

MSCI Standards for Real Estate Valuations

MSCI Private Real Estate Indexes

November 2023

Contents

Overview..... 3

Direct Property Valuation Standards 3

Supplementary Valuation Standards 5

APPENDIX: Versioning Table..... 6

Overview

For most financial asset classes, investment performance measurement is based upon transaction prices. The relatively low liquidity of private real estate investments renders the establishment of purely price-based property indexes problematic. As a result, the MSCI property indexes are predominantly constructed from professional valuations. The standards for the asset level valuations used in the MSCI property indexes are provided in this document.

Direct Property Valuation Standards

Real estate investment assets are not only illiquid but also extremely heterogeneous, making it difficult to establish purely price-based indexes. Only a small fraction of directly held assets are traded each year (about 5% of the MSCI Global Annual Property Index by value is sold on an annual basis).

Valuations are estimates of prices by professionally qualified valuers (externally or internally produced) based on a set of market assumptions and such recent transaction evidence as is deemed relevant. They are an essential element of financial and investor reporting for the asset class and are produced independently of their use in index construction

Despite the illiquidity and heterogeneity of real estate investments, MSCI property indexes aim to track market movement as closely as possible. MSCI therefore provides the data providers for these indexes with a clear and concise set of standards regarding the type of valuation that should be provided. These standards are based, as far as possible, upon multinational valuation and financial reporting standards.

MSCI also measures and publishes a comparison of the level of prices and values for each national market index annually. This work is reported in the Valuation and Sale Price Comparison Report, which is publicly available on the MSCI website.

The direct property asset valuations that are provided to MSCI must be produced in accordance with the following key principles.

- Valuations should be conducted at least once a year for each and every separate investment asset held within the contributing portfolio, including recent acquisitions and all assets under development or refurbishment, as well as retained investments. A higher frequency may be required for some indexes, and it should be noted that the Global Investment Performance Standards (GIPS)

require formal valuation updates (internal or external) at least once a quarter. Such a regime is also recommended, though not required, by MSCI.

- Open market valuations should be undertaken by professionally qualified and (where appropriate) nationally accredited valuers.
- An internationally recognized definition of Market Value as determined by the International Valuation Standards Committee (IVSC) and adopted by the The Royal Institution of Chartered Surveyors (RICS), the Appraisal Institute and many other national real estate standards organizations is as follows:

“The estimated amount for which an asset or liability should exchange on the valuation date between a willing buyer and a willing seller in an arm’s length transaction after proper marketing and where the parties had each acted knowledgeably, prudently and without compulsion.”

Neither formal accreditation nor the explicit adoption of the IVS is required by MSCI, though its use is recommended. However, a consistent approach, preferably in accordance with a national or international market valuation standard and definition, and one which aims to provide timely best estimates of open market values, is essential.

- The estimates may be produced internally rather than externally, provided that they meet the above specification and are accurately and fully reported to MSCI. However, it should be noted that GIPS now require external valuations to be performed by an independent external professionally designated, certified, or licensed commercial property valuer/appraiser at least once a year. This target is also recommended, though not required, by MSCI.
- Although internal valuations are accepted, if MSCI’s data quality assessment raises doubts about the standard of reported valuations (see MSCI Real Estate Data Provider Code of Conduct), MSCI may request documented evidence from contributors. If no evidence is provided, MSCI may take the decision to exclude the relevant properties from any index.
- No single operational computation methodology, such as income capitalization or Discounted Cash Flow (DCF), is prescribed for the conduct of these valuations.
- Valuations of development assets should be based upon the generic market valuation standards outlined above. However, in some circumstances this is not possible and only book values can be provided to MSCI. In these exceptional circumstances, such values may be used for index calculations.

- If non-market values are provided for owner-occupied properties, or other properties that cannot be traded on the open market, those assets will be excluded from MSCI market indexes.

It may be necessary, particularly in the early stages of market measurement and/or index development, to exempt certain highly specialized real estate investment sectors, principally those where regular open market trading is rare or difficult to delineate (e.g., social housing), from some of the above principles. Such sectors or segments are not combined into broader national or international property indexes until a mainstream open market valuation regime is in place.

Supplementary Valuation Standards

In addition to the valuations of direct property interests, valuations will be needed for other (investment) assets and liabilities held within real estate portfolios and funds. Although those valuations are not used in MSCI's Standard property indexes they will be used in analytic products and services as well as in bespoke indexes. The standards for the valuation of those indirect or financial assets are outlined below:

- Valuations for indirect (real estate) holdings (e.g., interests in pooled real estate funds) should be submitted as the mid-market price or net asset value (NAV) on the last working day prior to the valuation date.
- Valuations of debt liabilities should be submitted as Market/Fair Value, with mark-to-market adjustments.
- Valuations of debt investments (loans to third parties) should be submitted either as mark-to-market values or at cost, whichever is used in the vehicle NAV calculation.

APPENDIX: Versioning Table

VERSION	PUBLICATION DATE	REVIEW DATE	KEY CHANGES
V1.0	January 2019		First release of separate document, which was previously partly included in the MSCI Global Methodology Standards for Real Estate Investments and in the MSCI Global Data Standards for Real Estate Investment.
V1.1	June 2019		Name of the document changed from MSCI Requirements for Real Estate Valuations into MSCI Standards for Real Estate Valuations

Contact us

realestate@msci.com

+ 44 20 7336 4783

AMERICAS

Canada + 1 416 687 6284

US + 1 212 804 3900

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 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.

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>.