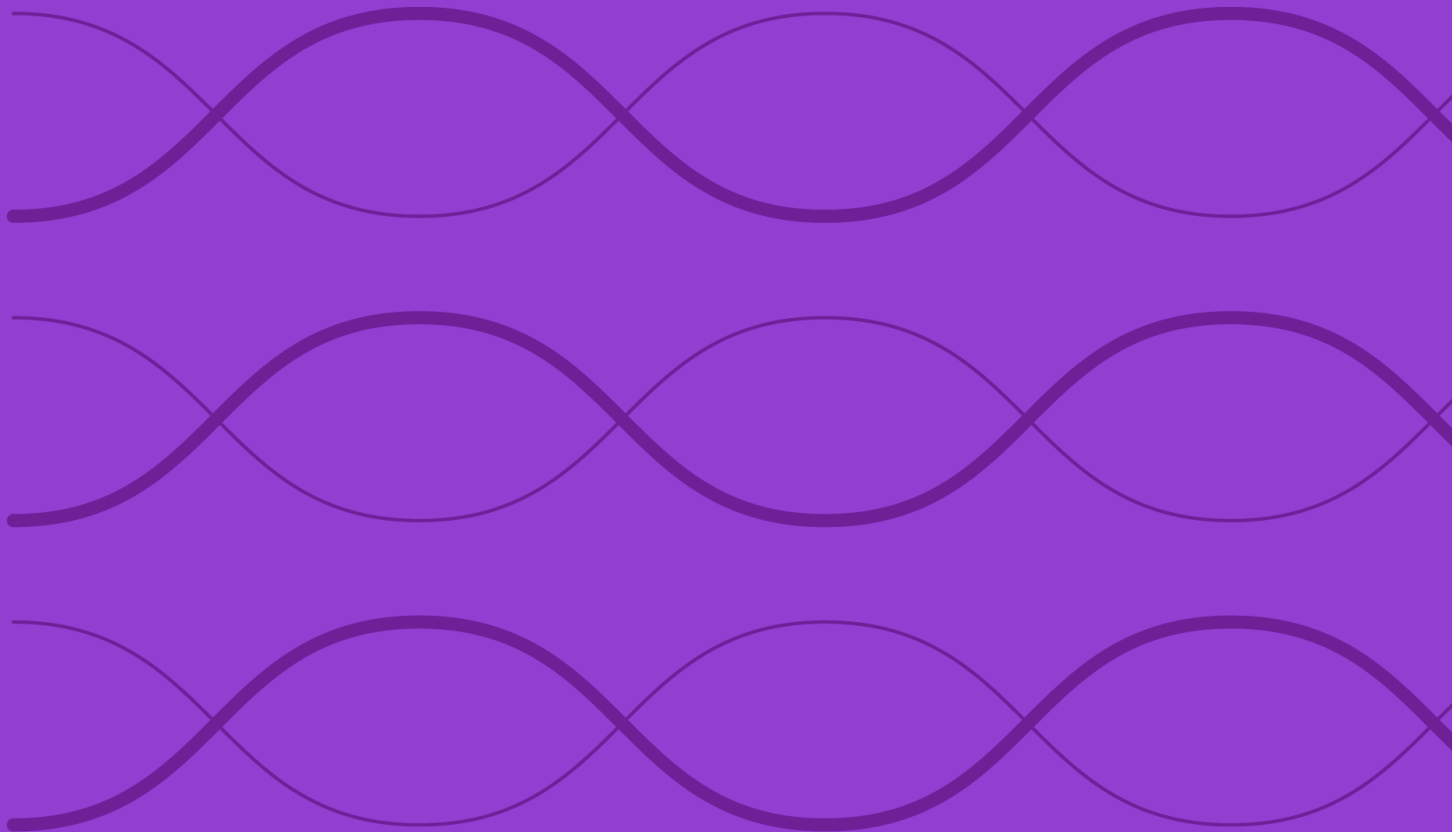


Construction Rules for the Morningstar PitchBook Global Unicorn Indexes



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Overview

The Morningstar PitchBook Global Unicorn Indexes benchmark the performance of privately held, late-stage venture capital-backed companies with post-money valuations of at least \$1 billion. Index constituents are derived from PitchBook's global database of venture capital-backed companies, and the index methodology employs a proprietary three-factor pricing model to estimate daily valuations. The indexes deliver timely insights and unprecedented transparency into the performance and behavior of global unicorns.

The indexes do not incorporate environmental, social, or governance criteria.

For more information on PitchBook data, refer to Appendix 1.

Index Inception and Performance Start Dates

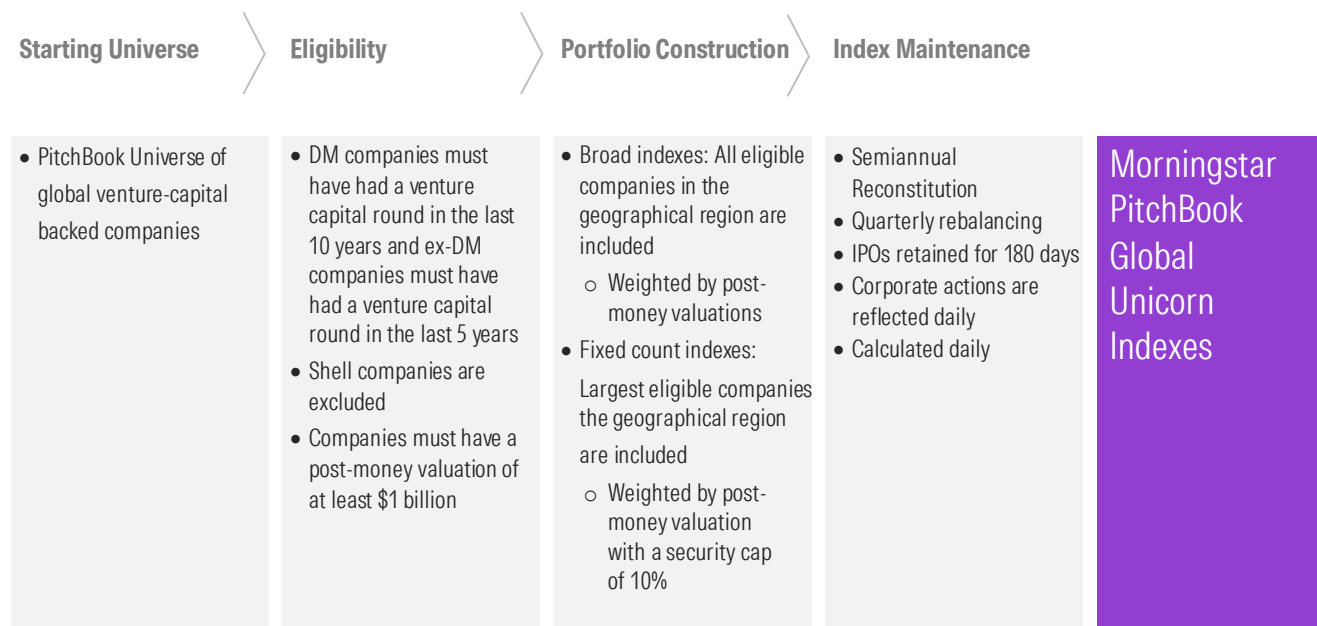
The performance inception date (when the first back-tested index value was calculated) for the Morningstar PitchBook Global Unicorn Index is December 19, 2014.

The performance inception date for the Morningstar PitchBook US Unicorn Index is June 20, 2014. The US index is older than the global index because the first unicorns were largely based in the United States.

Inception dates for all the indexes in the family are listed in Appendix 4.

Index Construction

Methodology Summary



Starting Universe

At each reconstitution, constituents of the Morningstar PitchBook Global Unicorn Indexes are derived from the global universe of privately held VC-backed companies covered by PitchBook.

Eligibility

To be eligible for index inclusion, all constituents must meet the following criteria:

- Developed Markets companies must have had a venture capital round in the last 10 years and ex-Developed Markets companies must have had a venture capital round in the last 5 years.
- Shell companies are excluded from the indexes.
- The company must have reached a post-money valuation of at least \$1 billion in a VC round or a private equity growth/expansion round that follows a VC round.
- The company must have a valuation of at least \$1 billion. If an existing constituent's post-money valuation falls below \$1 billion, it is removed from the index at the next reconstitution.

Portfolio Construction

Number of Constituents

For the suite of broad indexes, all eligible constituents are selected. For fixed-count indexes, the largest companies are selected from the eligible universe. (See Appendix 3 for the fixed counts for each index.) The number of constituents selected is subject to change if the size of the starting universe changes significantly.

To mitigate turnover, a buffer of 10% is applied to the ranked eligible companies, controlling additions and removals. For example, for an index with 100 companies, a current constituent is retained in the index as long as it ranks within the top 110 companies, and a new company added if it ranks within the top 100. Where more than 100 companies are selected, the smallest new constituents are removed until only 100 companies remain.

Index Weighting

The index is weighted by the last available post-money valuations of the constituents. For more details, refer to the Morningstar Indexes Calculation Methodology rulebook. Constituent weights, including securities that are listed and being held for 180 days, are subject to a cap of 10%.

Index Maintenance and Calculation

Reconstitution and Rebalancing

Semiannual Reconstitution

The index is reconstituted, where the membership is reset, semiannually in June and December, on the Monday following the third Friday. If Monday is a holiday, the reconstituted index is effective on the immediately following business day. Universe selection based on PitchBook data is as of the last trading day of April and October. The PitchBook market data used for reconstitution is as of the last trading day of May and November. Companies may be deemed unfit for inclusion based on deal structures or investor types. These companies will be identified by PitchBook analysts and will be removed from the universe.

A preliminary rebalancing report, or pro forma, indicating expected changes to the composition of the index will be available for review seven business days prior to the reconstitution effective date, excluding the Friday preceding the effective date. The reference date used to capture pricing for weight calculations is two business days prior to the proforma start date.

Quarterly Rebalance

The index is rebalanced quarterly on the third Friday of March, June, September, and December. Adjustments are implemented after Friday's market close and reflected the following Monday. If Monday is an index holiday, the rebalance is reflected the next business day. The market data used for rebalancing is as of the last trading day of February, May, August, and November.

Corporate Actions

The treatment of corporate actions is as per the Morningstar Corporate Actions Methodology for Private Companies. Details can be found in the [Morningstar Corporate Actions Methodology for Private Companies](#).

Index Calculation and Valuation Data

Details about index calculations can be found in the [Morningstar Indexes Calculation Methodology](#) rulebook. For details on valuations used for index calculation, please refer to Appendix 2.

Methodology Review and Index Cessation Policy

The index methodology is continually reviewed to ensure it achieves all stated objectives. These reviews consider corporate action treatment, eligibility requirements, and maintenance procedures. Subscribers to the index will be notified before any methodology changes are made. For more details, refer to the [Morningstar Index Methodology Change Policy](#).

Morningstar Indexes notifies all subscribers and stakeholders of the index that circumstances might arise that require a material change to, or a possible cessation of, the index. These circumstances are generally not within Morningstar's control and may include significant changes to the underlying market structure, inadequate access to necessary data, geo-political events, and regulatory changes. In addition, factors such as low usage or methodology convergence may result in the cessation of an index.

Because the cessation of the index or benchmark index could disrupt subscriber products that reference this index, all subscribers are encouraged to have robust fallback procedures if an index is terminated. For more details, refer to the [Morningstar Index Cessation Process](#).

Data Correction and Precision

Intraday Index Data Corrections

Commercially reasonable efforts are made to ensure the accuracy of data used in real-time index calculations. If incorrect price or corporate action data affects index daily highs or lows, it is corrected retroactively as soon as is feasible.

Index-Related Data and Divisor Corrections

Incorrect pricing and corporate action data for individual issues in the database will generally be corrected upon detection. In addition, an incorrect divisor of an index, if discovered within two days of its occurrence, will be fixed retroactively on the day it is discovered to prevent an error from being carried forward. Commercially reasonable efforts are made to correct an older error subject to its significance and feasibility.

For more details, refer to the [Recalculation Guidelines](#).

Computational and Reporting Precision

For reporting purposes, index values are rounded to two decimal places and divisors are rounded to appropriate decimal places.

Exceptions

While Morningstar will seek to apply the method described above, the market environment, supervisory, legal, financial, or tax reasons may require an alternative approach to be adopted. A decision to take an alternative approach will be made by the relevant Morningstar Indexes Methodology Committee, and in all instances, the application of a nonstandard process will be reported to the Morningstar Indexes Oversight Committee.

Appendixes

Appendix 1: PitchBook Data

- Headquartered in Seattle, PitchBook, a Morningstar company, is the largest provider of data on private markets. PitchBook employs over 1600 employees and covers 3.4 million private companies.
- PitchBook provides data, research and analysis on private and public companies. The company specializes in researching global M&A, private equity and venture capital investments along with all participating parties, including limited partners, investors, service providers and the professionals involved.
- PitchBook provides the investment community with a proprietary data platform, research tools and custom analysis to enable better investment decisions.

Appendix 2: Valuations Used for Index Calculation

The valuations used in the index calculation are obtained from Morningstar’s proprietary mark-to-model pricing methodology. Details can be found in the [Construction Rules for the Morningstar Mark-to-Model Pricing Methodology for Venture Capital-Backed Companies](#). Post-money valuations for secondary transactions are not considered.

Appendix 3: Fixed-Count Indexes

Region	Count
Global	500
US	100
Europe	50
Asia	100
UK	20
China	50
India	25

Appendix 4: Inception Dates

Index	Performance Inception Date	Inception Date
Morningstar PitchBook Global Unicorn Index	19-Dec-2014	18-Oct-2022
Morningstar PitchBook Global Unicorn 500 Index	19-Dec-2014	18-Oct-2022
Morningstar PitchBook Global ex-China Unicorn Index	19-Dec-2014	05-Mar-2024
Morningstar PitchBook US Unicorn Index	20-Jun-2014	18-Oct-2022
Morningstar PitchBook US Unicorn 100 Index	20-Jun-2014	18-Oct-2022
Morningstar PitchBook Asia Unicorn Index	18-Dec-2015	18-Oct-2022
Morningstar PitchBook Asia Unicorn 100 Index	18-Dec-2015	18-Oct-2022
Morningstar PitchBook Europe Unicorn Index	18-Dec-2015	18-Oct-2022
Morningstar PitchBook Europe Unicorn 50 Index	18-Dec-2015	18-Oct-2022
Morningstar PitchBook China Unicorn 50 Index	17-Jun-2016	18-Oct-2022
Morningstar PitchBook India Unicorn 25 Index	21-Jun-2019	18-Oct-2022
Morningstar PitchBook UK Unicorn 20 Index	21-Jun-2019	18-Oct-2022

About Morningstar Indexes

Morningstar Indexes was built to keep up with the evolving needs of investors—and to be a leading-edge advocate for them. Our rich heritage as a transparent, investor-focused leader in data and research uniquely equips us to support individuals, institutions, wealth managers, and advisors in navigating investment opportunities across major asset classes, styles, and strategies. From traditional benchmarks and unique IP-driven indexes to index design, calculation, and distribution services, our solutions span an investment landscape as diverse as investors themselves.

About Pitchbook

PitchBook is a research firm and financial data provider that empowers global capital market professionals to win what's next. We collect and analyze information on the entire investment and business lifecycle. Our data, research and insights are available through our in-depth reports, industry news, and robust platform. Founded in 2007, PitchBook is an independent subsidiary of Morningstar.

Morningstar Indexes Methodology Committee

The Morningstar Indexes Methodology Committee oversees all new index development, index methodology changes, and cessation of indexes for any indexes where Morningstar owns the intellectual property. This committee is also charged with ensuring that indexes align with Morningstar Research principles and values. The group comprises members of the index team with index research, product development, product management, client service, index implementation, and operation expertise who provide the first layer of governance over index design and methodology.

Morningstar Indexes Operations Committee

The Morningstar Indexes Operations Committee governs the processes, systems, and exception handling of the day-to-day management of all live indexes, including index rebalancing and reconstitution, restatements, market classification, and contingency management. The committee oversees the annual review of index methodology (as required by U.K. and EU benchmark regulations, or BMR), ensuring that methodologies remain fit for purpose and continue to achieve their stated investment objectives. The group comprises members of the index team with data, operations, corporate actions, product development, index launch, client service, and index management experience who provide the first layer of governance over index operations.

Morningstar Indexes Oversight Committee

The Morningstar Indexes Oversight Committee is responsible for the index oversight function as per the requirements of the U.K. and European BMR, providing independent oversight of all aspects of the governance of benchmark administration as required by the relevant BMR. Its remit extends to all calculation and administration-related business activities of Morningstar Indexes, including administration of Morningstar-owned benchmarks as well as client-owned benchmarks and index calculation. The oversight function is part of the organizational structure of Morningstar but is separate and independent from the index business, index management, and the other index committees.

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