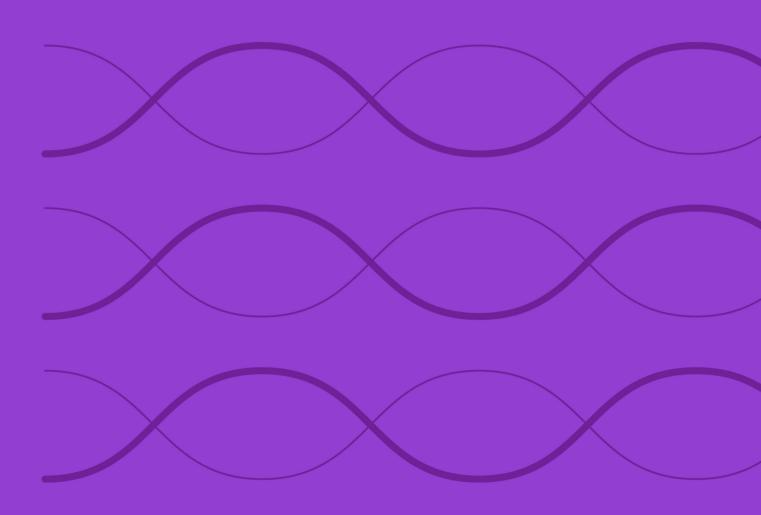


Morningstar Indexes Exchange-Rate Rules



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Overview

An exchange rate is the price of one currency expressed in terms of another currency or group of currencies. Most exchange rates are quoted against the U.S. dollar, as it is the most traded currency globally. Exchange rates are used to calculate indexes in different currencies other than the local currency and also to convert the local prices of securities to a single currency in case of multicurrency exposure indexes. Morningstar Indexes typically computes the index level in U.S. dollars, which is the base currency.

Data Source

Morningstar sources exchange-rate data from WM/Refinitiv. WM/Refinitiv Closing Spot Rates are used for end-of-day index calculations. WM/Refinitiv Intra-Day Spot Rates are used for real-time index calculations. WM/Refinitiv Closing Forward Rates are used for end-of-day hedged index calculations.

As per WMR's practice, national holidays in the following four financial centers will be monitored: the United States, United Kingdom, Germany, and Japan, for data service on a particular day. WMR closing spot and forward rates will be produced if two or more of these centers are open. WMR rates will not be produced if only one center is open. This affects the WMR exchange rates that are used in index calculations.

Index Calculations

Unless otherwise specified in the index rulebook, Morningstar uses the U.K. 4 p.m. spot rate for most of its standard index calculations. However, in scenarios where the U.K. 4 p.m. rate is not available, Morningstar will use the U.K. 12 p.m. rate for its index calculations. On a typical business day, the rate published for that day will be used for Morningstar Indexes' calculations.

On a full no-service day with no WM/Refinitiv rates produced, Morningstar will use the previous day's rate of that specific cutoff time. For example, if Jan. 1 is a no-service day where neither the U.K. 4 p.m. rate nor the U.K. 12 p.m. rate is published, we use the Dec. 31 U.K. 4 p.m. rate.

On partial-day service, if the specific rate used for index calculations is not published, Morningstar will take the previously available (indicative) rate for that day. If that indicative rate is also not available, Morningstar will use the previous day's rate that would be the best fit.

For example, assuming Dec. 24 is a day when the foreign exchange market closes early, the rate for that day is published until 1 p.m. only. In this case, the U.K. 4 p.m. rate will not be published for Dec. 24 since it is beyond the service cutoff time (1 p.m.). However, the U.K. 12 p.m. rate would be available because it is within the cutoff for that day. So, Morningstar will use the U.K. 12 p.m. rate for its index calculations since it is the latest available indicative rate for that day. However, in the absence of the U.K. 12 p.m. rate on Dec. 24, Morningstar will use the previous day's rate—that is, the U.K. 4 p.m. rate of Dec. 23.

The same procedures will be followed for any other customized rate such as Japan 10 a.m., Singapore 5:30 p.m., and so on. In case of an unforeseen event or a service being halted for a few hours, partial-day service treatment will be followed.



Exceptions

While Morningstar will seek to apply the above standard methodology, exceptional circumstances may require an alternative approach to be adopted in certain instances. A decision to take an alternative approach will be made by the Morningstar Index Operations Committee solely and where appropriate in conjunction with the relevant Morningstar Methodology Committee. Any application of a nonstandard process will be reported to the Morningstar Index Oversight Committee.



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 Services Methodology & Administration Committee

The purpose of the Morningstar Index Services Methodology & Administration Committee is to oversee all new index development, index methodology changes, and cessation of indexes for any indexes where Morningstar provides calculation and administration services but does not own the Intellectual Property of the indexes. The group is comprised of 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 the index calculation services and administration business, with regard to 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 European Benchmarks Regulation (the "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 (the "BMR"), providing independent oversight of all aspects of the governance of benchmark administration. 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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