper calculation of the index.

If index constituent prices are cancelled, the index will not be recalculated unless the Index Administrator decides otherwise.

Reasonable efforts are made to ensure the correctness and validity of data used in real-time index calculations. If incorrect price or corporate action data affects index daily closing values, they are corrected retroactively as soon as possible and all revisions are communicated out to the public and market data vendors.

There is the possibility of an exchange or market-wide event resulting in the normal closing auction not going off or official closing prices not being available. In those situations, the index will take guidance from the respective exchange(s) and address on an event-by-event basis. Exchange or market-wide events include, but are not limited to, the following:

- Volatility Halts
  - LULD (Limit Up / Limit Down)
  - Market Wide Circuit Breaker
- Technological Problems / Failures
- Natural Disaster or Other BCP-Related Event

## ***4.3 Changes to the Index***

### **Announcement policy**

Changes to the index methodology will be announced by an index announcement which will be distributed by IDI via [www.nyse.com/indices](http://www.nyse.com/indices) and NYSE Market Data at [www.nyse.com/market-data/indices](http://www.nyse.com/market-data/indices)

As a general rule, the announcement periods that are mentioned below will be applied. However, Emergency actions, including urgently required corporate action treatments, often resulting from late notices from the relevant company or exchange, may require the Index Administrator to deviate from the standard timing.

### **Inclusion of new constituents**

The inclusion of new companies in the index will typically only occur during rebalances although there could be exceptions based on a specific corporate action affecting a current constituent. The inclusion of the new company at the semi-annual rebalance/reconstitution will be announced at least six trading days before the effective date of the actual inclusion.

For example, for the rebalance effective for December 8, 2017, the announcement would occur after the close on November 30, 2017.

### **Removal of Constituents**

Components would be removed from the index as a result of periodic corporate actions as well as the results of rebalances. All removals will be announced at least one trading day before the effective date of the removal. It should be noted that in the case of mergers and acquisitions, every effort will be made to remove the company at some reasonable time ahead of the suspension in trading in the acquired company. There will be certain situations and corporate actions that would require the removal of a company that has already ceased trading. In those cases, the company will be removed from the index at its last traded price, or, at the discretion of the Index Administrator, at a derived price that most accurately represents its post-suspension value.

### **Corporate actions**

In case of an event that could affect one or more constituents, the Index Administrator will inform the market about the intended treatment of the event in the index shortly after the firm details have become available and have been confirmed. When possible, the corporate action will be announced, even if not all information is known, at least one trading day before the effective date of the action. Once the corporate action has been effectuated, the Index Administrator will confirm the changes in a separate announcement.

### **Rule changes**

Going forward, barring exceptional circumstances, the Index Administrator shall announce proposed Rules changes to stakeholders prior to them being implemented. Stakeholders shall also be notified of when the changes shall take effect.

### **Index Reviews**

IDI shall undertake regular reviews of the Index, the methodology and the market which it represents to ensure it continues to meet the index objective, in accordance with IDI's policies and procedures. Should changes to the Index be required or proposed, this will be communicated to stakeholders in accordance with IDI's policies and procedures.

### **Consultations**

IDI may from time to time consult with stakeholders on proposed material changes that affect the Index in accordance with IDI's policies and procedures at [https://www.theice.com/publicdocs/Consultation\\_Policy.pdf](https://www.theice.com/publicdocs/Consultation_Policy.pdf). Such proposals shall be published to Stakeholders and all feedback received will be considered by the Index Administrator. Any resulting changes to the Index will be announced prior to it being implemented.

### **Reconstitution/Rebalance: Publication of Results**

The new composition of the index, including the companies to be a part of the index and their corresponding new index shares, will be announced at least two trading days before the effective date and can be accessed from NYSE Market Data at [www.nyse.com/market-data/indices](http://www.nyse.com/market-data/indices).

## **5. Calculation**

### ***5.1 Calculation of the price index***

The index is calculated on a Price Return and Gross Total Return basis. The current index level would be calculated by dividing the current modified index market capitalization by the index divisor. The divisor was determined off of the initial capitalization base of the index and the base level. The divisor is updated as a result of corporate actions and composition changes.

The Gross Total Return calculation incorporates regular cash dividends paid in the underlying constituents and reinvests those distributions into the index at the open of the dividend ex-date.

A full description of the formulae used to calculate Price and Total Return index values can be found in the “NYSE Indices - Guide to Index Mathematics” at <http://www.nyse.com/indices/rules>.

### ***5.2 Currency Conversion***

The index is calculated and published in USD. The Index Administrator reserves the right to create, calculate, and publish the index in other currencies as required.

## **6. Index rebalances**

### ***6.1 General aim of rebalances and frequency***

#### **General aim of the periodical rebalance**

The general aim of the semi-annual rebalance of the index is to ensure that, using the AlphaDEX® methodology, the selection and weightings of the constituents continues to reflect as closely as possible the index's goal of objectively identifying and selecting securities from a particular market segment that have a greater potential for capital appreciation. The Index Administrator reserves the right to, at any time, change the number of securities comprising the index by adding or deleting one or more securities, or replacing one or more securities contained in the index with one or more substitute securities of its choice, if in the Index Administrator's discretion such addition, deletion or substitution is necessary or appropriate to maintain the quality and/or character of the index.

#### **Frequency**

Changes to the index constituents may occur during a scheduled rebalance and as a result of the removal of an index constituent. At each index rebalance, an index constituent's AlphaDEX® selection score is calculated. That constituent's weighting in the index is then derived based upon that score. The number of shares of that index constituent to be included in the index is updated to reflect its respective derived weighting. The exact process of how the weighting of an index constituent is determined is outlined in Section 5.3 below.

Index rebalances become effective before the open of trading on the 6<sup>th</sup> U.S. trading day of June, and December. The announcement will be made the last trading day of May and November. The reference date for all company-specific data and information utilized in the rebalancing process will be taken from the last U.S. trading day of May and December.

### ***6.2 Index universe and selection principle***

#### **Index Universe**

The BNY Mellon Europe ADR Index serves as the initial base index universe.

Securities failing the following screens are excluded:

- a. Securities with global average dollar volume over the last three months is less than \$5M(CAD)
- b. Securities with market capitalization less than \$200M (CAD)
- c. Securities with dividend yield of zero (0.00%)
- d. Securities with a closing prior price less than \$2.00 (CAD)
- e. Securities issued by companies not domiciled in Europe

Countries that qualify as "Europe" include the following:

Austria	Greece	Norway
Belgium	Ireland	Portugal
Denmark	Israel	Russia
Finland	Italy	Spain
France	Luxembourg	Sweden
Germany	The Netherlands	Switzerland
		United Kingdom

### **Selection of constituents**

At each semi-annual rebalance, the index universe, will be screened utilizing the criteria above and AlphaDEX® methodology. The following steps will be followed:

1. All of the securities are ranked on both growth and value factors. Securities are ranked separately on the sum of their ranks for both growth and value factors. A stock must have data for all growth and/or value factors to receive a rank for that style.
  - a. **(5) Growth Factors**
    - i. 3-Month Price Appreciation
    - ii. 6-Month Price Appreciation
    - iii. 12-Month Price Appreciation
    - iv. Price to Sales
    - v. 1-Year Sales Growth
  - b. **(3) Value Factors**
    - i. Price to Book Value
    - ii. Price to Cash Flow
    - iii. Return on Assets
2. In the case that two or more companies are tied on the basis of their value factors, the Price to Cash Flow ranking is attributed a lower weighting when determining the overall value ranking.
3. In the case that two or more companies are tied on the basis of their growth factors, the 3-Month Price Appreciation ranking is attributed a lower weighting when determining the overall growth ranking.
4. Securities are then ranked according to their selection score from Step 3. The **bottom 25%** of names is then eliminated to determine the 75% of the eligible universe that comprise the portfolio's basket of "selected stocks".

### **Source of Data**

The Compustat® (Classic) database is the source of all company fundamental data. In order to prevent look-ahead bias, the database contains no restated financial information.

### **Data Availability**

If a factor cannot be calculated due to a lack of data, “@NA” or a large negative number will result (e.g. -999). The company will then receive the worst rank for that factor.

### ***6.3 Periodical update of weighting***

#### **Determining constituent weightings at Semi-Annual Index Rebalances**

At Index Rebalances, the top 75% of securities are split into quintiles based upon their selection score from the AlphaDEX® methodology. The top-ranked quintile receives a 5/15 (33.33%) weighting, with successive quintiles receiving weightings of 4/15 (26.67%), 3/15 (20.00%), 2/15 (13.33%) and 1/15 (6.67%), respectively. Securities are equally weighted within each quintile.

## **7. Corporate Actions**

### ***7.1 General***

The index may be adjusted in order to maintain the continuity of the index level and the composition. The underlying aim is that the index continues to reflect as closely as possible the index's objective of identifying and selecting stocks from a particular market segment that have a greater potential for capital appreciation.

Adjustments take place in reaction to events that occur with constituents in order to mitigate or eliminate the effect of that event on the index performance.

A full description of standard corporate action events and their handling can be found in the "NYSE Indices - Corporate Action Handling Guide" at [www.nyse.com/indices/rules](http://www.nyse.com/indices/rules).

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