IPD Global Data Standards

Bringing global consistency to real estate performance measurement

Summary: March 2014 Consultation

Real estate is becoming an increasingly global asset class with new markets maturing rapidly and cross-border investment increasing. However, real estate can be an extremely diverse asset class with many standards and conventions across markets. In order to promote global consistency and comparability, MSCI is in the process of reviewing our methodology through a Global Data Standards project. As part of this project, several methodological developments were proposed and made available for comment through an initial public consultation in March 2014. The purpose of this note is to summarize the feedback, and explain how we plan to incorporate the proposals.

As the first of several planned consultations, we prepared some succinct and high level material, and invited a small number of clients to discuss in detail with us. We greatly appreciate the consideration that has been given to the proposals and the range of comments that have been received. Through this note we make reference to specific elements of feedback, and summarize the feedback where appropriate. In order to encourage the provision of frank and open feedback, we have anonymized the individual contributions.

The proposed changes in this first consultation focused on establishing a list of key global financial variables; developing a performance methodology excluding currency impacts (“local currency benchmarks”); standardizing the methodology for index reweighting; and standardizing fund level performance globally.

The following pages provide a summary of the feedback and MSCI’s planned course of action. The three areas of feedback covered in this document are:

1. Reweighting
2. Currency Conversion
3. Fund Level Total Return Formula

We would welcome any further feedback on the specific proposals and plans so please contact your client consultant or send an email to feedback@ipd.com should you want to provide additional comments or discuss further.

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FEEDBACK SUMMARY AND NEXT STEPS

REWEIGHTING

a. Feedback overview

Clients broadly welcome the decision of shifting from capital value to capital employed for computing multipliers used in an index rebalancing methodology. As a consequence, MSCI plans to introduce the proposed changes.

Specific points were raised in relation with the market sizes estimates - used in the reweighting process for MSCI's multinational aggregates - and with the detailed calculation of the monthly values of the market sizes derived for each month between two estimates, as explained below.

b. Specific feedback

Feedback 1: Abrupt changes in market size estimates

The series of market size estimates prior to 2013 reporting showed particularly large historical variations for example for Ireland, Japan and Korea. In addition, in 2013 there was a large amount of historical restatement.

> *"We have noticed that MSCI's weights have not only changed prospectively, but that they have also changed retrospectively. Other than for correction of errors, changes to weights should only be adopted prospectively, NOT retrospectively.*
>
> *We are also concerned that by avoiding tracking error, as our target allocation is the global index neutral weights. When there is a dramatic change in weights (ex: Ireland weights multiplied by 2), we would like MSCI to announce the change several months in advance in order to leave us enough time to rebalance our portfolio."*

MSCI's response:

The measurement of overall market size is undertaken by building up an estimate of the total value of the professionally managed real estate investments located in each national market, based on the records of all eligible (See Note 2) portfolios, whether or not their management is domiciled in the countries concerned. These estimates utilise publicly available information to supplement the private information which MSCI holds on portfolios, either currently measured or eligible for measurement.

Prior to the 2013 estimates, large variations observed in market size estimates year-on-year have been mainly due to the lack of consistency in including foreign-owned assets and assets owned/acquired by banks. It was an example of the latter that caused a sharp variation in market size estimate in 2013 for Ireland. In year 2013, c. 7 billion Euro of assets previously considered as non-professionally managed were added to the investment universe (c. 5 billions Euro in 2012), causing a jump of 200% in estimated market size.

For the 2013 estimate, a more globally consistent, coordinated and exhaustive approach to market size estimation was deployed, based upon a rigorous research study and report. The improvement to the 2013 market size estimate has been accompanied by a restatement of historical estimates to remove inconsistencies in the time series.

This history restatement has been achieved by back-indexing historically from 2013 estimates using published country level MSCI capital value growth rates in order to generate consistent annual historic estimates for each country.

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The step-by-step process has been:

i. Estimate each individual country's market size in local currency as at end 2013

ii. Convert 2013 market sizes to US dollars using prevailing market exchange rates as at December 31st 2013

iii. Apply MSCI annual capital growth rates, denominated in US dollars, back-indexing from 2013 country by country

In some years, estimated market capital values show large variations, but those variations are now due to market driven changes in local currency capital values and to changes in exchange rates. (See Exhibits 1 and 2).

The new methodology designed in 2013 is an improvement to past practices. In order to further enhance the robustness and lower the volatility of its market sizes estimate, MSCI is conducting a review of its methodology and data collection process.

This historical restatement is intended to be a one-off change. In future up-to-date market size estimates will be appended to the new time series produced in 2013. Consequently, changes in market sizes should happen prospectively only.

That said, since the global index is unfrozen, overall market capital employed estimates may show minute changes retrospectively due to changes in capital employed adjustment factors (resulting from changes in MSCI sample capital employed and capital values due to the inclusion of new contributors and their historical portfolio information).

Material changes in weights cannot be completely ruled out and MSCI will consider defining a policy for announcing prospective changes in weights that is consistent with MSCI standards and provide enough time for clients to rebalance their portfolios. This announcement should also be an opportunity for MSCI to enhance transparency by outlining the rationale for a prospective change in advance.

Feedback 2: Monthly changes in market sizes and weights

> *"The full series of market size estimates show small month-on-month variations. This was observed most particularly for the Japanese market. Intuitively, if market size estimates are converted into USD, and then linearly interpolated, these estimates should track straight lines trends, and should not fluctuate month-on-month."*

MSCI's response:

In March 2014, MSCI took the decision to shift from a multiplier based on overall capital values to one based on capital employed in order to better reflect the practice used in our return calculations. Overall market capital employed is thus estimated by assuming that the ratio of capital employed to capital value is the same in the overall market as it is in the MSCI sample.

$$Target\ Capital\ Employed_t = Target\ Capital\ Value_{t-1} \times \underbrace{\left[\frac{IPD\ Capital\ Employed_t}{IPD\ Capital\ Value_{t-1}}\right]}_{Adjustment\ Factor}$$

The variables of this adjustment factor are converted into USD.

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The non-linear shape observed in levels of monthly capital employed are the results of changes in Adjustment Factor, and which is not considered as an issue by MSCI.

Feedback 3: Correlation between the overall market sizes estimate and MSCI sample size

> *"We have observed strong correlations between the overall market size estimate and MSCI's total sample value at the annual level. The calculation of correlation coefficients based on non-interpolated estimates shows a correlation close to 1 in all countries." (see Exhibit 3)*

MSCI's response:

Although overall market and MSCI sample sizes should show some level of correlation since patterns of changes in capital values should be close at the overall market level and in the index (if the index is truly representative of the overall market), correlation is expected to be lower than 1. This is because MSCI sample sizes should also be affected by changes in coverage ratios resulting from the entry or exit of contributors to the index.

The reason for this abnormally high level of correlation relates directly back to the method change described in Feedback 1. Overall market estimates prior to 2013 have been historically re-calculated using 2013 overall market estimates using the MSCI sample capital value growth rates.

Such a high correlation between overall market size estimate and MSCI sample size is a one-off issue, and results from the historical re-calculation method used to derive a consistent history prior to 2013. Going forward, the investment universe will be independently re-estimated each year based on freshly collected bottom-up market evidences. Consequently, there should be independence between market size estimate and MSCI sample rates.

Although the investment universe weighting is central to the production of the Global Index, MSCI is open to considering alternative ways of rebalancing indexes, which is particularly relevant given the increased interest in creating new index series.

Feedback 4: Possible inconsistency between multiplier calculation and reweighted measures

> *"We suspect that the 'filtering' of assets (to screen out active management and non-market impact) from the Global Index may cause a disconnect between the multiplier and the size of the sample on which the rebalanced measure is based.*
>
> *Let's assume an example where the multiplier calculation occurs pre-filtering. Market A represents 10% of the entire universe capital value in MSCI (before any asset filtering), but 20% of the overall market size. Based on this, the multiplier is 2. Meanwhile, after filtering Market A represents within MSCI only 8% of the universe capital value. The target weight remains 20%, but by applying multiplier = 2, the rebalanced weight is 16%."*

MSCI's response:

The method used in the Global Index is the legacy multiplier method that consists of scaling up return numerators and denominators by the ratio between the estimated overall market capital value and the MSCI sample capital value pre-filtering (including both standing investments + transactions and developments).

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This multiplier is then applied to the numerator and denominators of the sample of the standing investments assets used for return calculations in the Global Index. The multiplier and the sample are consequently not consistent.

In the new standard reweighting methodology (adopted in 2014), the reweighting will be calculated post-filtering, therefore different multipliers can be used for reweighting a market index result and an all-property benchmark result.

Moreover, with this new methodology, the multiplier becomes a non-issue for the main performance measures (total, income and capital returns): the multiplier is calculated as the ratio of the target weight (overall market weight) over the weight of a market within the MSCI sample. This multiplier is then used at the asset level. By doing this, the multiplier should simplify into weighted results based on target weights (See Note 2).

From a return measurement view point, the asset multiplier operation thus seems unnecessary, and MSCI may consider simplifying its process by reweighting results rather than assets (as in the Equity business). That said, before making that decision, MSCI will need to conduct a full industry consultation, and assess the consequences of changing this procedure upon other measures, the implications in terms of possible loss of flexibility and development costs.

Feedback 5: Fixed FX conversion applied to overall market estimates

> *"FX conversion applied to overall market estimates is suspected by to be held constant over 2013, while we could expect that it changes given that the performance reported is not hedged in any way."*

MSCI's response:

The constant and thus counter-intuitive monthly FX rates observed in 2013 result probably from the process of calculating interpolated overall market sizes. As described above, overall market size estimates are first converted into USD, then interpolated. Consequently, the inferred FX rate in any month is the interpolated result of the difference in FX rates between year start and year end, and not the real FX rate of that month.

MSCI may consider reviewing and consulting upon the method /process for the calculation of the intervening monthly overall market capital employed estimates. An alternative might be: 1) interpolation of estimated capital values in local currency, 2) corresponding adjustments to capital employed, 3) USD conversion of monthly estimated overall market capital employed. This would also make more sense from an internal standardization point of view, since this process would become consistent with the way asset level capital employed is treated within the IDP sample.

CURRENCY CONVERSION

a. Feedback overview

There was no objection to MSCI's proposed methodology for reporting performance without currency impact "local currency reporting". As a consequence, MSCI plans to introduce the proposed changes.

Specific issues where raised on the variable currency conversion, on the data collection standard and on the possibility of isolating the effect of currency conversion at the asset level.

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b. Specific feedback

Feedback 1: Variable currency conversion formula internal consistency

> *"In the FX converted total return calculation, CAPEX are converted using the current month-end rate. This is not internally consistent, given that in CAPEX are assumed to occur at the beginning for the month. Thus, they should be converted using the previous month-end FX rate."*

MSCI's response:

This is correct. MSCI will consider changing the timing of the currency rate for CAPEX conversion.

Feedback 2: Is real estate variable currency rate conversion consistent with the equity business practices

> *"For equities, MSCI converts the total return of an index by compounding total returns denominated in local currency and the change in FX rate over the same period. By contrast, MSCI converts the each variable for each individual assets and then performs total return calculations. Do both approaches yield indexes that are comparable?"*

MSCI's response:

Where possible, MSCI strives to align practices between our real estate indexes and MSCI equity indexes. That said, MSCI believes that for currency conversion, real estate market peculiarities warrant some divergence and we believe that this will not impair the comparability of real estate and equity indexes.

There are mainly two reasons for deciding to retain currency conversion at the asset level for real estate:

- Data contributed for assets located in the same market are not necessarily provided in the same currency (ex: UK assets data provided in Euro). Consequently, we need to retain the capacity to convert assets, not only indexes.
- Result level conversion does not allow for a separate income return calculation: the only way to calculate converted income returns is to estimate total and capital returns, and then calculate income return as a residual difference. This calculation is not compliant with the Global Investment Performance Standards, which recommend that the components of total return should be calculated separately and not by difference.

In addition to the above, simulations show that, adjusting to currency rate timing for CAPEX as suggested in Feedback 1, there is no theoretical difference between the real estate and equity approach.

Feedback 3: Other points

> *"Currently, all assets are reported to MSCI in Euros. Is this optimal?"*
>
> *"At asset level I would like to distinguish real estate performance from FX rate change impact"*

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MSCI's response:

All information should be reported in local currency. It is possible to distinguish currency conversion effect at the asset level by looking at the difference between local and foreign currency denominated performance.

FUND LEVEL TOTAL RETURN FORMULA

The proposal is to move away from a (unitized) average investor return to a fund return, which is consistent with the Portfolio Analysis Service. The formula has also been slightly modified to better follow principles set out by GIPS.

a. Feedback overview

The new fund-level total return formula has been presented to most services where a Property Fund Index exists. Overall, the proposed formula has been welcome, with the exception of the UK, where PFI participants worry that the new formula may not take full account of the complexity of their market. In services where the proposed formula has been validated, the methodology will be implemented in mid-2015. In the UK however, MSCI has decided to take a staged strategy. The current methodology will be maintained for the full year 2015 but the new methodology will be run in parallel in order to test its full impact.

b. Specific feedback

The specific feedback has come mainly from the UK Consultative group. Their main concern is the proposal to remove unitisation, which implies moving away from an average investor return to a fund return.

Feedback 1: Removing unitisation

A series of clients were concerned by the proposed changes to the bid-offer spread mechanism. This mechanism is operated so that continuing unit holders are protected from the investment decisions of subscribing and redeeming unit holders. The cost of investing new subscriptions which are attached to serving unit redemptions are borne by the unit holder to which the primary unit trade relates. A unit holder that undertakes no primary unit trades for a given period will therefore report a return that is in line with the fund return calculated at the unit level. Should the proposed new methodology be adopted, this will not be the case. Respondents were concerned that the proposals would effectively undermine the benefit of being able to report our property level returns through PAS, and average investor level ones through PFI. Most UK respondents felt that unitisation is central to providing transparent, directly comparable average investor returns and do not want to lose the ability to benchmark our funds in this way.

MSCI's response:

The bid/offer price that exists in some markets (mainly the UK and Australia) does indeed protect existing investors from purchase costs incurred following new capital flowing into the fund. The return of existing investors is therefore better represented using the current methodology. However this investor return is only an average return, not the return every investor gets (new investors will pay more, and some investors might negotiate different fees, et cetera).

More fundamentally, the question is not whether one methodology is better than another but rather what the index wants to measure. The unitised formula aims to measure an investor return, whereas the proposed fund-level formula measures a fund return. At the fund level, new capital invested does

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result in the purchase of new assets and therefore purchase costs will impact the return of the fund which will be reflected in the proposed methodology.

Feedback 2: Modified Dietz methodology

A number of UK clients were seeking clarification on whether the proposed formula is consistent with Modified Dietz method and the data collection process. For most, the principle itself is not an issue but some UK participants worry that extra the data collection will be too demanding on data contributors, which might result in an inconsistent sample of funds which can provide day-dated cash flows and some which cannot and for which assumptions will have to be made.

MSCI's response:

Modified Dietz is the methodology recommended by GIPS, many global fund management houses use it and MSCI is keen to implement it. However we are conscious that it might be hard in practice to collect the data in some markets where funds are traded on a daily basis (mainly the UK). The test period in the UK in 2015 will be useful to check whether day-dating can be collected and by how many participants. In light of the results, we will decide whether this can be rolled out. In the other services data collection does not seem to be a concern and will be implemented as planned.

Feedback 3: Net investment Income

Some German clients noted that the principle of replacing Distributions with Net Investment Income is good but the precise definition of NII needs to be tightened in order to make sure all funds can provide it on a consistent basis.

MSCI's response:

Before the new methodology is implemented, a new Data Collection Template will be distributed to the participants, including a glossary of definitions.

Feedback 4: Historical restatement

In addition to concerns about the potential impact of the changing methodology on the AREF/IPD UK QPFI results going forward, some UK clients also expressed concern about the potential for historical restatement of the index and the impact this would have on the index. It was also suggested that any large historical restatements could undermine the credibility of the index.

MSCI's response:

These are important points and MSCI is in need of a common approach to history restatement. MSCI do not restate Equity Index history on the back of a changing methodology. The same principle might be applied to the PFI, but MSCI is in the process of investigating further.

Feedback 5: Timing of proposed change

A common remark from UK participants, who are comfortable with the current AREF/IPD UK QPFI methodology, was that they felt the consultation and implementation timetable for the proposed changes was too short.

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MSCI's response:

Given the proposed formula is a significant change for the UK PFI, where there is a move from an investor return to a fund return, MSCI has agreed to run the 2 methodologies in parallel period for 1 year, where the official numbers will remain based on the current methodology while the new numbers will be generated to 1) test the impact of the new formula and 2) feed into all global calculations. Further consultation will be carried out once the results are available.

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[1] *As of June 30, 2014, as reported on September 30 2014 by eVestment, Morningstar and Bloomberg* *Nov 2014*

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