

# HOW GLOBAL EQUITY INDICES ARE CONSTRUCTED

*The make-up of the global equity markets based on MSCI rules*

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**Clients often ask us about the make-up of the global equity markets—questions about size, the definition of developed and emerging markets, and changes to equity market composition over time.**

There are a number of providers of global equity indices. Each has different index construction rules although there are many similarities. For simplicity, in this article we review the composition of the global equity indices based on MSCI's rules. MSCI's global equity indices are among the most popular benchmarks for non-U.S. and global equity portfolios.

## Index Composition

MSCI divides the global equity markets into three categories: developed markets, emerging markets and frontier markets. Institutional investors invest in developed and emerging markets, but rarely invest in frontier markets because of size,

concentration, and liquidity constraints (see Figure A).

A comparison of the various indices' key characteristics as of May 2015 is shown in Figure B. Of note are the differences in size and number of securities. The emerging markets index, however, has grown considerably in terms of market capitalization, number of countries, and improved diversification.

MSCI employs a series of rules to create these indices. The rules are described in the Appendix. Composition of the global equity indices changes is based on:

- the index creators' decisions to add or remove countries and companies;
- market value changes of the individual stocks making up the index; and
- corporate events such as mergers, acquisitions and bankruptcies.

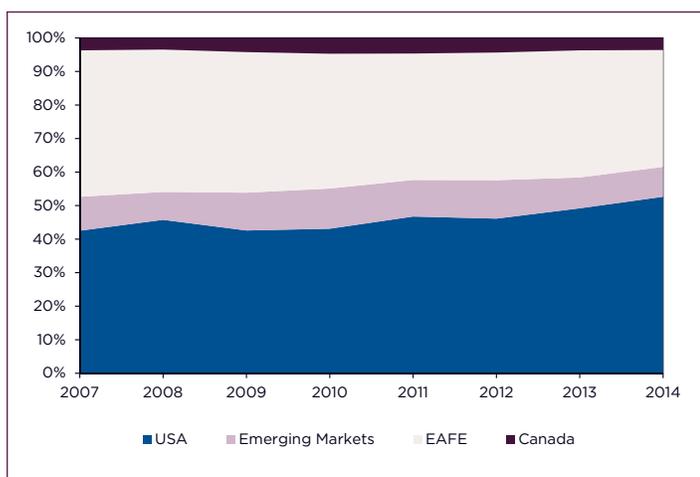
**Figure A: MSCI ACWI & Frontier Markets Index**

MSCI ACWI INDEX						MSCI EMERGING & FRONTIER MARKETS INDEX				
MSCI WORLD INDEX			MSCI EMERGING MARKETS INDEX			MSCI FRONTIER MARKETS INDEX				
DEVELOPED MARKETS			EMERGING MARKETS			FRONTIER MARKETS				
Americas	Europe & Middle East	Pacific	Americas	Europe, Middle East & Africa	Asia	Americas	Europe & CIS	Africa	Middle East	Asia
Canada United States	Austria Belgium Denmark Finland France Germany Ireland Israel Italy Netherlands Norway Portugal Spain Sweden Switzerland United Kingdom	Australia Hong Kong Japan New Zealand Singapore	Brazil Chile Colombia Mexico Peru	Czech Republic Egypt Greece Hungary Poland Qatar Russia South Africa Turkey United Arab Emirates	China India Indonesia Korea Malaysia Philippines Taiwan Thailand	Argentina Jamaica Trinidad & Tobago	Bosnia Herzegovina Bulgaria Croatia Estonia Lithuania Kazakhstan Romania Serbia Slovenia Ukraine	Botswana Ghana Kenya Mauritius Morocco Nigeria Tunisia Zimbabwe	Bahrain Jordan Kuwait Lebanon Oman Palestine Saudi Arabia	Bangladesh Pakistan Sri Lanka Vietnam

**Figure B: Key characteristics of various indices (as of May 2015)**

	Frontier	Emerging IMI	Developed Markets (EAFE IMI)
<b>Market capitalization</b>	\$92.9 billion	\$4.7 trillion	\$15.4 trillion
<b>Number of countries</b>	24	23	21
<b>Number of constituents</b>	127	2619	3091
<b>Top 3 countries</b>	Kuwait (22%) Nigeria (16%) Argentina (9%)	China (25%) S. Korea (15%) Taiwan (14%)	Japan (24%) U.K. (21%) France (9%)
<b>Top 3 sectors</b>	Financials (52%) Telecom (14%) Energy (10%)	Financials (28%) Info Tech (18%) Consumer Disc (10%)	Financials (25%) Industrials (14%) Consumer Disc (14%)
<b>Top 3 Stocks</b>	Natl Bank of Kuwait (7%) Kuwait Finance House (5%) Mobile Telecom (4%)	Samsung (3%) Taiwan Semi (3%) Tencent Holdings (2%)	Nestle (2%) Novartis (2%) Roche Holding (1%)
<b>P/E</b>	11x	15x	19x
<b>Dividend yield</b>	3.8%	2.4%	2.8%

In total, the global equity markets had a market capitalization of \$44.5 trillion at May 31, 2015 based on the MSCI IMI indices, which includes the developed foreign markets plus the U.S. and Canada. As the Figure C illustrates, the U.S. allocation of the global equity markets has increased from 43% in 2007 to 53% at the end of 2014, largely as a result of the much stronger performance of U.S. stocks during this period. The allocations to emerging markets and Canada remained relatively steady, while the allocation to developed foreign markets (EAFE) declined by about 10 percentage points. The frontier markets represent less than 0.5% of the global equity markets.

**Figure C: Regional Weights**


Annually, MSCI assesses those markets it has placed under review for potential reclassification. MSCI considers markets for reclassification only if the classification status can be viewed as irreversible. Changes to classifications over the past several years are included in Figure D.

**Figure D: Changes to MSCI classifications over the years**

Country Indexes	Market Reclassification	Date*
MSCI Ukraine Index	From Frontier to Standalone	Aug-15
MSCI Qatar Index	From Frontier to Emerging Markets	May-14
MSCI UAE Index	From Frontier to Emerging Markets	May-14
MSCI Greece Index	From Developed to Emerging Markets	Nov-13
MSCI Morocco Index	From Emerging to Frontier Markets	Nov-13
MSCI Trinidad & Tobago Index**	From Frontier Markets to Standalone	May-11
MSCI Israel Index	From Emerging to Developed Markets	May-10
MSCI Bangladesh Index	From Standalone to Frontier Markets	May-10
MSCI Argentina Index	From Emerging to Frontier Markets	May-09
MSCI Pakistan Index***	From Standalone to Frontier Markets	May-09
MSCI Jordan Index	From Emerging to Frontier Markets	Nov-08
MSCI Lithuania Index	From Standalone to Frontier Markets	Nov-08
MSCI Serbia Index	From Standalone to Frontier Markets	Nov-08
MSCI Sri Lanka****	From Standalone to Frontier Markets	Nov-07
MSCI Venezuela Index*****	From Emerging to Standalone	May-06
MSCI Greece Index	From Emerging to Developed Markets	May-01
MSCI Portugal Index	From Emerging to Developed Markets	Nov-97

\* As of the close of the last business day of the month.

\*\* Trinidad and Tobago was added to the MSCI Frontier Markets Index in May 2009

\*\*\* Pakistan was removed from the MSCI Emerging Market Index in December 2008 and maintained as a standalone country index

\*\*\*\* Sri Lanka was removed from the MSCI Emerging Market Index in June 2001 and maintained as a standalone country index

\*\*\*\*\* Index was discontinued on January 2, 2008

MSCI will include the MSCI Pakistan Index in its 2016 annual Market Classification Review for a potential reclassification to emerging markets.

On June 9, 2015, MSCI Inc. announced that it expects to include China A-shares in its global benchmarks after a few important remaining issues related to market accessibility have been resolved.

On June 19, 2015, MSCI Inc. announced that the introduction of any restrictive measures, which may result in a material deterioration of the accessibility of the Greek equity market, may lead to the reclassification of the MSCI Greece Index to Standalone Market status from Emerging Markets status.

## APPENDIX

### Regional and Country Composition Rules

MSCI's criteria for classifying countries as developed, emerging or frontier consist of three components:

economic development within the country, size and liquidity requirements, and market accessibility. Specifics within each category are as follows:

**Figure E: MSCI Market Classification Criteria Market Reclassification**

Criteria	Frontier	Emerging	Developed
<b>Economic Development</b>	No requirement	No requirement	Country GNI per capita 25% above the World Bank high income threshold <sup>1</sup> for three consecutive years
<b>Size and Liquidity Requirements</b>			
• Number of companies meeting the standard index criteria*	2	3	5
• Company size (full market cap) <sup>2</sup>	USD 598 mm	USD 1195 mm	USD 2391 mm
• Security size (float market cap) <sup>2</sup>	USD 52 mm	USD 598 mm	USD 1195 mm
• Security liquidity <sup>3</sup>	2.5% ATVR	15% ATVR	20% AVTR
<b>Market Accessibility Criteria</b>			
• Openness to foreign ownership	At least some	Significant	Very high
• Ease of capital inflows/outflows	At least partial	Significant	Very high
• Efficiency of the operational framework	Modest	Good and tested	Very high
• Stability of the institutional framework	Modest	Modest	Very high

The economic development criteria affect only the classification of the developed markets. The standard to be classified as high income requires a GNI per capita of USD 12,475 as of 2011. A comparison of the GNI per capita of some of the key countries is shown in the next table. While Brazil, China and India, have a number of large,

globally competitive companies listed on their stock exchanges and thereby may meet the size and liquidity criteria for developed markets, they do not yet meet the economic development criteria. Korea, however, which is still classified as an emerging market, does meet the economic development criteria.

<sup>1</sup> This refers to the number of companies that must match all the criteria in order for a country market to be added to the index.

<sup>2</sup> High income threshold for 2011: GNI per capita of USD 12,475 (World Bank, Atlas Method)

<sup>3</sup> Minimum in use for Nov 2014 Semi-Annual Index Review, updated semi-annually.

<sup>3</sup> ATVR stands for annualized traded value ratio, which is the sum of the monthly median traded values. Depository receipts are included in the trading volume for the security.

MSCI adds or removes companies from a country index based on characteristics that measure for ease of investment: minimum size (\$150 million) and free-float adjusted market capitalization (50% or more) requirements, liquidity based on trading volume measures, and availability for purchase by foreign investors.

**Figure F: Country GNI Per Capita—World Bank**

Country Name	2011
<b>World</b>	9,067
<b>Australia</b>	50,060
<b>Brazil</b>	10,700
<b>Canada</b>	46,860
<b>China</b>	4,900
<b>Colombia</b>	6,100
<b>France</b>	44,220
<b>Germany</b>	46,410
<b>Greece</b>	24,980
<b>Hong Kong, SAR, China</b>	35,680
<b>Israel</b>	31,170
<b>Italy</b>	37,690
<b>Japan</b>	45,190
<b>Korea, Rep</b>	22,620
<b>Morocco</b>	2,940
<b>Spain</b>	31,280
<b>Thailand</b>	4,620
<b>UAE</b>	34,400
<b>UK</b>	40,090
<b>US</b>	50,350

Each of these main classification categories has sub criteria. The market accessibility criteria are largely qualitative and particularly extensive. The market accessibility criteria include such factors as:

- foreign ownership limits;
- equal economic and voting rights for foreign investors;
- restriction on capital inflows/outflows;
- a developed foreign exchange market;
- an advanced legal and regulatory framework governing the financial markets, a stock exchange and various entities involved in the financial markets;
- lack of ambiguity;
- prompt enforcement of laws and regulations;
- well-functioning clearing and settlement systems based on international standards;
- competition among custodian banks and global custodian bank presence;
- a well-functioning registry/depository;
- practical framework for short selling;
- availability of information in English; and others.

During its annual market classification review, MSCI analyzes and seeks feedback on those markets it has placed under review for potential reclassification. Every June, MSCI communicates its conclusions from the discussions with the investment community on the list of countries under review and announces the new list of countries, if any, that may be reclassified in the upcoming cycle. MSCI will consider markets for reclassification only if the classification status can be viewed as irreversible.

MSCI's practice of only reclassifying a country if the country's new status is thought to be permanent is an important one that limits potential market disruptions that could result in more frequent classification changes.

**GENERAL DISCLOSURE:** This paper is intended for sophisticated and/or accredited investors and is for illustrative use only. While the assumptions, data and models used to develop the information contained herein are from sources deemed to be reliable, there can be no certainty or guarantee regarding the likelihood of the outcomes as presented. This document is not and should not be construed as legal, taxation or investment advice. Any investment advice would be delivered pursuant to a written agreement and legal and taxation advice should be obtained from appropriate and qualified professionals. No part of this publication may be reproduced in any manner without our prior written permission. © 2015 Pavilion Advisory Group Inc.

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