

MSCI/AREF UK Quarterly Property Fund Index Methodology

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1 Introduction

The objective of the MSCI/AREF UK Quarterly Property Fund Index (UK PFI) is to represent the performance of U.K. unlisted pooled property funds. The Index is value-weighted, and it is based on the Net Asset Value (NAV) of its constituent property funds each quarter. To determine the representativeness of the Index on an annual basis, the overall size of the underlying U.K. property fund market is estimated and this estimate is reviewed by the MSCI Real Estate Index Committee (REIC).

2 Methodology Documentation Set

The construction and maintenance rules for the UK PFI are collectively described in the following documents:

2.1 MSCI REAL ESTATE - INDEX POLICIES

The [MSCI Real Estate – Index Policies](#) document describes the various governance policies related to the construction, maintenance and termination of the MSCI Private Real Estate indexes to provide consistency in decisions and avoid ambiguity in its responses to particular events.

2.2 MSCI PROPERTY FUND INDEXES METHODOLOGY

The [MSCI Property Fund Indexes Methodology](#) describes the general methodology that is being used for the calculation of the MSCI Property Fund Indexes and includes the methodology for the index composition, data requirements and index calculation methodology.

2.3 MSCI/AREF UK QUARTERLY PROPERTY FUND INDEX METHODOLOGY

This document includes the rules and methods specific to the UK PFI.

3 MSCI/AREF UK Quarterly Property Fund Index Specific Methodology

3.1 INITIAL INDEX INCLUSION REQUIREMENTS

3.1.1 SPECIFIC INCLUSION REQUIREMENTS FOR MSCI/AREF UK PROPERTY FUND INDEX

In addition to the standard MSCI requirements for property fund indexes, there are additional eligibility requirements for initial inclusion in the UK PFI. Funds must:

- a. Not be listed on a stock exchange
- b. Have a minimum of 85% of their gross assets invested in the U.K.
- c. Have the investment performance of their direct property portfolio measured by MSCI at least annually, preferably quarterly. The frequency of asset and fund data provision to MSCI must align with the valuation and reporting regime of the fund and must meet MSCI's data collection deadlines.
- d. Be a full member of the Association of Real Estate Funds (AREF).
- e. Be open to new investors or have the possibility in the near future for investment by new investors. Funds such as joint ventures (the investors in which are expected to remain unchanged during the life of the fund) are, therefore, not eligible for inclusion.
- f. Have a NAV equal to or greater than that of the 9th decile fund within the MSCI/AREF UK All Balanced Property Fund Index for the forthcoming measurement period at the point of the fund's entry into the index.
- g. Be listed within the MSCI/AREF UK Quarterly Property Fund Index market information products with individual fund performance, but not contribute to the Index, for their first period of data submission.
- h. Value and report the Net Asset Value (NAV) at least quarterly (preferably monthly).

Alongside the MSCI / AREF UK Quarterly Property Fund Index, MSCI offers additional market information products, which includes individual fund performance series. The criteria for inclusion in the additional market information products are less stringent and permit the inclusion of funds:

- a. Which are in their first quarter of data submission;
- b. For which MSCI has not yet established that both data provision and data accuracy are sufficient; and/or
- c. Which have not yet reached the new entry minimum size threshold.

The reporting of fund results in UK PFI products is shown to one decimal place for publication purposes; however, the underlying data are calculated to more decimal places.

3.2 CHANGE IN COMPOSITION

The addition of new funds and withdrawal/termination of existing funds are normal events in the evolution of the MSCI Property Fund Indexes. However, for the UK PFI additional requirements and clarification have been provided.

New Funds:

- a. are required to provide sufficient and complete data to compile the longest possible history of their investment performance, subject to a minimum of either five years, or the period from the date of launch of the fund.
- b. must always provide performance data for disclosure in the index products for the longest possible time period. Full performance history shall be shown for the fund until it retires from the Index or terminates. A change of mandate, structure, branding or manager does not warrant the removal of historical performance from the index and market information products.

Removed/Withdrawn Funds:

- a. Withdrawal from the Index should be through written communication to both MSCI and AREF and, where possible, one quarter prior to the next Index release. MSCI will communicate the fund's withdrawal to industry participants, complete with reasoning, market information products for the MSCI / AREF UK Quarterly Property Fund Index.

Re-admitted Funds:

- a. Funds wishing to be re-admitted to the Index must provide MSCI with the data to calculate their investment performance during the whole period since their last inclusion in the Index.
- b. Re-admitted funds are subject to the same eligibility requirements as potential new constituents.

Formal communication of a material change in the index composition will be done through an Index Announcement made available at www.msci.com/realestate, in accordance with the thresholds as defined in the Index Review Process in the MSCI Real Estate – Index Policies. For the intended inclusion of new funds in the UK PFI an announcement will be communicated one quarter in advance.

3.3 BALANCED FUNDS

Funds will be classified as either Balanced or Specialist depending mainly on their (self-reported) investor mandates, but also with regard to the classification of the assets currently held. Funds will be classified as Balanced if:

- a. their holdings of either office, retail, industrial or “other” property account for no more than 70% of their portfolio, and
- b. they are also diversified geographically so that no more than 70% of their portfolio is located in any one of the following regions: Central London (comprising the City, Mid-town and the West End), Inner London, Outer London, South East, South West, Eastern, East Midlands, West Midlands, Yorkshire & Humberside, North East, North West, Scotland, Wales, Northern Ireland, Offshore UK (Channel Islands & Isle of Man).

3.4 SUB-INDEXES

The hierarchy of the UK PFI Sub-Indexes is outlined below and are based on the data provider self-reported classification:

MSCI/AREF UK Property Fund Index (also referred to as the MSCI/AREF UK All Property Fund Index)

- a. MSCI/AREF UK Long Income Property Fund Index
- b. MSCI/AREF UK All Balanced Property Fund Index
- c. MSCI/AREF UK Managed Property Fund Index
- d. MSCI/AREF UK Other Balanced Property Fund Index
- e. MSCI/AREF UK Specialist Property Fund Index

Each Index has a base date of 31 December 1989, with the exception of the Specialist Property Fund Index and the Long Income Property Fund Index, which have base dates of 31 December 2001 and 31 December 2011, respectively.

The constituents of each index series are as follows:

- a. **Long income property funds** – Funds that maintain weighted average unexpired lease lengths of over 15 years as of December 2015 (this criterion is reviewed from time to time) qualify for inclusion in this sub-index. Low leverage and a diversified portfolio are further conditions for inclusion within this category.
- b. Balanced Funds – Split into:
 - i. **Managed property funds** – This sub-index includes managed property pension funds, excluding those classified as long income property funds.

- ii. **Other balanced property funds** – This sub-index includes all other types of balanced funds including open and closed-ended property unit trusts, common investment funds, open-ended property companies, partnerships and property authorized investment funds or other suitable structures, excluding funds classified as long income property funds.
- c. **Specialist property funds** – funds that otherwise qualify for inclusion in the Index but do not meet the conditions to be included either as a balanced, fund or as a long income property fund.

3.5 OTHER SUB-INDEXES

3.5.1 LOW GEARED BALANCED PROPERTY FUNDS

Low geared balanced property funds are balanced funds, excluding those classified as long income property funds, whose net debt/equity ratio has been less than 25%, on an average, as at the end of the current and the previous three quarters.

4 Data Provision Requirements

4.1 NET ASSET VALUE REPORTING REQUIREMENTS

In addition to the standard requirements, as part of the MSCI Global Data Standards for Real Estate Investments, there are additional requirements for the Net Asset Value. These requirements are:

- a. Each fund's NAV should be based on the valuation of at least 95% of the value of its property portfolio. The valuation must also cover properties held through joint or indirect investments. Any other indirect property investments, such as shares in listed property companies and derivatives, should also be re-valued.
- b. Constituents of the Index should calculate their NAV data on a consistent basis from quarter to quarter. NAV should be calculated in accordance with the AREF Code of Practice, unless the fund's articles (or equivalent) specifically require an alternative methodology.
- c. All NAVs should use in performance calculations are net of fund management fees.

4.2 INDIRECT HOLDINGS (UNITS IN OTHER FUNDS)

Constituents of the Index must disclose quarterly to MSCI the extent of their holdings in other funds (indirect investments/crossholdings) that are also constituents of the Index. Funds must inform MSCI where the valuation dates of any joint or indirect property investments differ from those of directly-held properties.

4.3 SECTOR WEIGHTING

Clients are required to provide asset level sector allocations based upon the Gross Asset Values (GAVs) of the underlying portfolio. To ensure consistency in the sector weightings reported in the products produced by MSCI, holding of derivative instruments should be recorded allocated to their appropriate sector or segment, whenever possible. Those that cannot be assigned to a specific sector/segment, because they represent a variety of property segments should be assigned to the segment "Other Property Related Securities."

5 Index Calculation Methodology

The MSCI/AREF UK Quarterly Property Fund Index is constructed by applying the unitized computation methodology as detailed in the MSCI Property Fund Indexes Methodology.

5.1 DATA PREPARATION FOR INDEX CALCULATION

5.1.1 CROSS HOLDING ADJUSTMENT

When one fund in the UK PFI has an interest in another fund included in the Index, the second fund's performance will be over weighted unless an adjustment is made. The performance of the fund that is cross-held will contribute directly at a weight of 100% of its total NAV as well as indirectly, with its additional weight depending upon the ownership percentage held within the cross-holding interest. As a result, the performance of the cross-held fund would, if unadjusted, therefore contribute at over 100% of its total NAV in the performance of the overall Index.

MSCI adjusts for cross holdings in the UK PFI by deducting the amount of the investment from the NAV of the fund in which the investment is made. For the UK PFI, the data is collected for the investments in other funds that are parts of the Index, and the above described adjustment is made. This same adjustment is made for all the sub-indexes within the MSCI/AREF UK Quarterly Property Fund Index, whether or not that cross holding is present within any/all of these sub-indexes.

5.2 RULES FOR PERFORMANCE REPORTING

As part of the requirement for inclusion in the UK PFI, data providers agree to disclose their individual fund results and NAV. This means that individual fund results including the NAV are routinely included in market information products. However, MSCI still applies both the standard confidentiality rule (that the minimum number of funds acceptable for index publication is three), and the fund dominance rule (that the maximum weight of a single contributor in any index series must not exceed 75% of index NAV), to determine if index results will be made available.

5.3 FROZEN HISTORY REPORTING

The UK PFI and Sub-Index returns are frozen, which means they have fixed histories and returns will not be updated when new data becomes available or corrections are made, unless the historic corrections need to be restated based on the MSCI Correction Policy. Therefore inclusion of a new fund with historic data does not impact the historic Index returns. The Index was originally frozen in June 2005. From

that date, funds have only been allowed to contribute from their first submission that meets MSCI eligibility requirements. The exceptions to this rule have been as follows:

- a. In December 2012, due to exceptional circumstances relating to the provision of data, the Index was restated to Q3 2012. At this point, historic fund contributions were refreshed to allow for the correction of data errors. The time periods for which each fund contributes remained unchanged.
- b. In January 2019, results were restated to reflect minor data corrections, including certain inputs to cross holdings. This restatement was due to the need to back-calculate indexes on a new technology platform.

Aggregate medians and quartiles for multiperiod results, reported in addition to fund returns, were not based on frozen results until the Q3 2018 release. Starting in January 2019 (Q4 2018 release), aggregate medians and quartiles are calculated based on the frozen results.

6 Governance of the Index

MSCI uses four main committees to provide overall oversight and governance for benchmark administration for MSCI Private Real Estate indexes:

- Oversight as required by EU benchmark regulation and any similar post-Brexit UK regulation (collectively, the “BMR”) is provided by the BMR Oversight Committee (“OC”).
- Governance is provided by the Private Real Estate Index - Risk and Regulatory Committee (“RRC”), the Index Policy Committee (“IPC”) and the Real Estate Index Committee (“REIC”).

All of the committees are staffed solely by MSCI group company employees with extensive relevant experience.

All committee members are expected to act with integrity as is required of all our employees according to our Code of Ethics and Business Conduct posted on www.msci.com, and are subject to MSCI’s compliance policies, including with respect to confidential information and relevant Chinese Walls.

All decisions taken by the committees are the responsibility of their members.

MSCI believes that its editorial and operational independence is critical to its objectivity, efficiency and avoiding conflicts of interest.

7 AREF Research and Information Committee

The AREF Research and Information Committee is an advisory group of users and data providers for the UK PFI. The functions of this group include:

- a. Providing feedback to MSCI on the development of content for the Index.
- b. Providing feedback to MSCI on the inclusion and classification rules for funds within the Index, based on investment mandates and actual data.
- c. Providing feedback to MSCI on changes to the technical specification or the rules of the Index.

MSCI retains complete editorial control over the index.

8 APPENDIX: Versioning Table

Version	Publication Date	Key Changes
V1.0	February 2013	Release of the AREF / IPD UK Quarterly Property Fund Index Rules.
V2.0	June 2019	<p>Changed the name of the methodology from AREF / IPD UK Quarterly Property Fund Index Rules into MSCI/AREF UK Quarterly Property Fund Index Methodology.</p> <p>Removed certain sections that are also part of the MSCI Property Fund Indexes Methodology.</p> <p>Removed sections that refer to the oversight of the UK Property Fund Index Consultative Group (PFICG), whose functions have been assumed by an advisory group, the AREF Research and Information Committee.</p> <p>Added sections on the restatement of Index results in January 2019 and the methodology change for percentile results from the Q4 2018 release.</p>



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