

EQUITY CALCULATION METHODOLOGY

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1. Introduction

Mirae Asset Global Index Pvt Ltd is highly committed to comply with IOSCO principles in order to maintain highest standards and transparency in maintenance and calculation of indices. This document is guideline for processes during maintaining, calculating of equity indices. This document mentions about index calculation process, type of indices we publish, handling of various corporate actions and rebalance process. The aim is of Index Calculation Document is to define the methods followed by Mirae Assets Global Index as part of its Index Creation, Calculation and Maintenance process. The adjustments described in the document is Mirae's recommendation which have been based on an analysis of the market standards and aims to be a practical approach towards complex treatments.

2. Index Calculation

Depending on the return type in consideration, Mirae Asset Global Index offers calculation in three versions of indices:

Price Return (PR): The return measure that considers only the capital appreciation of the portfolio, while the income generated by the assets in the portfolio, in the form of certain dividends, is ignored.

Gross Return (GTR): The return measure that considers the capital appreciation of the portfolio and the income generated by the assets in the portfolio, in the form of dividends.

Net Return (NTR): The return measure that considers the tax adjusted capital appreciation of the portfolio and the income generated by the assets in the portfolio, in the form of dividends.

The calculation for market cap-weighted indices, the total market value which is the numerator is summation of price of each security in the index at the respective exchange multiplied by the numbers of shares of Index Security. Target Weights of Index Security which are determined on the Selection Day according to the methodology is used to calculate the number of shares of each Index Security. The Divisor, the denominator, is a mathematical factor that is defined at the inception of the Index. The Divisor is a term induced to adjust for certain Corporate Actions and Index Rebalances. This is show in equation below

$$Index\ Value_t = \frac{\sum_{i=1}^n NOS_t^i * P_t^i}{Divisor_t}$$

In case the currency of the security is different from the currency being used in Index Calculation then the foreign exchange rate is also taken into consideration for individual securities. This is shown in equation below

$$Index\ Value_2 = \frac{\sum_{i=1}^n NOS_t^i * P_t^i * FX_t^i}{Divisor_t}$$

Another variant is the float market-cap-weighted index, where float market capitalization is taken instead. The shares are adjusted for float and are represented by the equation below

$$Index\ Value_3 = \frac{\sum_{i=1}^n NOS_t^i * P_t^i * FX_t^i * IWF_t^i * WCF_t^i}{Divisor_t}$$

where in,

NOS_t^i : Total Shares Outstanding of i stock at time t .

P_t^i : Price per share of company i on date t .

FX_t^i : Foreign exchange rate applied on company i 's stock to translate its value to the index currency on ex-date t .

IWF_t^i : Investable Weight Factor is the unit that shows how much portion of a company's total shares is available to the investors for trading freely on the stock exchange. This is not adjusted for foreign ownership restriction.

WCF_t^i : Weighting Cap Factor is a factor defining the relative weight of an Index security to the Index Market Capitalization. The process to determine WCF is mentioned in the given equation:

$$WCF_t^i = \frac{CW_t^i}{W_t^i}$$

CW_t^i is the capped weight of stock i at time t as determined by the weight capping rule of the index in question and W_t^i is the uncapped weight of stock i at time t based on the free float-adjusted market capitalization of all index constituents.

2.1. Divisor Adjustment

Divisor is a factor that is used to calculate the value of an Index and is adjusted so as to reflect the impact of the Corporate events on the Index. The divisor is a way to maintain the continuity of the Index series. From a theoretical standpoint any changes to a stock in the Index which alters the Market

Capitalization of the stock would impact the entire Index weightings itself. In order to compensate for this, we adjust the divisor to maintain continuity of the Index. The adjustments to the divisor are resulting from changes in the adjustment factors of price and number of shares of an individual stock of the Index. These are respectively called as PAF and SAF adjustments.

Divisor is calculated as below:

$$Divisor_t = Divisor_{t-1} * \frac{\sum_{i=1}^n [(P_{t-1}^i * PAF_t^i) * IWF_t^i * WCF_t^i * (NOS_{t-1}^i * SAF_t^i) * FX_{t-1}^i]}{\sum_{i=1}^n [P_{t-1}^i * NOS_{t-1}^i * IWF_{t-1}^i * WCF_{t-1}^i * FX_{t-1}^i]}$$

Where:

$Divisor_t$	Value of divisor on date t .
P_{t-1}^i	Price per share of company i on date $t - 1$.
FX_t^i	Foreign exchange rate applied on company i 's stock to translate its value to the index currency on ex-date t .
NOS_{t-1}^i	Number of shares of the company i on date $t - 1$.
SAF_t^i	Shares Adjustment Factor of company i on date t .
PAF_t^i	Price Adjustment Factor of company i on date t .
IWF_{t-1}^i	Investable Weight Factor of company i on date $t - 1$.
WCF_{t-1}^i	Weighting Cap Factor of company i on date $t - 1$.

2.2. Index Levels Publication

Index levels in USD are published after the 4 PM London time to incorporate WMR currency rates. For markets closing post 4 PM London time, Index Values are published as soon the data is available from the respective exchanges.

2.3. Index Files Distribution

Index files such as daily constituents and levels are published to respective clients through encrypted SFTP

3. Adjustments

Adjustment to index is made if there is a corporate action event or periodic rebalance or extraordinary event which leads to addition or deletion of certain securities.

In case of a corporate action event, the necessary adjustment in stocks and overall index is made. Please refer to Mirae Standard CA Treatment document which explains treatments of various events.

Based on index rebalance requirements, index is reviewed for index eligibility criteria which leads to weight change, adds and/or drops of constituents and divisor change. In such situation necessary adjustments required before the rebalance gets effective. While performing the periodic rebalance, the process identifies all future corporate events such as mergers and spin-offs before effective date to make sure lesser turnover.

In case of corporate events involving removal of any of the existing index constituents, a minimum of two index business days' advance notice will be released before effective date of index adjustment. The index adjustment will be made using the last available close price of the impacted constituent/s, as applicable.

4. Rebalance Schedule

Our standard equity indices are rebalanced every quarter on 3rd Friday of Mar/Jun/Sep/Dec and gets effective on next business day. The reference date for index parameters calculations such as liquidity/Float Market Cap/Full Market Cap etc. is set to last business day of month previous to rebalance date.

5. Holidays

As standard procedure we use 5-day weekly calendar for our index calculation across all markets. In case of any disruption in market trading where the market is closed for trading or gets closed prematurely previous day prices for such markets will be used for index calculation

6. Extraordinary Events other than Temporary Disruptions

For events in which country is imposed sanctions or list of securities in a particular sector/industry are put in sanction list by any regulatory body or governments then such securities will be removed from

index, if they are not traded for more than a month, at 0 price. For further rebalances such securities will be excluded from equity selection.