

MSCI PIMFA EQUITY RISK INDEX SERIES METHODOLOGY

October 2019

Contents

- 1 Introduction 3
- 2 Constructing the MSCI PIMFA Equity Risk Index Series 4
 - 2.1 Index Structure..... 4
 - 2.2 Index Weighting Scheme..... 5
- 3 Maintaining the MSCI PIMFA Equity Risk Index Series 6
 - 3.1 Monthly Index Reviews..... 6
 - 3.2 Ongoing Event-Related Changes 6
- Appendix 1 – Methodology for Component Indexes 7
 - MSCI United Kingdom (UK) IMI..... 7
 - MSCI ACWI ex UK Index 7
 - MSCI World Index..... 7
 - MSCI Emerging Markets Index 8
 - MARKIT iBOXX £ Gilts Index 8
 - MARKIT iBOXX £ Corporates Index..... 8
 - MARKIT iBOXX UK Gilt Inflation-Linked Index 9
 - Cash Equivalent (BoE Bank Rate – 0.75%) 9
 - MSCI UK IMI Liquid Real Estate Index..... 9
 - Alternatives Equivalent (100% MSCI World Diversified Multiple-Factor Index - 70% MSCI World Index + 70% BoE Bank Rate)..... 10

1 Introduction

The MSCI PIMFA Equity Risk Indexes aim to represent the performance of five distinct equity allocation driven investment strategies defined by the Personal Investment Management and Financial Advice Association for United Kingdom domestic investors with Pounds Sterling (GBP) denominated exposure. This methodology book provides a description of the rules and guidelines followed by MSCI for the construction and maintenance of the MSCI PIMFA Equity Risk Index Series. These Indexes are produced by MSCI, with component index weights provided by the Personal Investment Management and Financial Advice Association (PIMFA).

The MSCI PIMFA Equity Risk Index Series consists of the following five indexes

- MSCI PIMFA Equity Risk 1 Index
- MSCI PIMFA Equity Risk 2 Index
- MSCI PIMFA Equity Risk 3 Index
- MSCI PIMFA Equity Risk 4 Index
- MSCI PIMFA Equity Risk 5 Index

The primary purpose of the MSCI PIMFA Equity Risk Indexes is to act as performance benchmarks for wealth managers to compare to their portfolios. The Indexes are available in price and net variants calculated as per the MSCI Price Index methodology and the MSCI Net Daily Total Return (DTR) Index methodology respectively described in the MSCI Index Calculation Methodology¹.

The MSCI PIMFA Equity Risk Indexes are part of the MSCI Blended Index Family. For further details on the MSCI Blended Index Family, please refer to the MSCI Blended Index Family – Benchmark statement available on www.msci.com.

¹ MSCI Index Calculation Methodology available at <https://www.msci.com/index-methodology>

2 Constructing the MSCI PIMFA Equity Risk Index Series

2.1 INDEX STRUCTURE

The MSCI PIMFA Equity Risk Index Series consists of five indexes designed to represent a variety of investment strategies.

- **MSCI PIMFA Equity Risk 1 Index**

The MSCI PIMFA Equity Risk 1 Index aims to represent the average performance of a group of multi-asset class strategies that have 10%-25% exposure to equities.
- **MSCI PIMFA Equity Risk 2 Index**

The MSCI PIMFA Equity Risk 2 Index aims to represent the average performance of a group of multi-asset class strategies that have 26%-46% exposure to equities.
- **MSCI PIMFA Equity Risk 3 Index**

The MSCI PIMFA Equity Risk 3 Index aims to represent the average performance of a group of multi-asset class strategies that have 47%-66% exposure to equities.
- **MSCI PIMFA Equity Risk 4 Index**

The MSCI PIMFA Equity Risk 4 Index aims to represent the average performance of a group of multi-asset class strategies that have 67%-85% exposure to equities.
- **MSCI PIMFA Equity Risk 5 Index**

The MSCI PIMFA Equity Risk 5 Index aims to represent the average performance of a group of multi-asset class strategies that have 86%-100% exposure to equities.

2.2 INDEX WEIGHTING SCHEME

The five indexes are constructed as combinations of the following component indexes at specified weights. The component index weights² are provided by PIMFA on a quarterly basis.

- MSCI United Kingdom (UK) IMI
- MSCI ACWI ex UK Index
- MSCI World Index
- MSCI Emerging Markets (EM) Index
- Markit iBoxx £ Gilts Index³
- Markit iBoxx £ Corporates Index
- Markit iBoxx UK Gilt Inflation-Linked Index
- Cash Equivalent (BoE Bank Rate – 0.75%)
- MSCI United Kingdom IMI Liquid Real Estate Index
- Alternatives Equivalent (100% MSCI World Diversified Multiple-Factor Index – 70% MSCI World Index + 70% BoE Bank Rate)

The price variant in Pound Sterling (GBP) of the MSCI PIMFA Equity Risk Indexes utilize the price variant in Pound Sterling (GBP) for the underlying MSCI component indexes and the Clean Price Index (CPI) for the underlying Markit component indexes, while the net variant in Pound Sterling (GBP) of the MSCI PIMFA Equity Risk Indexes utilize the net variant in Pound Sterling (GBP) for the underlying MSCI component indexes and the Total Return Index (TRI) for the underlying Markit component indexes.

The methodology for construction and maintenance of the component indexes is detailed in Appendix 1.

² The component index weights for each index are determined by the PIMFA's Indices Committee, who may choose to make these publicly available

The component index weights for the MSCI PIMFA Equity Risk Indexes are available at www.msci.com/pimfa-equity-risk-indexes

³ In case of market closure or when Markit iBoxx Indexes are not available to MSCI on a specific day or a specific period, MSCI carries forward previous day Markit Index Level to calculate its indexes.

3 Maintaining the MSCI PIMFA Equity Risk Index Series

3.1 MONTHLY INDEX REVIEWS

The MSCI PIMFA Equity Risk Indexes are reviewed and rebalanced on a monthly basis, wherein, at the beginning of each month, the weight assigned to each component index⁴ is aligned with the latest⁵ weight provided by PIMFA. Between the monthly reviews, the relative daily performance in GBP of the component indexes determine the weights of the component indexes in each PIMFA Equity Risk index.

The component indexes constituting the MSCI PIMFA Equity Risk Indexes follow the rebalancing schedules described in their respective methodology documents.

3.2 ONGOING EVENT-RELATED CHANGES

In general, the MSCI PIMFA Equity Risk Indexes follows the event maintenance of the component indexes.

Any security added or deleted from a component index follows the same treatment in the corresponding MSCI PIMFA Equity Risk Index that uses the component index.

⁴ The component index weights for the MSCI PIMFA Equity Risk Indexes are available at www.msci.com/pimfa-equity-risk-indexes

⁵ In the event that PIMFA does not provide the component index weights for an upcoming quarter, the component index weights effective for the corresponding index at the previous quarter will be applied for the rebalance of the index.

Appendix 1 – Methodology for Component Indexes

The following component indexes are used in the construction of the MSCI PIMFA Equity Risk Index Series.

MSCI UNITED KINGDOM (UK) IMI

The MSCI United Kingdom IMI is constructed and maintained in accordance with the MSCI Global Investable Market Indexes methodology⁶.

The MSCI United Kingdom IMI, price variant in GBP measures the performance of the Index in Pound Sterling (GBP), calculated as per the MSCI Price Index methodology described in the MSCI Index Calculation Methodology.

The MSCI United Kingdom IMI, net variant in GBP measures the performance of the Index in Pound Sterling (GBP), calculated as per the MSCI Net Daily Total Return Index methodology described in the MSCI Index Calculation Methodology.

MSCI ACWI EX UK INDEX

The MSCI ACWI Ex UK Index is constructed and maintained in accordance with the MSCI Global Investable Market Indexes methodology.

The MSCI ACWI Ex UK Index, price variant in GBP measures the performance of the Index in Pound Sterling (GBP), calculated as per the MSCI Price Index methodology described in the MSCI Index Calculation Methodology.

The MSCI ACWI Ex UK Index, net variant in GBP measures the performance of the Index in Pound Sterling (GBP), calculated as per the MSCI Net Daily Total Return Index methodology described in the MSCI Index Calculation Methodology.

MSCI WORLD INDEX

The MSCI World Index is constructed and maintained in accordance with the MSCI Global Investable Market Indexes methodology.

The MSCI World Index, price variant in GBP measures the performance of the Index in Pound Sterling (GBP), calculated as per the MSCI Price Index methodology described in the MSCI Index Calculation Methodology.

⁶ MSCI Global Investable Market Indexes methodology available at <https://www.msci.com/index-methodology>

The MSCI World Index, net variant in GBP measures the performance of the Index in Pound Sterling (GBP), calculated as per the MSCI Net Daily Total Return Index methodology described in the MSCI Index Calculation Methodology.

MSCI EMERGING MARKETS INDEX

The MSCI Emerging Markets Index is constructed and maintained in accordance with the MSCI Global Investable Market Indexes methodology.

The MSCI Emerging Markets Index, price variant in GBP measures the performance of the Index in Pound Sterling (GBP), calculated as per the MSCI Price Index methodology described in the MSCI Index Calculation Methodology.

The MSCI Emerging Markets Index, price variant in GBP measures the performance of the Index in Pound Sterling (GBP), calculated as per the MSCI Net Daily Total Return Index methodology described in the MSCI Index Calculation Methodology.

MARKIT IBOXX £ GILTS INDEX

The index is the Markit iBoxx £ Gilts Index⁷.

The Markit iBoxx £ Gilts Index, Clean Price Index (CPI) calculated in GBP may be utilized for the calculation of the price variant of the MSCI PIMFA Equity Risk Indexes, while the Markit iBoxx £ Gilts Index, Total Return Index (TRI) calculated in GBP may be utilized for the calculation of the net variant of the MSCI PIMFA Equity Risk Indexes.

MARKIT IBOXX £ CORPORATES INDEX

The index is the Markit iBoxx £ Corporates Index⁸.

The Markit iBoxx £ Corporates Index, Clean Price Index (CPI) calculated in GBP may be utilized for the calculation of the price variant of the MSCI PIMFA Equity Risk Indexes, while the Markit iBoxx £ Corporates Index, Total Return Index (TRI) calculated in GBP may be utilized for the calculation of the net variant of the MSCI PIMFA Equity Risk Indexes.

⁷ <http://content.markitcdn.com/corporate/Company/Files/DownloadDocument?CMSID=25329378592f431c9765becda11544f3>

⁸ <http://content.markitcdn.com/corporate/Company/Files/DownloadDocument?CMSID=25329378592f431c9765becda11544f3>

MARKIT IBOXX UK GILT INFLATION-LINKED INDEX

The index is the Markit iBoxx UK Gilt Inflation-Linked Index⁹.

The Markit iBoxx UK Gilt Inflation-Linked Index, Clean Price Index (CPI) calculated in GBP may be utilized for the calculation of the price variant of the MSCI PIMFA Equity Risk Indexes, while the Markit iBoxx UK Gilt Inflation-Linked Index, Total Return Index (TRI) calculated in GBP may be utilized for the calculation of the net variant of the MSCI PIMFA Equity Risk Indexes.

CASH EQUIVALENT (BOE BANK RATE – 0.75%)¹⁰

The Cash Equivalent (BoE Bank Rate – 0.75%) represents the performance of the Bank of England Bank Rate dominated in Pound Sterling (GBP) minus 0.75% annual¹¹.

A floor of 0% is set for this component, i.e. if the value of BoE Bank Rate decremented by a fixed 0.75% annually becomes less than 0%, then the value of the component would be kept at 0%.

MSCI UK IMI LIQUID REAL ESTATE INDEX

The MSCI UK IMI Liquid Real Estate Index is constructed by combining MSCI UK IMI Core Real Estate Volatility Tilt Index and the Markit iBoxx UK Gilt Inflation-Linked Short Index.

The Index is constructed and maintained in accordance with the MSCI Liquid Real Estate Indexes methodology available at <https://www.msci.com/index-methodology>.

The MSCI UK IMI Liquid Real Estate Index, price variant in GBP measures the performance of the Index in Pound Sterling (GBP), calculated as per the MSCI Price Index methodology described in the MSCI Index Calculation Methodology.

The MSCI UK IMI Liquid Real Estate Index, net variant in GBP measures the performance of the Index in Pound Sterling (GBP), calculated as per the MSCI Net Daily Total Return Index methodology described in the MSCI Index Calculation Methodology.

⁹ <http://content.markitcdn.com/corporate/Company/Files/DownloadFiles?CMSID=84b9904db5254b3db95ce057b52cba2c>

¹⁰ Prior to November 01, 2019, the cash equivalent used in the indexes was (GBP Libor 1-week – 1%) in GBP.

¹¹ Annualized on a 365 day basis

ALTERNATIVES EQUIVALENT (100% MSCI WORLD DIVERSIFIED MULTIPLE-FACTOR INDEX - 70% MSCI WORLD INDEX + 70% BOE BANK RATE¹²)

The 100% MSCI World Diversified Multiple-Factor Index - 70% MSCI World Index + 70% BoE Bank Rate Index (the “Index”) is constructed using a combination of the MSCI World Diversified Multiple-Factor index, the MSCI World Index and the BoE Bank Rate.

The MSCI World Diversified Multiple-Factor Index is constructed and maintained in accordance with the MSCI Diversified Multiple-Factor Indexes methodology available at <https://www.msci.com/index-methodology>.

On a monthly basis, the weights for the MSCI World Diversified Multiple-Factor Index, MSCI World Index and BoE Bank Rate in the Index are reset to pre-defined proportions. The following weights are effective at the open of the first business day of each month:

- MSCI World Diversified Multiple-Factor: 100%
- MSCI World Index: -70%
- BoE Bank Rate¹³: 70%

In between the monthly rebalances, the weights of the MSCI World Diversified Multiple-Factor Index, MSCI World Index and BoE Bank Rate in the Index will evolve based on the relative daily return performance in GBP of each component.

¹² Prior to November 01, 2019, this component was constructed as 50% MSCI World Diversified Multiple-Factor Index + 50% GBP Libor 1-Week

¹³ A floor of 0% is set for this component, i.e. if the value of BoE Bank Rate becomes less than 0%, then the value of the component would be kept at 0%.

Contact us

clientservice@msci.com

AMERICAS

Americas	1 888 588 4567 *
Atlanta	+ 1 404 551 3212
Boston	+ 1 617 532 0920
Chicago	+ 1 312 675 0545
Monterrey	+ 52 81 1253 4020
New York	+ 1 212 804 3901
San Francisco	+ 1 415 836 8800
São Paulo	+ 55 11 3706 1360
Toronto	+ 1 416 628 1007

EUROPE, MIDDLE EAST & AFRICA

Cape Town	+ 27 21 673 0100
Frankfurt	+ 49 69 133 859 00
Geneva	+ 41 22 817 9777
London	+ 44 20 7618 2222
Milan	+ 39 02 5849 0415
Paris	0800 91 59 17 *

ASIA PACIFIC

China North	10800 852 1032 *
China South	10800 152 1032 *
Hong Kong	+ 852 2844 9333
Mumbai	+ 91 22 6784 9160
Seoul	00798 8521 3392 *
Singapore	800 852 3749 *
Sydney	+ 61 2 9033 9333
Taipei	008 0112 7513 *
Thailand	0018 0015 6207 7181 *
Tokyo	+ 81 3 5290 1555

* = toll free

ABOUT MSCI

MSCI is a leader provider of critical decision support tools and services for the global investment community. With over 45 years of expertise in research, data and technology, we power better investment decisions by enabling clients to understand and analyze key drivers of risk and return and confidently build more effective portfolios. We create industry-leading research-enhanced solutions that clients use to gain insight into and improve transparency across the investment process.

To learn more, please visit www.msci.com.

Notice and disclaimer

This document and all of the information contained in it, including without limitation all text, data, graphs, charts (collectively, the "Information") is the property of MSCI Inc. or its subsidiaries (collectively, "MSCI"), or MSCI's licensors, direct or indirect suppliers or any third party involved in making or compiling any Information (collectively, with MSCI, the "Information Providers") and is provided for informational purposes only. The Information may not be modified, reverse-engineered, reproduced or disseminated in whole or in part without prior written permission from MSCI.

The Information may not be used to create derivative works or to verify or correct other data or information. For example (but without limitation), the Information may not be used to create indexes, databases, risk models, analytics, software, or in connection with the issuing, offering, sponsoring, managing or marketing of any securities, portfolios, financial products or other investment vehicles utilizing or based on, linked to, tracking or otherwise derived from the Information or any other MSCI data, information, products or services.

The user of the Information assumes the entire risk of any use it may make or permit to be made of the Information. NONE OF THE INFORMATION PROVIDERS MAKES ANY EXPRESS OR IMPLIED WARRANTIES OR REPRESENTATIONS WITH RESPECT TO THE INFORMATION (OR THE RESULTS TO BE OBTAINED BY THE USE THEREOF), AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, EACH INFORMATION PROVIDER EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES (INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF ORIGINALITY, ACCURACY, TIMELINESS, NON-INFRINGEMENT, COMPLETENESS, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) WITH RESPECT TO ANY OF THE INFORMATION.

Without limiting any of the foregoing and to the maximum extent permitted by applicable law, in no event shall any Information Provider have any liability regarding any of the Information for any direct, indirect, special, punitive, consequential (including lost profits) or any other damages even if notified of the possibility of such damages. The foregoing shall not exclude or limit any liability that may not by applicable law be excluded or limited, including without limitation (as applicable), any liability for death or personal injury to the extent that such injury results from the negligence or willful default of itself, its servants, agents or sub-contractors.

Information containing any historical information, data or analysis should not be taken as an indication or guarantee of any future performance, analysis, forecast or prediction. Past performance does not guarantee future results.

The Information should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. All Information is impersonal and not tailored to the needs of any person, entity or group of persons.

None of the Information constitutes an offer to sell (or a solicitation of an offer to buy), any security, financial product or other investment vehicle or any trading strategy.

It is not possible to invest directly in an index. Exposure to an asset class or trading strategy or other category represented by an index is only available through third party investable instruments (if any) based on that index. MSCI does not issue, sponsor, endorse, market, offer, review or otherwise express any opinion regarding any fund, ETF, derivative or other security, investment, financial product or trading strategy that is based on, linked to or seeks to provide an investment return related to the performance of any MSCI index (collectively, "Index Linked Investments"). MSCI makes no assurance that any Index Linked Investments will accurately track index performance or provide positive investment returns. MSCI Inc. is not an investment adviser or fiduciary and MSCI makes no representation regarding the advisability of investing in any Index Linked Investments.

Index returns do not represent the results of actual trading of investable assets/securities. MSCI maintains and calculates indexes, but does not manage actual assets. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the index or Index Linked Investments. The imposition of these fees and charges would cause the performance of an Index Linked Investment to be different than the MSCI index performance.

The Information may contain back tested data. Back-tested performance is not actual performance, but is hypothetical. There are frequently material differences between back tested performance results and actual results subsequently achieved by any investment strategy.

Constituents of MSCI equity indexes are listed companies, which are included in or excluded from the indexes according to the application of the relevant index methodologies. Accordingly, constituents in MSCI equity indexes may include MSCI Inc., clients of MSCI or suppliers to MSCI. Inclusion of a security within an MSCI index is not a recommendation by MSCI to buy, sell, or hold such security, nor is it considered to be investment advice.

Data and information produced by various affiliates of MSCI Inc., including MSCI ESG Research LLC and Barra LLC, may be used in calculating certain MSCI indexes. More information can be found in the relevant index methodologies on www.msci.com.

MSCI receives compensation in connection with licensing its indexes to third parties. MSCI Inc.'s revenue includes fees based on assets in Index Linked Investments. Information can be found in MSCI Inc.'s company filings on the Investor Relations section of www.msci.com.

MSCI ESG Research LLC is a Registered Investment Adviser under the Investment Advisers Act of 1940 and a subsidiary of MSCI Inc. Except with respect to any applicable products or services from MSCI ESG Research, neither MSCI nor any of its products or services recommends, endorses, approves or otherwise expresses any opinion regarding any issuer, securities, financial products or instruments or trading strategies and MSCI's products or services are not intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such. Issuers mentioned or included in any MSCI ESG Research materials may include MSCI Inc., clients of MSCI or suppliers to MSCI, and may also purchase research or other products or services from MSCI ESG Research. MSCI ESG Research materials, including materials utilized in any MSCI ESG Indexes or other products, have not been submitted to, nor received approval from, the United States Securities and Exchange Commission or any other regulatory body.

Any use of or access to products, services or information of MSCI requires a license from MSCI. MSCI, Barra, RiskMetrics, IPD and other MSCI brands and product names are the trademarks, service marks, or registered trademarks of MSCI or its subsidiaries in the United States and other jurisdictions. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and Standard & Poor's. "Global Industry Classification Standard (GICS)" is a service mark of MSCI and Standard & Poor's.

MIFID2/MIFIR notice: MSCI ESG Research LLC does not distribute or act as an intermediary for financial instruments or structured deposits, nor does it deal on its own account, provide execution services for others or manage client accounts. No MSCI ESG Research product or service supports, promotes or is intended to support or promote any such activity. MSCI ESG Research is an independent provider of ESG data, reports and ratings based on published methodologies and available to clients on a subscription basis. We do not provide custom or one-off ratings or recommendations of securities or other financial instruments upon request.

Privacy notice: For information about how MSCI ESG Research LLC collects and uses personal data concerning officers and directors, please refer to our Privacy Notice at <https://www.msci.com/privacy-pledge>.