IPD® Global Data Standards

MSCI Research

August 2015

Summary: May-June 2015 Consultation

Real estate is becoming an increasingly global asset class with new markets maturing rapidly and cross-border investment increasing. However, the asset class remains diverse, with many standards and conventions in existence across markets. In order to promote global consistency and comparability, we at MSCI are now reviewing and standardizing our methodologies globally. As part of this project, several methodological changes were proposed and made available for comment through world-wide public consultations in March and October 2014 as well as in January and May 2015. The purpose of this note is to summarize the feedback from the May 2015 consultation, and explain how we plan to incorporate it in the proposals.[1]

We greatly appreciate the consideration that has been given to the proposals and the range of comments that have been received. In the course of this note we make reference to specific elements of feedback, summarizing these where appropriate. In order to encourage frank and open feedback, we have anonymized the individual contributions.

The proposed changes covered by the May 2015 consultation focused on the following eight areas:

1. Interpolation
2. Valuation Filtering
3. Reweighting to Market Sizes
4. Capital Growth Analysis
5. Geographic Classification
6. Asset Strategy Classification
7. Portfolio Dominance Policy
8. Sample Composition

The subsequent pages provide a summary of the feedback and MSCI's planned course of action in each of the above areas. IPD®

[1] Copies of the consultation documents and feedback notes can be found on MSCI's IPD Reporting Portal at https://padlock.ipd.com (registration required).

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We welcome further feedback on the specific proposals and plans. Please contact your client consultant if you wish to provide additional comments or discuss these issues further.

1. Interpolation

a. Feedback overview

Most respondents supported the proposed use of interpolation across all markets on the basis that it should provide for more comparable analyses. However, there were concerns about the shaping proposals, particularly in the UK where a move to sector level quarterly shaping proved controversial. In addition, some respondents did not favor restating historical indexes and benchmarks using the new methodology.

MSCI believes that it should be possible to implement this proposal historically with minimal disruption, but will work with clients to manage the transition and explain historical revisions resulting from the change, with the retrospective interpolation taking place as a one-off event. In the future, methodological changes will only be implemented prospectively for indexes. Regarding the change in the UK, we believe that greater consistency should not be achieved at the expense of accuracy.

b. Specific feedback

Comment 1: Application of interpolation to capital expenditure and revenue

“Will the proposed interpolation methodology be applied to capital expenditure or revenue?”

MSCI response: No. These fields are collected for every reporting period and therefore do not need to be interpolated. Interpolation is only required for capital value, since assets are not necessarily valued at every reporting period. For individual months within a reporting period, if expenditure and revenue figures are not broken down by month, MSCI assumes that they are equally spread over the months concerned.

Comment 2: Change to shaping in the UK indexes

“It is strange to move the interpolation driver away from the segment level to sectors in the UK and also from a monthly to a quarterly interpolation driver. Given that the UK has the ability to use monthly interpolation, why not do so? In our view this is a regressive step for the UK market.”

MSCI response: The objective of this change was to strike the right balance between accuracy and global consistency. Simulations using historical data show that for the quarterly index in the UK, discontinuing the use of the monthly index as a driver at segment level has an impact of less than 2 basis points in any year. We do not therefore believe that this proposed improvement in consistency will be obtained at the expense of accuracy.

Comment 3: Inconsistency of treatment for markets without quarterly indexes

“We feel that applying shaping to countries where quarterly indexes exist, but not in other countries, represents a source of global inconsistency.”

MSCI response: While the proposal will introduce some inconsistency across MSCI’s annual indexes, with a number being subject to shaping and others not, we believe that the added value from shaping justifies its use in

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those markets where it can be applied. Rather than blindly standardizing, we have chosen to adopt best practice by using the best available information.

Comment 4: Impact of historical restatement

"We are concerned about the impact on benchmark history. While we understand the logic behind keeping the basis for index calculation consistent, and would thus not object to historical restatement of the index, we do feel that restatement of historical benchmark data would lead to unnecessary confusion when reporting to investors."

MSCI response: We recognize that most clients are concerned by the restatement of frozen indexes and by changes to index composition when a methodological change is implemented retrospectively or when new portfolios are included in the index history. This proposal does not affect our on-going restatement policy, but rather represents a one-off restatement that will occur in Q1 2016, as a result of the standardization of our methodologies. After this one-off restatement, methodological changes affecting frozen indexes will only be implemented prospectively.

Comment 5: Explanation of the 56bps impact on the UK annual index in 2013

"In the table of historical simulations, you show that the maximum impact on the UK annual index is 56 basis points. What underlies this number, which is quite large in the context of an All Property index?"

MSCI response: This difference is due to the monthly-shaped UK capital value growing faster than the quarterly-shaped capital value in the fourth quarter of 2013, driven primarily by offices in the London Mid Town and West End market segments. The slight frontloading of capital growth under the quarterly shaping resulted in a 56 basis point difference for the year.

Comment 6: Use of interpolated figures for volatility calculations

"Please consider the view that the interpolated figures should not be used for volatility analysis."

MSCI response: Volatility measures are designed to be calculated using only genuine data points, not derived ones.

2. Valuation filtering

a. Feedback overview

Most respondents supported MSCI's proposal to stop carrying forward market values of properties where valuations are not available at the required reporting date. Consequently, we intend that the proposed standard be applied to all indexes. However, we will consider exceptions to this methodology in markets where non-synchronous valuations exist and are a generally accepted feature of market reporting.

With the implementation of valuation filtering, funds whose valuation regimes are out of sync with the index will be asked by MSCI to provide internal valuations in line with the index frequency. Portfolios with out of sync valuation regimes that cannot provide internal valuations for the required dates will be excluded from indexes but, MSCI will provide a custom benchmarking substitute so that no contributor is excluded from benchmarking services. The change will be implemented to indexes prospectively.

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b. Specific feedback

Comment 1: Systematic restatement

"We are concerned that this proposal, in conjunction with interpolation, will introduce systematic restatement of returns as-and-when an asset's valuation date is passed, so that its valuation can be retrospectively interpolated and included in a previously published return."

MSCI response: This kind of systematic restatement would only apply in markets with non-synchronous valuation regimes; MSCI therefore intends to apply it as standard methodology. However, we understand that for some respondents in markets with non-synchronous valuations, historical changes caused by the retrospective inclusion of interpolated values may create undesired variations in unfrozen benchmarks. From 2016, MSCI intends to address this key concern by freezing indexes performance history. In the interim, the implementation of the proposal will translate into some level of historic volatility for unfrozen indexes, but we are confident that this volatility should be very modest.

Comment 2: Sample size versus smoothing

"Assuming a general upward trend in real estate values, excluding held down assets is likely to overestimate the performance of a market since it underestimates the average invested capital."

MSCI response: The proposed exclusion of held down values will not introduce any systematic bias in the indexes. In fact it will result in estimates which are more representative of genuine market movements.

The question of whether to include held down values depends on a tradeoff between sample size and index accuracy. Including held down asset values increases the sample size, but using these out-of-date valuations introduces lags and smoothing into the index. From a statistical point of view, we therefore believe that the index calculation should only use genuine valuations.

From a benchmarking point of view, carrying forward capital values for a significant number of properties may cause a portfolio to systematically underperform in rising markets and outperform in declining markets.

Comment 3: Reweighting

"In the event that the sample of revalued assets is substantially different to the composition of the overall index, this could result in a bias. Would MSCI consider reweighting to adjust the revalued sample in these circumstances?"

MSCI response: MSCI has not explicitly considered reweighting in such situations, but the proposals discussed below could provide some protection from bias in the revalued sample at a national level.

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3. Reweighting to market sizes

a. Feedback overview

Feedback on this item was generally positive, as both proposed options allow for a better alignment with equity measurement practices and more transparency of weights in advance of their implementation in the performance measurement period.

Most respondents did not have a strong preference between Option 1 (weights determined during the measurement period) and Option 2 (weights determined 7 to 8 months ahead of the measurement period). When indicating a preference, a narrow majority preferred Option 1, believing that Option 2 was harder to explain and that replicating indexes was not a practice they were planning to adopt at present. Nevertheless, some strong support for Option 2 was received from clients who wish to pursue index tracking investment strategies.

On the balance of the arguments, MSCI has decided to treat Option 1 as the default, but will also provide Option 2 on a custom basis to investors who request it. Option 1 will therefore be used as the basis for the IPD Global Index but both Options 1 and 2 will be available for calculating benchmarks.

b. Specific feedback

Comment 1: Application to pan-European index

"Will the reweighting methodology at European level follow the same methodology?"

MSCI response: Yes, all reweighted MSCI indexes, including the Global Index and the Pan-European Index, will employ this methodology.

Comment 2: Passive investing in real estate

"We favor Option 1 as we don't believe that there is any passive investing in real estate."

MSCI response: MSCI understands that passive investing or index tracking is not as common in private real estate as in other more liquid asset classes. However, we have received feedback from investors who are currently or are considering implementing passive investment strategies. With the increasing sophistication of the market, MSCI expects index tracking to become more common in future.

Comment 3: Lag in Option 2

"We are concerned by the lag in Option 2 between the publication and implementation dates. We would also like to know how Option 2 will work if exchange rates move."

MSCI response: The lag between the estimation of market sizes and their implementation is longer under Option 2, but the slow evolution of real estate markets should mean that the impact on weights is relatively small. In order to avoid large currency impacts, MSCI will announce market sizes in local currency terms but calculate weights by applying the exchange rate for the calculation period. For example, if the market size estimated at December 2015 is used as the basis for the 2017 weights, it will be converted using 2017 exchange rates. Market size esimates will therefore give some forward indication of weights, but actual weights will not be fixed and movements in exchange rates through 2016 will not bias the 2017 weights.

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Comment 4: Bottom up estimation

"By taking a bottom-up approach, MSCI measures only the size of institutionally owned properties when it should measure the size of institutional grade properties. This renders MSCI estimates dependent on ownership structures. Consequently it underestimates the size of the opportunity set in emerging markets – where institutional penetration is low – and overstates it in more transparent markets."

MSCI response: Our estimate is focused on the size of the professionally managed real estate market, as we believe this represents the opportunity set accessible to most investors (comparable to the free float of equity indexes).

MSCI will however also consider developing an additional set of market estimates to reflect long-term investment potential.

4. Capital growth analysis

a. Feedback overview

Virtually all participants agreed that analysis of the sources of capital growth was an important question, both for themselves and the wider market. The proposal to globally standardize the analysis using reversionary yield and market rental value was welcomed for the increased transparency and comparability it would bring. Similarly, the decision to continue providing an additional local breakdown for the UK and Irish markets based on equivalent yield was welcomed, as this is still considered an important measure in those markets.

b. Specific feedback

Comment 1: Default reporting for UK and Ireland

"The components of capital growth are important measures that we place value upon. The aim of a globally consistent capital growth breakdown is a good idea as it will allow for a direct comparison between markets that is not currently available. We do, however, feel that equivalent yield is still the best measure for the UK market as it utilizes all available information from leasing and projected cashflows. Our main questions are 1) is reversionary yield now going to be the default position for the UK with equivalent yield as an additional measure or vice versa? and 2) when UK benchmark reports are published, will the main analysis now be done using reversionary yield?"

MSCI response: MSCI has not yet finalized its reporting templates, but in theory analyses based on both equivalent yield and reversionary yield could be provided by default to UK clients.

Comment 2: Residual impact

"The capital growth breakdown is difficult to explain to clients and the residual is usually material as well as hard to explain. It is not easy for clients to leverage our existing analysis of capital growth and so the whole methodology should be revised."

MSCI response: As with any analysis on aggregate data, there will always be a residual component that cannot be fully explained. However, MSCI considers that it is better to publish the residual than to artificially allocate it to the income growth or yield components. Nevertheless, MSCI will continue to work on a model that provides more explanatory power into the drivers of capital value change, and reduces the significance of the residual.

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5. Geographic classification

a. Feedback overview

Most respondents were supportive of the geographic hierarchy proposed. There were no specific objections. Consequently, MSCI will implement the proposal.

b. Specific feedback

Comment 1: Current geographic segmentations

"Will the geographic submarkets which are defined today continue to exist?"

MSCI response: Yes, current geographic submarkets will continue to exist as pre-defined segmentations.

Comment 2: Example classification

"Could you please provide concrete examples for properties located in Germany (e.g. Munich) and France (e.g. Paris)? I would like to better understand the cluster above and below city level."

MSCI response:.

Here are the examples

	Munich	**Paris**
Level 3	Deutschland	France
Level 4	Bayern	Ile-de-France
Level 5 (US specific)	N/A	N/A
Level 6	Oberbayern	Ile-de-France
Level 7	München	Paris
Level 8	München, Kreisfreie Stadt	Paris
Level 9	München, Landeshauptstadt	Paris
Level 10	Postal codes	Arrondissement (e.g. 1er)
Level 11		Quartier (Les Halles)

Comment 3: Real estate submarket classifications

"Administrative borders have little value compared to real estate market segments defined by the real estate industry (economic submarkets). Is there any plan to develop such a classification of real estate submarkets?"

MSCI response: Yes, our next objective is to develop the current real estate submarket classification further.

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Comment 4: Implications for data contribution

“Will clients have to provide additional information?”

MSCI response: No, the classification will be derived from address fields. Consequently, MSCI’s scrutiny of the quality of data provided in these fields will increase.

6. Asset strategy classification

a. Feedback overview

Overall, respondents welcomed the proposal to analyze the contributions of different asset-level strategies to performance. However, a number of comments were received concerning the implementation of this proposal. When applying this new methodology, MSCI will take careful consideration of these remarks.

b. Specific feedback

Comment 1: Strategies are not discrete

“It will be difficult to put a property into one category alone since they are not discrete. Generally, there is no single strategy implemented, but a combination. For example, while it is good to have greening as a separate category, it might be hard in practice to separate it from the other statuses, given that greening is an important consideration in all investment decisions (regardless of strategy) but is nevertheless not the most important consideration.”

MSCI response: We appreciate that strategies may be combined. MSCI will consider either allowing for multiple responses, or asking clients to decide on a prevailing strategy.

Comment 2: Strategies change over time

“The strategy of a property may change over time based on external and property related changes. For assets that were bought 15 years ago, the strategy may not be what it originally was. Shouldn’t you set a time horizon for the strategy (e.g.,the next 2-3 years)?”

MSCI response: MSCI will consider shifting to a classification that is not fixed at the date of acquisition, but rather can be updated over time.

Comment 3: Income plays

“The proposed classification is mostly focused on strategies involving capital events. What about income plays? For example, in case the case of short leases (2-3 years) or break options, we could think of a strategy of vacancy followed by lease re-gearing.”

MSCI response: MSCI will consider adding income play strategies to the current classification.

Comment 4: Classification in terms of core, value added and opportunistic

“What about having a classification using the concepts of core, value added and opportunistic?”

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MSCI response: Core, value added and opportunistic are investment styles that apply at the fund level rather than the asset level. These styles form part of our fund level classification (see P29 of the October 2014 Consultation).

Comment 5: Relationship of strategy classification with risk level

"If the categories are ordered from less capital intensive to more capital intensive (and therefore more risky), should redevelopment not then come after rehabilitation?"

MSCI response: This is reasonable. We will change the order to be more intuitive.

Comment 6: Development definition

"We are concerned that MSCI systematically understates development performance. In a previous study, MSCI showed that developments were systematically underperforming. In addition to being erroneous, this conclusion is dangerous as it could deter investors from taking development risks.

MSCI should make the distinction between two types of developments: 1. Properties that will be fully let at completion (e.g. pre-let offices): here value is recognized during the development cycle, and measuring year-on-year performance makes sense, 2. Properties that will be let once completed, (e.g. retail properties): here value is recognized after completion or even one year later. In this case, since inception performance makes sense, year-by-year performance measurement does not."

MSCI response: MSCI will consider distinguishing between these two types of development, and will review the assumptions of the study referred to above as soon as the opportunity arises.

Comment 7: Data collection

"Will data collection for this classification be a one-off requirement, or will it have to be provided on an on-going basis?"

MSCI response: In its current state, the proposal is for one-off data collection. But if we decide, as suggested above, to allow for updates to the strategy, then some on-going data provision will be necessary. However, given that by definition, strategies do not change every year, the additional data requirement should be modest.

7. Portfolio dominance policy

a. Feedback overview

The overwhelming majority (94%) of respondents supported a dominance threshold of above 50% but less than or equal to 80%: three quarters of these respondents were in favor of a dominance threshold of 80%, but a quarter considered the proposed 80% threshold to be too high, both from a confidentiality and robustness point of view.

Only 6% of respondents requested a threshold lower than 50%. Here the reason stated was not confidentiality, but rather the robustness of the indexes, as these contributors preferred to have indexes with less concentration of data from single sources.

In order to provide a balance between these positions, MSCI will implement the following method:

- The dominance threshold will be lowered to 75%

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- MSCI will consider providing an indication of portfolio concentration for its indexes, which will allow users to make informed judgments in this context.

b. Specific feedback

Comment 1: Confidentiality

“We believe that 80% is too high from a confidentiality viewpoint and would be more comfortable with a threshold around 70%. What about a situation where there are three funds, the largest of which represents 75% of index value, the second 20% and the third 5%, (i.e. is negligible)? If the name of the largest fund is publicly known, then it could be argued that the second fund is in a position to estimate the performance of the dominant portfolio.”

MSCI response: MSCI will implement a lower dominance threshold than initially contemplated.

The case described above is not impossible, but is likely to be very rare. MSCI does not believe that devising a global rule which would drastically restrict information availability in order to cover such a rare event would be reasonable.

To elaborate, there is no direct relationship between confidentiality and portfolio concentration. Restricting portfolio concentration will reduce data availability and granularity, but is unlikely to protect confidentiality effectively.

Comment 2: Robustness

“Our concern is not that people would try to re-engineer results to determine a specific portfolio’s performance, but that at 80% dominance we wouldn’t be seeing true market performance. We do not want to use unreliable indexes either for strategy definition or for benchmarking. So, we propose a 50% threshold to mitigate this risk.”

MSCI response: In addition to lowering the dominance threshold to 75%, MSCI will explore ways of providing clients with more information on portfolio concentration, through an indicator that remains to be defined, but will not be the value of the maximum portfolio weight as initially proposed (see comment 4 below).

That said, the existence of high ownership concentration in an index does not necessarily imply a lack of robustness. Indeed, ownership structure should not in itself be assumed to imply a systematic bias in measured performance. Assessments of robustness should instead be based on a comparison of index composition with that of the underlying market (in terms of asset types and fund investment styles) rather than on ownership concentration.

Comment 3: Loss of market information

“We are concerned that setting a dominance threshold which is too low could lead to a substantial loss of market information, particularly in smaller markets where it is most needed.”

MSCI response: This is a legitimate concern. We believe that the proposed threshold now strikes a good balance between requirements for data availability on the one hand, and robustness and confidentiality on the other. Fortunately, higher portfolio concentrations are not necessarily seen in smaller markets, but in countries where market depth allows for granular segmentation.

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Comment 4: Publication of maximum portfolio weight

"We are not comfortable with the proposed disclosure of the maximum portfolio weight."

MSCI response: MSCI is no longer proposing to publish the maximum portfolio weight and will instead consider other measures for providing clients with an indication of ownership concentration in its indexes and benchmarks.

8. Sample composition: consistency of total, income and capital return samples

a. Feedback overview

The consensus of clients was that the consistency of samples for total return and its constituents (income return and capital growth) was more important than maximizing the sample for each measure. Therefore, MSCI will implement the proposal by which an asset must contribute to both income return and capital growth calculations in in order to contribute to MSCI indexes.

b. Specific feedback

Comment 1: Impact on historical benchmarks

"We are concerned about the impact on benchmark history. Restatement of historical benchmark returns could cause confusion."

MSCI response: The number of assets affected by this proposed change is very small and therefore should only have a very minor impact on historical performance. Furthermore, this will be a one-off change. MSCI believes that it should be possible to implement this proposal historically with minimal impact, but will work with clients to manage the transition and explain any resulting historical revisions.

Comment 2: Cross product

"We support the change but think that it does not go far enough. We believe that income and capital growth should sum to total return over any period."

MSCI response: MSCI calculates private real estate returns on a monthly time-weighted basis. This means that at the monthly frequency, total return equates perfectly to the sum of income return and capital growth. However, for periods longer than a month, the total return will not necessarily equate to the sum of the income return and capital growth due to the existence of a cross product which arises when compounding monthly total returns.

When two or more monthly total returns are chain-linked, both capital and income are re-invested at the rate of total return. This means that in addition to investing capital in more capital and income in more income (as happens when capital growth and income return are individually chain-linked), capital is also reinvested in income and income in capital.

Using a simple two month example, the calculation below highlights the cross product terms in red:

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$$TR_{1,2} = 100 * \left(\left(1 + \frac{tr_1}{100}\right) * \left(1 + \frac{tr_2}{100}\right) - 1\right) = 100 * \left(\left(1 + \frac{cg_1}{100} + \frac{ir_1}{100}\right) * \left(1 + \frac{cg_2}{100} + \frac{ir_2}{100}\right) - 1\right)$$

$$= 100 * \left(1 + \frac{cg_2}{100} + \frac{ir_2}{100} + \frac{cg_1}{100} + \left(\frac{cg_1}{100} * \frac{cg_2}{100}\right) + \left(\frac{cg_1}{100} * \frac{ir_2}{100}\right) + \frac{ir_1}{100} + \left(\frac{ir_1}{100} * \frac{cg_2}{100}\right) + \left(\frac{ir_1}{100} * \frac{ir_2}{100}\right) - 1\right)$$

The impact of these cross product terms can vary depending on market conditions, but is generally very small. MSCI intends to continue using a monthly time weighted calculation methodology, and therefore total return will not always equate exactly to the sum of income return and capital growth for quarterly, annual or any other frequencies of longer than one month.

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