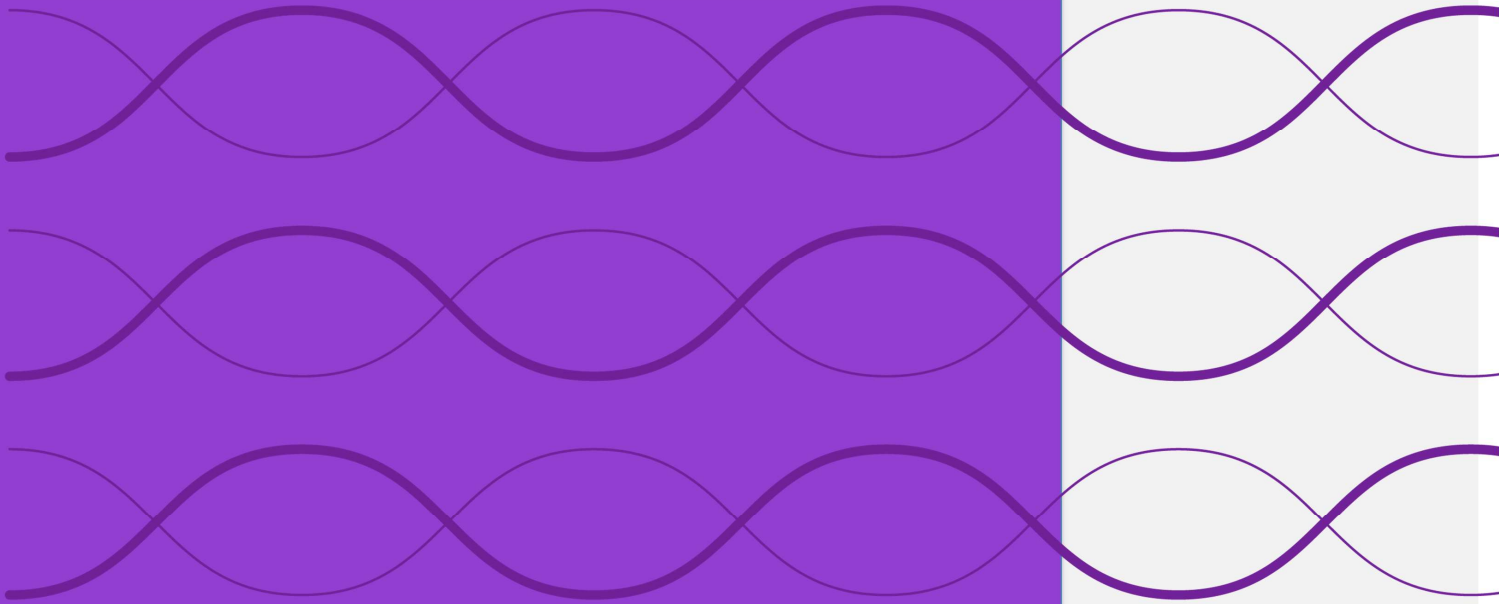


Construction Rules for the Morningstar Multi-Asset High Income UCITS Index



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Overview

The Morningstar Multi-Asset High Income UCITS Index is a broadly diversified index that seeks to deliver a high level of current income while maintaining long-term capital appreciation. The index consists of a comprehensive set of exchange-traded funds (ETFs) that collectively target equity, fixed income, and alternative asset classes. The asset allocation provides an optimal portfolio of equity, fixed income, and cash and is driven Morningstar Investment Management's asset-allocation methodology.

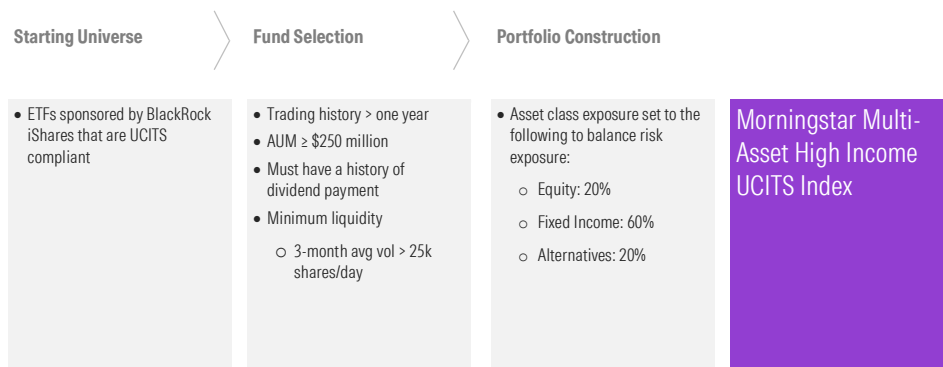
The index does not incorporate environmental, social, or governance criteria.

Index Inception and Performance Start Date

The index inception date is January 18, 2019, and the performance start date, when the first back-tested index value was calculated, is November 29, 2016.

Index Construction

Methodology Summary



Assigning ETFs to the Index

Starting Universe

At each reconstitution, securities for the Morningstar Multi-Asset High Income UCITS Index are derived from UCITS compliant ETFs with fund sponsor, iShares, a subsidiary of BlackRock Inc. The ETFs classified in the following asset and sub asset classes and listed are considered eligible for inclusion in the index:

- Equity
 - US style and size
 - International style and size
 - Emerging markets
 - Dividend focused

- Global infrastructure
- Fixed Income
 - Broad market
 - Credit
 - Government (US and non-US)
 - Mortgages
 - International
- Alternative
 - Preferred
 - REITs

Fund Selection

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

- ETFs must have at least one year of trading history
- ETFs must have at least \$250 million in assets under management
- ETFs must have a history of dividend payment
- ETFs must have a 3-month average trading volume greater than 25,000 shares per day

To avoid redundancy in categories where there are multiple ETF choices available, a machine learning strategy is adopted to select the best funds in each cluster, defined as follows:

Broad Category Group	Clustering Criteria	Best Fund Selection Criteria
Equity	Regional Exposure (Net)	1. Morningstar Medalist Rating
	Equity Style Exposure (Net)	2. Highest 12-mo yield
Fixed Income	Regional Exposure (Net)	1. Morningstar Medalist Rating
	Credit Quality Distribution	2. Yield-to-Maturity (as of processing date)
	Average Effective Duration	

The best fund selection criteria are applied sequentially, that is, the second criterion is applied only as a tie-breaker in case there are multiple funds with the same highest Morningstar Medalist Rating. More details about this process are available in [Appendix 2](#).

The following ETF categories are not eligible:

- Country specific
- Sector specific
- Industry specific
- Commodity
- Managed futures

- Municipal bonds
- Inflation-linked strategies
- Allocation funds (ETF fund of funds or target date/ risk)
- Bank loans
- Convertible bonds
- Master limited partnerships

Number of Funds

The number of ETFs in the index is subject to the selection and eligibility criteria at the time of reconstitution.

Index Weighting

To maintain broad exposure and diversification, the index will maintain a weight allocation at each rebalance of:

- Equity: 20%
- Fixed Income: 60%
- Alternatives: 20%

Portfolio Weight Calculation

Securities that meet the investable universe standards are selected and assigned a weight according to a variant of the mean-variance optimization equation developed by Morningstar Investment Management. The equation creates an optimal portfolio based on the return, standard deviation, correlation, and yield of the eligible securities. The weight of each constituent of the portfolio is given by maximizing:

$$\max f(w) = \lambda w'y - \sqrt{w'Vw}$$

Where:

w	=	index weight
y	=	12-month yield for equities and current yield-to-maturity for fixed income (less management fees)
V	=	variance-covariance matrix of last 36 months of total market returns
λ	=	Optimizer scale factor set to 3.5

As noted above, covariance used in the optimizer are calculated using the past 36 months of total returns. When the number of return periods is less than the number of assets (as is the case for this index) there may be occasions where a covariance matrix may not work well in an optimization. For this reason, we shrink the covariance matrix partially towards zero using a blend of 75% of the full correlation and 25% zero.

Maximum allocations to each constituent are capped according to the following AUM-based schedule:

- \$250 million ≤ AUM < \$500 million = 5% maximum allocation
- \$500 million ≤ AUM = 10% maximum allocation
- AUM ≥ \$1 billion = 15% maximum allocation
- Aggregate high yield bond exposure is capped at 20%

Index Maintenance and Calculation

Scheduled Maintenance

Quarterly Reconstitution and Rebalance

The index is reconstituted and rebalanced quarterly and is implemented after the close of business on the last business day of February, May, August and November and is effective the following business day. The market data used for reconstitution and rebalance is as of previous month end.

Index files are published according to the US calendar schedule. For more information, please refer to the [Morningstar Indexes Holiday Calendar](#).

Index Calculation and Price Data

Index Calculation

The value (price) and total return of the index is calculated using a Laspeyres' formula. The only difference between the price return and total return index is the divisor D_t is different for the total return and price return indexes:

$$Index(t) = \left(\frac{M(t)}{B(t)} \right) * BaseIndexValue$$

$$M(t) = \sum_{i=1}^n (p_{i(t)} * q_{i(t)})$$

$$B(t) = C(t) \sum_{i=1}^n (p_{i(0)} * q_{i(0)})$$

The above formula can be simplified as: $Index(t) = \frac{M(t)}{D(t)}$

Where:

D(t)	=	divisor at time (t)=B(t)/Base Index Value
n	=	number of constituents in the index
pi(0)	=	closing price of constituent i at the base date
qi(0)	=	number of shares held in index of constituent i at the base
pi(t)	=	price of constituent i at time (t)
qi(t)	=	number of shares in index of constituent i at time (t)
C(t)	=	adjustment factor for the base date market capitalization
t	=	time the index is calculated
M(t)	=	market capitalization of the index at time (t)
B(t)	=	adjusted base date market capitalization of the index at time (t)

Distributions are reinvested proportionally in the index sample of the total return index variant. Any dividend larger than 10% of the equity price is considered a special cash dividend, which requires a divisor adjustment to the price-return variant.

Divisor Adjustments

To avoid distortions caused by corporate actions that affect the share capital of index constituents, the divisor of the index is adjusted accordingly.

Note: No divisor adjustments are necessary for constituent splits, since market capitalization does not change and the share number price are adjusted prior to the opening of trading on the split's ex-date.

The following formula will be used for divisor adjustments due to corporate action:

$$D(t+1) = D(t) * \frac{(\sum_i^n P_i(t) * Q_i(t)) + \Delta MV(t+1)}{(\sum_i^n P_i(t) * Q_i(t))}$$

Where:

D(t)	=	divisor at time (t)
D(t+1)	=	divisor at time (t+1)
P _i (t)	=	price of constituent i at time (t)
q _i (t)	=	number of shares of constituent i at time (t)
DMC(t+1)	=	add new components' market capitalization and adjusted market capitalization

Calculated with adjusted closing prices and shares effective at time t+1 and/or minus market capitalization of constituents to be deleted

Note: If the current trading price of a constituent is unavailable, the previous trading session's closing price is used. However, if the constituent is affected by any corporate action that requires an adjustment, then the adjusted price is used.

The following events would require a divisor adjustment due to a deletion in the index:

Delisting

If the constituent is delisted by its principal exchange the ETF is removed from the index and is not replaced in between rebalancing periods. Exceptions are made on a case-by-case basis.

Dividend Reinvestment

Dividends are reinvested proportionally into the index sample on the ex-date. The ex-date rather than the pay date is used because the marketplace price adjustment for the dividend occurs on the ex-date. A divisor adjustment for the Total Return index is performed to reflect dividend reinvestment. The total dividends paid by all stocks in the index on the ex-date are considered a market value change and the divisor is adjusted accordingly.

Price data

Price data is the end of day total return index level of index constituents calculated by third parties for index level calculation.

Methodology Review and Index Decommissioning Policy

The index methodology is continually reviewed to ensure it achieves all stated objectives. These reviews consider corporate action treatment, selection, 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

Commented [LM1]: Should this be decommissioning policy as well?

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 Decommissioning Policy](#).

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 calculations, corrections are applied prospectively.

Index-Related Data and Divisor Corrections

Incorrect pricing and corporate action data for individual issues in the database will be corrected upon detection. In addition, an incorrect divisor of an index, if discovered 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](#).

Exceptions

While Morningstar will seek to apply the methodology as described within this document, 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 Morningstar Index Methodology Committee, and in all instances, the application of a nonstandard process will be reported to the Morningstar Index Oversight Committee.

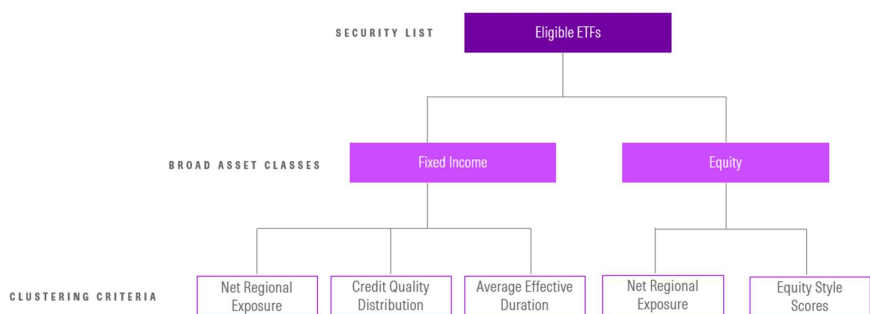
Appendixes

Appendix 1: Modifications to the Rulebook

Section	Description of Change	Update Date
Entire rulebook	Moved rulebook to new brand template and made minor formatting changes Removed Computational and Reporting Precision section Added Exceptions section	June 2025
Appendix 3	Updated the disclosures as a result of an enhancement to the Morningstar Medalist Rating	April 2026

Appendix 2: Machine Learning Strategy for Security Reduction

An agglomerative hierarchical clustering approach was adopted to merge similar funds into groups based on regional exposures and style scores. The starting set of securities is divided into two broad asset-class groups of equity and fixed income. For the equity group, net equity style scores are used. For the bonds group, average credit quality distribution of holdings and the average effective duration are used as proxies for the fixed-income style scores.



Information about regional exposures can be found [here](#). Equity style scores factsheet can be found [here](#).

Number of clusters selected is equal to the total number of unique Morningstar Category - Strategic Beta combinations in the list of eligible ETFs. Morningstar categories combine regional exposure and investment style into one categorical data point. Within each category, there can be up to two subgroups based on whether funds implement a strategic beta approach or not. The intention is to select the best fund from each of these groups, which are approximately represented as clusters. See example below:

ETF	Morningstar Category	Strategic Beta
A	UK Equity Large Blend	Yes
B	UK Equity Large Blend	No
C	Euro Fixed Income	No
D	Euro Fixed Income	No
E	High Yield Fixed Income	Yes

The number of clusters in this case would be four since there are four unique category-strategic beta combinations. More information about Morningstar Category Classifications can be found [here](#). The Morningstar Strategic Beta Guide can be found [here](#).

Once the number of clusters has been determined from the previous step, they are selected from the hierarchical clustering algorithm output and the best fund selected from each primarily based on Morningstar Medalist Ratings¹. In the event of a tie between two funds, one with the higher historical yield is preferred.

The complete process is summarized in the following graphic:



Appendix 3: Morningstar Medalist Ratings

The Morningstar Medalist Rating for funds is the summary expression of Morningstar's forward-looking analysis of investment strategies as offered via the specific vehicles. Vehicles can include but are not limited to open-end funds, closed-end funds, exchange-traded funds, and separately managed accounts domiciled throughout the world. The Medalist Rating does not express a view on a given asset class or peer group; rather, it seeks to evaluate each strategy and associated vehicle within the context of an appropriate benchmark and peer group.

Morningstar assigns Morningstar Medalist Ratings at the vehicle level to accurately capture the impact of fee differences on expected net-of-fee alpha between different types of vehicles, including different share classes of the same fund.

Morningstar's research and academic studies have repeatedly shown that a vehicle's ability to outperform erodes as fees become higher. Morningstar's analysis of each specific vehicle under coverage ensures the most precise accounting possible of fees. For open-end funds, for example, this means that share classes of the same fund that charge different amounts may receive different Morningstar Medalist Ratings.

Morningstar expresses the Morningstar Medalist Rating on a five-tier scale running from Gold to Negative. For actively managed funds, Morningstar assigns Gold, Silver, and Bronze ratings to vehicles expected to add value, or "positive alpha," over the long term when compared with a relevant Morningstar Category index after accounting for fees and risk. For passive strategies, Morningstar assigns Gold, Silver, and Bronze ratings to vehicles expected to deliver alpha that exceeds the lesser of the category median net alpha, or zero, over the long term. (Morningstar defines "long term" as periods lasting at least five years.)

The cost of an investment product is evaluated using the Medalist Rating Price Score, which is a continuous score running from negative 2.5 to positive 2.5 based on the percentile rank of a vehicle's expense ratio within its Morningstar Category. Morningstar combines the pillar scores and Medalist Rating Price Score using predetermined weights for actively and passively managed vehicles to calculate a weighted score.

¹ Effective April 25, 2023, the Morningstar Medalist Rating combined the Morningstar Analyst Rating and Morningstar Quantitative Rating into one forward looking rating for managed investments. Prior to April 25, 2023 the Morningstar Analyst Rating was used.

Then, the weighted score is set to a fixed number thresholds employed consistently across Morningstar Categories and regions, with separate thresholds for actively and passively managed investments. Rating thresholds are reviewed at least annually. Buffers and ratings caps are employed to prevent frequent ratings changes. When analysts directly cover a vehicle, they assign the fundamental pillar ratings based on their qualitative assessment, subject to the oversight of the Analyst Rating Committee, and monitor and reevaluate them approximately once a year. When the vehicles are covered either indirectly by analysts or by algorithm, the ratings are assigned monthly.

Additional details on the Medalist Rating methodology can be found [here](#).

Please also see the Conflict Disclosures [page](#) for further disclosure information.

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.

Morningstar Index Methodology Committee

The Morningstar Index 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 Index Operations Committee

The Morningstar Index 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 the European Benchmarks Regulation (“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 Index Oversight Committee

The Morningstar Index Oversight Committee is responsible for the index oversight function as per the requirements of the European Benchmarks Regulation (“BMR”), providing independent oversight of all aspects of the governance of benchmark administration as required by the 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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