

Bloomberg R&D Leaders Index Methodology

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Introduction

The Bloomberg R&D Leaders Index is constructed to track the performance of companies that seek to return implicit value to shareholders by reinvesting in their own growth. It aims to include companies that have consistently increased their Research & Development expenditures for at least 3 consecutive years.

Section 1: Index Overview

Name	Bloomberg R&D Leaders Index
Ticker	BRND (Price Return) BRNDT (Total Return) BRNDN (Net Return)
Currency	USD
Inception Date	2022-02-28
Base Date	2007-04-23
Publication	Weekdays

Section 2: Index Eligibility Process

Parent Universe

In order to be eligible for the Bloomberg R&D Leaders Index, a security must be a part of the Bloomberg US 1000 Index (B1000).

Section 3: Index Construction Process

Index Selection Process

Investability Screening

In order for a security to be included in the Index, it must satisfy the following conditions:

- 1) It must have data available as of the Selection Date defined below for:
 - a. R&D Expenditures as of t , $t-1$, $t-2$, and $t-3$;
 - b. Revenue as of t ;
 - c. Free Float Market Capitalization as of t ; and
 - d. 90-Day Average Daily Value Traded as of t ;

Where:

t Selection Date

- 2) It must be in the top 90th percentile of the Parent Universe as defined above by Free Float Market Capitalization as of the Selection Date
- 3) It must be in the top 90th percentile of the Parent Universe as defined above by 90-Day Average Daily Value Traded as of

the Selection Date

R&D Screening

Of the securities remaining in the Parent Universe after applying the Investability Screening, a security must satisfy the following condition:

- 1) It must have three consecutive years of positive R&D Expenditures growth, as defined below

$$\left(\frac{R\&D_t}{R\&D_{t-1}} - 1\right) > 0, \left(\frac{R\&D_{t-1}}{R\&D_{t-2}} - 1\right) > 0, \left(\frac{R\&D_{t-2}}{R\&D_{t-3}} - 1\right) > 0$$

Where:

R&D Research & Development expenditures at t

t Selection Date

R&D to Sales Screening

Of the securities remaining in the Parent Universe after applying the R&D Screening, a security must satisfy the following condition:

- 1) It must be in the top 90th percentile by R&D to Sales ratio, as defined below

$$\left(\frac{R\&D_t}{Revenue_t}\right)$$

Where:

R&D Research & Development expenditures at t

Revenue Revenue at t

t Selection Date

Securities that remain in the Parent Universe after the R&D to Sales Screening is applied are included in the Index.

Index Selection Process Exception Rules

If there are less than 20 issuers in the Index after all of the rules in the Index Selection Process have been applied, then the 90-Day Average Daily Value Traded threshold in the Investability Screening process above is relaxed until there are 20 issuers included in the Index. If there are still less than 20 issuers included in the Index, then the 90-Day Average Daily Value Traded threshold and Free Float Market Capitalization threshold in the Investability Screening process above are relaxed until the Index has 20 issuers.

Index Weighting

The Index is modified market capitalization weighted. A security's initial weight is determined by its Free Float Market Capitalization such that:

$$W_i = \frac{FMC_i}{\sum_1^M FMC_i}$$

Where:

W_i	Initial weight of security i
M	Number of Index Members
FMC	Free Float Market Capitalization of security i

Weight Capping

- 8% to top 5 issuers by Free Float Market Capitalization
- 4% to all other issuer
- 40% at Sector level¹

Any excess weight from capping is redistributed proportionally to all the remaining uncapped issuers until there are no issuers with weight greater than 8%, at most 5 issuers with weight greater than 4%, and no sector has a weight greater than 40%. For issuers with multiple securities, the issuer weight is redistributed proportionally based on the free float market capitalization of each security for a given issuer.

Index Weighting Exception Rules

If there are less than 20 issuers included in the Index, then all the issuers are equally-weighted. For issuers with multiple securities, the issuer weight is redistributed proportionally based on the free float market capitalization of each security for a given issuer.

Index Rebalance and Reconstitution

The Index is reconstituted semi-annually in April and October. The Index Members' weights are rebalanced quarterly in January, April, July, and October.

Selection Date

The Index Eligibility Process and Index Selection Process are applied using data as of the end of March and September.

Index Share Determination Date

Capping and weighting are determined using market data as of the end of March, June, September, and December.

Index Announcement Date

¹ according to the Bloomberg Industry Classification System (BICS) level 1 sectors

An Index Announcement Date shall be the 2nd Friday in January, April, July, and October.

Index Effective Date

The Index Reconstitutions go effective at the close of trading on the 3rd Friday in April and October. The Index Rebalances go effective at the close of trading on the 3rd Friday in January, April, July, and October.

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Selection Date	End of Month			X						X			
Share Determination	End of Month			X			X			X			X
Announcement Date	2 nd Friday	X			X			X			X		
Effective Date	3 rd Friday	X			X			X			X		

Section 4: Index Maintenance

Index Calculation

Refer to the [Bloomberg Global Equity Indices Methodology](#) for index calculation details.

Deletion Policy

Index securities are not deleted outside of the semi-annual Index Reconstitution except in the case of a delisting.

Addition Policy

Index securities are not added outside of the Index reconstitution.

- IPOs that qualify to be fast tracked to the underlying parent universe are not added to the Index.
- For a spin-off, a child distributed from an Index Member is added to the Index on the ex-date and will remain in the Index if it qualifies to remain in the underlying parent universe. The security will then be assessed as part of the forthcoming Index Reconstitution.

Replacement Policy

Index securities are not replaced outside of the Index reconstitution.

Corporate Actions

Refer to [Bloomberg Global Equity Indices Non-Market Cap Corporate Action Methodology](#) for the treatment of corporate actions.

Stakeholder Engagement

Bloomberg Index Services Limited (“BISL”) is in regular and ongoing engagement with its users through various channels, including via help desks, sales personnel, and direct communication with product personnel. To help ensure that the Index remains an accurate representation of global equities defined in the methodology, BISL endeavors to meaningfully incorporate these engagements into improvements in processes and service. Prior to any material change that might meaningfully impact users, BISL consults more broadly with stakeholders, where appropriate, before a recommendation is presented to the Product, Risk & Operations Committee (“PROC”) for approval. This concept of shared ownership enables BISL to produce the most relevant Index and helps ensure responsiveness to user needs.

Risks

The following is a summary of certain risks associated with the Index but is not meant to be an exhaustive list of all risks associated with the Index. Although the Index is designed to be representative of the markets it is measuring, it may not be representative of every use case. There is also inherent, though transparent, judgment in its construction, as outlined in this methodology. The Index is designed for general applicability and not to address the individual circumstances and needs of users. BISL does not advise about the usefulness of the Index to a particular circumstance; users are therefore encouraged to seek their own counsel for such matters. This methodology is subject to change, which may impact its usefulness to users. Although efforts will be made to alert users of any change, every individual user may not be aware of them. Such changes may also significantly impact the usefulness of the Index. BISL may also decide to cease publication of this Index. BISL maintains internal policies regarding user transitions, but no guarantee is given that an adequate alternative is available generally or for a particular use case. Markets for stocks, as with all markets, can be volatile. As the Index is designed to measure this market, it could be materially impacted by market movements, thus significantly affecting the use or usefulness of the Index for some or all users. Also, certain equity markets are less liquid than others – even the most liquid markets may suffer periods of illiquidity. Illiquidity can have an impact on the quality or amount of data available to BISL for calculation and may cause the Index to produce unpredictable results.

Limitations of the Index

Though the Index is designed to be representative of the markets it measures or otherwise aligns with its stated objective, it may not be representative in every case or achieve its stated objective in all instances. It is designed and calculated strictly to follow the rules of this methodology, and any Index level or other output is limited in its usefulness to such design and calculation.

Markets can be volatile, including those market interests that the Index measures or upon which the Index is dependent to achieve its stated objective. For example, illiquidity can have an impact on the quality or amount of data available to the administrator for calculation and may cause the Index to produce unpredictable or unanticipated results.

In addition, market trends and changes to market structure may render the objective of the Index unachievable or to become impractical to replicate by investors.

In particular, the Index measures global equity markets. As with all equity investing, the Index is exposed to market risk. The value of equities fluctuates with the changes in economic forecasts, interest rate policies established by central banks and perceived geopolitical risk. The Index does not consider the cost of replication and as a result a tracking portfolio's returns will underperform the Index with all else equal. As the Index is designed to measure those markets, it could be materially impacted by market movements, thus significantly impacting the use or usefulness of the fixings for some or all users.

In addition, certain Sub-Indices may be designed to measure smaller subsets of the Index such as specific styles, size, and sector. Some of these Sub-Indices have very few qualifying constituents and may have none for a period of time. During such period, the Sub-Index will continue to be published at its last value, effectively reporting a 0% return, until new constituents qualify. If no constituents are expected to qualify (due to changes in market structure and other factors), the Sub-Index may be discontinued. In such an event, this discontinuation will be announced to index users.

Section 5: Benchmark Oversight and Governance

Benchmark Governance, Audit and Review Structure

BISL uses two primary committees to provide overall governance and effective oversight of its benchmark administration activities:

- The Product, Risk & Operations Committee ("PROC") provides direct governance and is responsible for the first line of controls over the creation, design, production and dissemination of benchmark Indices, strategy Indices and fixings administered by BISL, including the Index. The PROC is composed of Bloomberg personnel with significant experience or relevant expertise in relation to financial benchmarks. Meetings are attended by Bloomberg Legal & Compliance personnel. Nominations and removals are subject to review by the BOC, discussed below.
- The oversight function is provided by Bloomberg's Benchmark Oversight Committee ("BOC"). The BOC is independent of the PROC and is responsible for reviewing and challenging the activities carried out by the PROC. In carrying out its oversight duties, the BOC receives reports of management information both from the PROC as well as Bloomberg Legal & Compliance members engaged in second level controls.

On a quarterly basis, the PROC reports to the BOC on governance matters, including but not limited to client complaints, the launch of new benchmarks, operational incidents (including errors & restatements), major announcements and material changes concerning the benchmarks, the results of any reviews of the benchmarks (internal or external) and material stakeholder engagements.

Index and Data Reviews

The Index Administrator will periodically review the Indices (both the rules of construction and data inputs) on a periodic basis, not less frequently than annually, to determine whether they continue to reasonably measure the intended underlying market interest,

the economic reality, or otherwise align with their stated objective. More frequent reviews may be done in response to extreme market events and/or material changes to the applicable underlying market interests.

Criteria for data inputs include reliable delivery and active underlying markets. Whether an applicable market is active depends on whether there are sufficient numbers of transactions (or other indications of price, such as indicative quotes) in the applicable constituents (or similar underlying constituent elements) that a price (or other value, as applicable) may be supplied for such constituent(s).

Other than as set forth in this methodology, there are no minimum liquidity requirement for Index constituents and/or minimum requirements or standards for the quantity or quality of the input data. The review will be conducted by product managers of the Index in connection with the periodic rebalancing of the Index or as otherwise appropriate.

Any resulting change to the methodology deemed to be material (discussed below) will be subject to the review of the PROC under the oversight of the BOC, each of which committees shall be provided all relevant information and materials it requests relating to the change. Details regarding the PROC and BOC are described above. Material changes will be reflected and tracked in updated versions of this methodology.

Material changes related to the Index will be made available in advance to affected stakeholders whose input will be solicited. The stakeholder engagement will set forth the rationale for any proposed changes as well as the timeframe and process for responses. The Index Administrator will endeavor to provide at least two weeks for review prior to any material change going into effect. In the event of exigent market circumstances, this period may be shorter. Subject to requests for confidentiality, stakeholder feedback and the Index Administrator's responses will be made accessible upon request.

In determining whether a change to an Index is material, the following factors shall be taken into account:

- The economic and financial impact of the change;
- Whether the change affects the original purpose of the Index; and/or
- Whether the change is consistent with the overall objective of the Index and the underlying market interest it seeks to measure.

Internal and External Reviews

BISL's Index administration is also subject to Bloomberg's Compliance function, which periodically reviews various aspects of its businesses to determine whether it is adhering to applicable policies and procedures, and assess whether applicable controls are functioning properly. In addition, Bloomberg may from time to time appoint an independent external auditor with appropriate experience and capability to review adherence to benchmark regulation. The frequency of such external reviews will depend on the size and complexity of the operations and the breadth and depth of Index use by stakeholders.

Expert Judgement

The Index is rules-based, and its construction is designed to consistently produce values without the exercise of expert judgment or discretion. Nevertheless, BISL may use expert judgment or discretion with regards to the following:

- Index restatements
- Extraordinary circumstances during a market emergency
- Data interruptions, issues, and closures
- Significant acquisitions involving a non-Index company

When expert judgment or discretion is required, BISL undertakes to be consistent in its application, with recourse to written procedures outlined in the methodology of the Index and internal procedures manuals. In certain circumstances exercises of expert judgment or discretion are reviewed by senior members of BISL management and Bloomberg Compliance teams, and are reported to the PROC, BISL's governance committee, which operates under the supervision of BISL's oversight function, the BOC. BISL also maintains and enforces a code of ethics to prevent conflicts of interest from inappropriately influencing index construction, production, and distribution, including the use of expert judgment or discretion.

Data Providers and Data Extrapolation

The Index is rules-based, and its construction is designed to consistently produce Index levels without the exercise of discretion. The Index is produced without the interpolation or extrapolation of input data.

In addition, the Index Administrator seeks to avoid contributions of input data that may be subject to the discretion of the source of such data and instead seeks to use input data that is readily available and/or distributed for a number of non-index or benchmark creation purposes. Accordingly, the index requires no 'contributors' to produce and no codes of conduct with any such sources are required.

Conflicts of Interest

The Index confers on BISL discretion in making certain determinations, calculations and corrections from time to time. In making those determinations, calculations and corrections, the Index Administrator has no obligation to take the needs of any Product Investor or any other party into consideration. BISL is committed to avoiding and, where necessary, managing actual or potential conflicts of interest in the BISL decision-making process and has established a Conflicts of Interest Policy to minimize or resolve actual or potential conflicts of interest. BISL does not create, trade or market Products.

Restatement Policy

BISL strives to provide accurate calculation of its indices. However, to the extent a material error in index levels is uncovered following publication and dissemination, a public notification will be made alerting of such error and the expected date of a revised publication, if warranted.

An error to an equity Index in excess of 3 basis point over one day will automatically be reviewed for restatement. If the Index in error is a Primary Index (listed below) and has occurred in the last 2 business days, a restatement will be made for all impacted indices. Errors occurring beyond the last 2 business days will be evaluated on a case-by-case basis.

Real-time indices are not considered for restatement, all real-time dissemination is considered indicative.

The following factors will be reviewed to determine whether to restate. Not all conditions need to be present to warrant a restatement, and certain factors may be more determinative than others depending on the circumstances of the given error.

- The relative importance of the data field impacted by the error;
- When the error occurred and when it was discovered;
- The number of indices and sub-indices affected;
- Whether the impacted indices are linked to tradable products;
- The magnitude of the error;
- The burden of restatement on client re-processing relative to the impact of the error;
- The impact of the restatement on analytical tools.

Appendix: ESG Disclosure

EXPLANATION OF HOW ESG FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY	
Item 1. Name of the benchmark administrator.	Bloomberg Index Services Limited ("BISL")
Item 2. Type of benchmark or family of benchmarks.	Equities
Item 3. Name of the benchmark or family of benchmarks.	Bloomberg R&D Leaders
Item 4. Does the benchmark methodology for the benchmark or family of benchmarks take into account ESG factors?	No
<p>Item 5. Where the response to Item 4 is positive, please list below, for each family of benchmarks, those ESG factors that are taken into account in the benchmark methodology, taking into account the ESG factors listed in Annex II to Delegated Regulation (EU) 2020/1816.</p> <p>Please explain how those ESG factors are used for the selection, weighting or exclusion of underlying assets. The ESG factors shall be disclosed at an aggregated weighted average value at the level of the family of benchmarks.</p>	
(a) List of environmental factors considered:	Not applicable
(b) List of social factors considered:	Not applicable
(c) List of governance factors considered:	Not applicable
<p>Item 6. Where the response to Item 4 is positive, please list below, for each benchmark, those ESG factors that are taken into account in the benchmark methodology, taking into account the ESG factors listed in Annex II to Delegated Regulation (EU) 2020/1816, depending on the relevant underlying asset concerned.</p> <p>Please explain how those ESG factors are used for the selection, weighting or exclusion of underlying assets. The ESG factors shall not be disclosed for each constituent of the benchmark, but shall be disclosed at an aggregated weighted average value of the benchmark.</p> <p>Alternatively, all of this information may be provided in the form of a hyperlink to a website of the benchmark administrator included in this explanation. The information on the website shall be easily available and accessible. Benchmark administrators shall ensure that information published on their website remains available for five years.</p>	
(a) List of environmental factors considered:	Not applicable
(b) List of social factors considered:	Not applicable
(c) List of governance factors considered:	Not applicable
Hyperlink to the information on ESG factors for each benchmark:	Not applicable
Item 7. Data and standards used	
(a) Data input. (i) Describe whether the data are reported, modelled or sourced internally or externally. (ii) Where the data are reported, modelled or sourced externally, please name the third party data provider.	Not applicable
(b) Verification and quality of data. Describe how data are verified and how the quality of those data is ensured.	Not applicable
(c) Reference standards Describe the international standards used in the benchmark methodology.	Not applicable
Date on which information has been last updated and reason for the update:	October 2022, Update

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