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# MSCI Frontier Emerging Markets APEX Index Methodology

February 2010

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1. INTRODUCTION

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The MSCI Frontier Emerging Markets APEX Index is a free float-adjusted market capitalization index designed to serve as a more tradable proxy for the MSCI Frontier Emerging Markets Index.

## 2. CONSTRUCTING THE MSCI FRONTIER EMERGING MARKETS APEX INDEX

At construction the constituent countries of the MSCI Frontier Emerging Markets Index are fully included provided:

• There are no foreign exchange restrictions resulting in currency liquidity constraints, materially limiting the ability to freely conduct foreign currency transactions, or material capital controls such as significant cash reserve requirements or limits on funds repatriation;

and

• The market capitalization weighted average of the Annualized Traded Value Ratio (ATVR)<sup>1</sup> for the Standard Index on the local equity market is 10% or above.

For these countries, the index composition is identical to the composition of the relevant MSCI Standard Country Indices.

Countries that do not meet such requirements may be represented in the MSCI Frontier Emerging Markets APEX Index by the index securities, which have a liquid foreign listing. Foreign listed common shares or depository receipts are deemed to be liquid if their ATVR is 15% or above.

Countries that do not meet such requirements and have no security with a liquid foreign listing are not represented.

# 3. MAINTAINING THE MSCI FRONTIER EMERGING MARKETS APEX INDEX

Changes to the country composition of the MSCI Frontier Emerging Markets APEX Index may result from:

- The MSCI Frontier Emerging Markets APEX Annual Country Index Review, designed to assess a country's restrictions on the foreign exchange operations and capital controls as well as liquidity;
- Changes to the MSCI Frontier Emerging Markets Index.

<sup>&</sup>lt;sup>1</sup>The ATVR of each security is calculated in a 3-step process:

First, monthly median traded values are computed using the median daily traded value, multiplied by the number of days in the month that the security traded. The daily traded value of a security is equal to the number of shares traded during the day, multiplied by the closing price of that security. The median daily traded value is the median of the daily traded values in a given month.

Second, the monthly median traded value of a security is divided by its free float-adjusted security market capitalization at the end of the month, giving the monthly median traded value ratio.

Finally, the ATVR is obtained by taking the average of the monthly median traded value ratios of the previous 12 months – or the number of months for which this data is available – and annualizing it by multiplying it by 12.

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## 3.1. MSCI Frontier Emerging Markets APEX Annual Country Index Review

The country composition is reviewed during the November Semi-Annual Index Review to coincide with the Emerging Markets Annual Eligibility Review for the MSCI Frontier Emerging Markets Index.

## 3.1.1. Country Additions

A constituent country of the MSCI Frontier Emerging Markets Index, which is not part of the MSCI Frontier Emerging Markets APEX Index due to either previously imposed restrictions on foreign exchange, capital controls or low liquidity, will be added if the country removes the restrictions at least six months prior to the implementation of the MSCI Frontier Emerging Markets APEX Annual Country Index Review and the market capitalization weighted average of the ATVR increases to 10% or above.

A country will also be added if the above requirements are not satisfied but liquid foreign listings become available. Only foreign listings will be included for such countries.

## 3.1.2. Country Deletions

Those constituent countries of the MSCI Frontier Emerging Markets APEX Index for which material restrictions on foreign exchange operations or capital controls have been newly introduced will be excluded from the MSCI Frontier Emerging Markets APEX Index, unless liquid foreign listings exist.

In addition, the average liquidity of local listings for each constituent country of the MSCI Frontier Emerging Markets APEX Index is assessed. In order to preserve the stability of the MSCI Frontier Emerging Markets APEX Index, a country will be removed from the index only if the index market capitalization weighted average ATVR for the local listings falls below 5% (vs 10% at the index construction), unless liquid foreign listings exist.

#### 3.1.3. Switch Between Standard Constituents and Foreign Listings

If a constituent country of the MSCI Frontier Emerging Markets APEX Index for which foreign listings are used, removes the restrictions at least six months prior to the implementation of the MSCI Frontier Emerging Markets APEX Annual Country Index Review, and the market capitalization weighted average of the ATVR for the local listings is above 10%, the foreign listings will be substituted with all constituents of the relevant MSCI Standard Country Indices.

The countries identified through the steps described in 3.1.2 may remain in the MSCI Frontier Emerging Markets APEX Index if liquid foreign listings can be found. The Standard constituents of such countries will be either switched to the relevant foreign listings, or deleted if such listings are not available.

# **3.2. Impact Resulting from the Changes to the MSCI Frontier Emerging Markets Index**

If a new country is added to the MSCI Frontier Emerging Markets Index, it will be simultaneously added to the MSCI Frontier Emerging Markets APEX Index provided that there are no material restrictions on foreign exchange, no material capital controls and the index market capitalization weighted country average ATVR is above 10%, or liquid foreign listings are available. Similarly, if a country is deleted from the MSCI Frontier Emerging Markets Index, it will be simultaneously



deleted from the MSCI Frontier Emerging Markets APEX Index. These changes may occur during the November or May Semi-Annual Index Reviews.

## 3.3. Announcement Policy

In order to give sufficient lead-time, the changes resulting from the MSCI Frontier Emerging Markets APEX Annual Country Index Review will be announced as part of the August Quarterly Index Review and implemented as part of the subsequent November Semi-Annual Index Review.

The potential additions to or deletions from resulting from changes to the MSCI Frontier Emerging Markets Index will be announced at least three months before the implementation.

## 3.4. Security Level Index Maintenance

The implementation of corporate events in the MSCI Frontier Emerging Markets APEX Index will generally mirror the implementation of these events in the respective MSCI Standard Country Indices.

For the countries where foreign listings are used, those securities will be monitored for corporate events. The implementation of the events will follow the same principle as in the respective MSCI Standard Country Indices. The eligibility of new foreign listings will be reviewed during Quarterly Index Reviews.

If a security is deleted from the underlying MSCI Frontier Emerging Markets Index due to a corporate event, it will be automatically removed from the MSCI Frontier Emerging Markets APEX Index. Examples include securities of companies that are being acquired, file for bankruptcy or for protection from their creditors, and/or are suspended and for which a return to normal business activity and trading is unlikely in the near future.



# **APPENDIX I: SIMULATED INDEX HISTORY**

Exhibit 1 provides a performance comparison of the MSCI Frontier Emerging Markets APEX Index with the MSCI Frontier Markets Index and MSCI Emerging Markets Index.





With the exception of Argentina, the simulated historical country composition has been unchanged since the simulated initial construction. Countries such as Mauritius and Sri Lanka were excluded due to low liquidity, while Ukraine and Vietnam were not part of the MSCI Frontier Emerging Markets APEX Index due to restrictions on the foreign exchange transactions. For Argentina, Colombia, Peru and Kazakhstan the relevant foreign listings were used in the simulated history calculations.

# **APPENDIX II: LIST OF ELIGIBLE COUNTRIES**

The following constituent countries of the MSCI Frontier Emerging Markets Index are not included in the MSCI Frontier Emerging Markets APEX Index: Vietnam, Ukraine, Nigeria and Sri Lanka. For Argentina, Peru and Kazakhstan the relevant foreign listings are used in the MSCI Frontier Emerging Markets APEX Index.



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