

MSCI/PREA U.S. AFOE Quarterly Property Fund Index (Unfrozen) Methodology

July 2022



Contents	1 Introduction						
	2 Methodology Documentation Set						
	2.1 MSCI Real Estate Index Policies	4					
	2.2 MSCI Property Fund Indexes Methodology	4					
	2.3 MSCI/PREA U.S. AFOE Quarterly Property Fund Index (Unfrozen) Methodology						
	3 MSCI/PREA U.S. AFOE Quarterly Property Fund Index (Unfrozen) Specific Methodology	. 5					
	3.1 Initial Inclusion Requirements	. 5					
	3.2 Change in Composition	6					
	3.3 Index Series	7					
	3.4 Quarterly Eligibility Assessment of Index Constituents	7					
	4 Data Provision Requirements	9					
	4.1 Net Asset Value Reporting Requirements	9					
	5 Index Calculation Methodology1	0					
	5.1 Unfrozen History Reporting1	0					
	6 PREA MSCI U.S. Index Advisory Board (USIAB)1	1					
	7 Appendix1	12					
	7.1 Inclusion Criteria for MSCI/PREA U.S. AFOE Quarterly Property Fund Index (Unfrozen)1	12					
	8 Versioning Table1	13					



1 Introduction

The objective of the MSCI/PREA U.S. AFOE Quarterly Property Fund Index (Unfrozen) ("U.S. AFOE PFI") is to represent the performance of the U.S. based openended commingled real estate funds for institutional investors. The index is value-weighted, based on the Weighted Average Equity of its constituent property funds each quarter and is denominated in United States Dollars (USD).



2 Methodology Documentation Set

The construction and maintenance rules for the U.S. AFOE 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/PREA U.S. AFOE QUARTERLY PROPERTY FUND INDEX (UNFROZEN) METHODOLOGY

This document includes the rules and methods specific to the U.S. AFOE PFI.



3 MSCI/PREA U.S. AFOE Quarterly Property Fund Index (Unfrozen) Specific Methodology

3.1 INITIAL INCLUSION REQUIREMENTS

INCLUSION REQUIREMENTS FOR MSCI/PREA U.S. AFOE QUARTERLY PROPERTY FUND INDEX (UNFROZEN)

In addition to the standard MSCI requirements for property fund indexes (refer to MSCI Property Fund Indexes Methodology for further details), there are additional eligibility requirements for initial inclusion in the U.S. AFOE PFI. The U.S. AFOE PFI comprises of funds that adhere to specific criteria relating to their investment mandate and their structure. For inclusion in U.S. AFOE PFI with history, funds must meet the following criteria based on the latest data at the point of inclusion. Funds must:

- Be a professionally managed pooled/commingled property fund providing access to direct property returns for institutional investors. Fund of property funds, Debt funds and Property derivative funds are not eligible for inclusion within the index.
- Be an Open-ended or Semi Open-ended fund. In case a fund closes to new contributions or redemptions for a sustained period of time, its inclusion in the index will be reviewed.
 - a) Semi open-ended funds are open-ended funds where investors may be subject to an initial "lock up", typically for the first 3 to 5 years of the life, during which either:
 - i. investors are not permitted to redeem their investment
 - ii. redemptions by investors are restricted to a maximum fixed percentage of their investment in any one year
- 3. Have a Gross Asset Value¹ (GAV) greater than USD 150 Million.
- 4. Have at least 95% of the Gross Asset Value (GAV)¹ invested in assets within the U.S.A.
- 5. Have at least 85% of the fund's Gross Asset Value invested in Direct Real Estate properties (by capital value).

¹ Gross Asset Value (GAV) is derived as a sum of Direct Real Estate Properties, Cash, Mezzanine Loans (Debt Investment), Indirect Real Estate , Real Estate Derivatives, Forward Commitments & Other Assets .



- 6. Funds where the General Partner/Manager or equivalent for the fund has a discretionary mandate to manage its investments, are included in the index.
- 7. Fund is incorporated using a recognized legal structure.
- 8. Fund must provide the data to calculate underlying direct property performance measured by MSCI, at least quarterly.
- 9. Funds must provide the data required for fund reconciliation analysis to MSCI, at least quarterly.
- 10. Participating funds must agree for the fund's name, date of inclusion in the index, and date of exclusion from the index to be included in all the index releases and associated materials.

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. For the U.S. AFOE PFI, additional requirements and clarification have been provided below.

New Funds:

a) are required to provide data of their investment performance as per requirements², subject to a minimum of either five years or the period from date of launch of the fund

Removed/Withdrawn Funds:

a) Withdrawal from the index should be through written communication to MSCI

Re-admitted Funds:

- a) In order to be re-admitted to the index, the funds 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.

² refer section 3 of the MSCI Property Fund Indexes Methodology



Formal communication of a material change in the index composition will be done through an Index Announcement made available at www.msci.com, in accordance with the thresholds as defined in the MSCI Real Estate – Index Policies.

3.3 INDEX SERIES

The standard index publication comprises of MSCI/PREA U.S. AFOE Quarterly Property Fund Index (Unfrozen) which is the headline index series of U.S. AFOE PFI and includes funds that meet the criteria for inclusion as defined in section 3.1, of this methodology document. The index measures gross and net of fees total return of property funds and has a base date of December 2007.

3.4 QUARTERLY ELIGIBILITY ASSESSMENT OF INDEX CONSTITUENTS

The fund characteristics may change over time either strategically or temporarily due to market movements or transaction activity. The quarterly review of eligibility is designed to ensure that the index composition is aligned with index inclusion criteria on an on-going basis. An observation period for funds temporarily not-aligned to the index inclusion criteria is aimed at stability of index composition. Both quarterly review of eligibility and observation period ensures on-going review of index composition and reporting using a rules based approach.

Quarterly Review: Following the index inclusion, MSCI reviews the constituent funds of the U.S. AFOE PFI every quarter for their eligibility into the index based on the certain rules, as listed in Appendix 7.1. Any non-adherence to the criteria based on quarterly eligibility assessment of the funds will result in a rules-based index exclusion, subject to the observation period, where applicable.

The rules within the scope of Quarterly Review and Observation Period are listed in Appendix 7.1.

Observation Period is defined as a time window of four quarters in which MSCI will monitor the existing index funds that are in temporary non-adherence to a particular criteria. Any non-adherence to the specific inclusion rule for four consecutive quarters will result in rules based exclusion of the fund in the fourth quarter .



See Exhibit 1 below for illustration of methodology of observation period applicable to the index.

EXHIBIT 1: ILLUSTRATION OF METHODOLOGY - OBSERVATION PERIOD FOR EXISTING INDEX CONSTITUENTS

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Period 8	Period 9	Period 10
Inclusion rule compliance	Yes	Yes	No	No	No	No	No	No	Yes	Yes
(Yes / No)			Observation Period Prior to Exclusion (4 quarters)				Fund excluded from the index		No observation period before Re- admission of fund	
Index Inclusion Status (Yes / No)	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes



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 reporting. These requirements are:

- a) Funds are required to report their NAV at least quarterly and should have done so for the whole of the period of their performance history within the index.
- b) Each fund's NAV should be based on the quarterly revaluation of 100% of the assets and liabilities. 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.
- c) Constituents of the index should calculate their NAV data on a consistent basis from quarter to quarter. The method of calculation should be either based on a recognized methodology as determined by international or local accounting standards or specified in the fund's articles of incorporation.
- d) Constituent funds must agree to disclose the basis of NAV computation to MSCI.
- e) Constituent funds of the index must provide IPD independent confirmation of the fund's NAV. This validation can take the form of an external auditor's statement of NAV or statements of value from an independent external appraiser.
- f) The revaluation of the property portfolio should be undertaken at least quarterly by a third party appraiser.
- g) NAV used in performance calculations is net of fund management fees.



5 Index Calculation Methodology

The MSCI/PREA U.S. AFOE Quarterly Property Fund Index is constructed by applying Modified Dietz computation methodology as detailed in the <u>MSCI Property Fund Index Methodology</u>.

5.1 UNFROZEN HISTORY REPORTING

The U.S. AFOE PFI returns are unfrozen, which means they do not have fixed histories and returns will be updated when new data becomes available or corrections are made. Therefore inclusion of a new fund with historic data impacts the historical index returns. MSCI evaluates from time to time to determine if it is suitable to freeze the Index.



6 PREA | MSCI U.S. Index Advisory Board (USIAB)

The USIAB is an advisory group of users and data providers for the U.S. AFOE 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 sole discretion over the index methodology, its application and any changes.



7 Appendix

7.1 INCLUSION CRITERIA FOR MSCI/PREA U.S. AFOE QUARTERLY PROPERTY FUND INDEX (UNFROZEN)

#	Index Inclusion Rules and Data Requirements	Eligibility reviewed at the point of inclusion	Quarterly review of eligibility	Observation period
1	Fund must be a professionally managed commingled/pooled property fund providing access to direct property returns for institutional investors	Yes	-	-
2	Fund must be Open-ended or Semi open-ended fund	Yes		-
3	Fund must have a Gross Asset Value ³ (GAV) greater than USD 150 million	Yes	-	
4	At least 95% of the fund's GAV invested in assets within the U.S.A	Yes	-	
5	At least 85% of the fund's GAV is invested in Direct Real Estate properties (by capital value)	Yes	Yes	4 quarters
6	The General Partner/Manager or equivalent for the fund has a discretionary mandate to manage its investments	Yes	-	
7	Fund is incorporated using a recognized legal structure	Yes	_	_
8	Fund must provide the data to calculate underlying direct property performance measured by MSCI, at least quarterly	Yes	Yes	
9	Funds must provide the data required for fund reconciliation analysis to MSCI, at least quarterly	Yes	Yes	
10	Participating funds must agree for the fund's name, date of inclusion in the index, and date of exclusion from the index to be included in all the index releases and associated materials	Yes		

³ Gross Asset Value (GAV) is derived as a sum of Direct Real Estate Properties, Cash, Mezzanine Loans (Debt Investment), Indirect Real Estate , Real estate derivatives, Forward Commitments & Other Assets



8 Versioning Table

Version	Publication Date	Key Changes
V1	July 2022	Release of the MSCI/PREA U.S. AFOE Quarterly Property Fund Index (Unfrozen) Methodology



Contact us

AMERICAS

Canada + 1 416 687 6284 US + 1 212 804 3900

realestate@msci.com

+ 44 20 7336 4783

EUROPE, MIDDLE EAST & AFRICA

UK + 44 20 7336 9200

France + 44 20 7336 4783

Germany + 49 691 3385 900

Italy + 44 20 7336 9684

Spain + 34 93 467 7403

South Africa + 27 11 656 2115

Sweden + 46 8 400 252 30

ASIA PACIFIC

 Australia
 + 61 2 9033 9300

 Hong Kong
 + 852 2844 9333

 Singapore
 + 65 6826 9339

 Japan
 + 81 3 5211 1455

ABOUT MSCI

MSCI is a leading provider of critical decision support tools and services for the global investment community. With over 50 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.

The process for submitting a formal index complaint can be found on the index regulation page of MSCI's website at: https://www.msci.com/index-regulation



Notice and disclaimer

@MSCI. All rights reserved. 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 redisseminated 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 Investment 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 investible 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.

NO REGULATED USE OF ANY MSCI PRIVATE REAL ASSETS ESTATE INDEX IN ANY JURISDICTION IS PERMITTED WITHOUT MSCI'S EXPRESS WRITTEN AUTHORIZATION. THE PROCESS FOR APPLYING FOR MSCI'S EXPRESS WRITTEN AUTHORIZATION CAN BE FOUND ON THE INDEX REGULATION PAGE OF MSCI'S WEBSITE AT: https://www.msci.com/index-regulation.

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.