The Use of Benchmarks for Real Estate Portfolio Performance by U.K. Financial Institutions

The Use of Benchmarks for Real Estate Portfolio Performance by UK Financial Institutions

Edward Trevillion, Alan Gardner, Stewart Cowe and Colin Jones
The Urban Institute, Heriot-Watt University, Edinburgh

Abstract

The paper examines the application of benchmarks in the UK primarily by semi-structured interviews with 17 major investment houses holding domestic real estate assets under management of nearly £180bn with in excess of £515bn in other countries. The MSCI/IPD database is the predominant reference point for peer and relative benchmarking but funds also apply an absolute benchmark approach. Many fund houses indicated a reluctance to change benchmarks. However, increasing short-termism and the transformation of market fundamentals after the GFC have led to a re-appraisal of the nature of existing benchmarks and there is a continuing move toward use of alternatives.

I Introduction

With the arrival of UK market indices in the mid-1980s benchmarking rapidly established itself at the core of the real estate portfolio management process, providing also the foundation on which performance is overseen and checked. The scope of benchmarks encompasses establishing weightings between asset classes, remuneration targets and the basis of investment mandates by clients. Much of the academic research to date on real estate investment benchmarks has been on the appropriate construction of market indices to support them rather than their inter-relationship. One premise of this paper is that this standpoint is too narrow as it ignores alternative approaches to real estate benchmarks. It over-simplifies benchmarks.

The paper first examines the different potential types of benchmarks and investigates their application by reference to UK direct real estate investment. In particular, the paper examines the drivers for the choice of different benchmarks by type of financial institution. The paper then considers how and why market benchmarks have changed through time, including the consequences of the global financial crisis (GFC). The research questions are addressed primarily by means of semi-structured interviews with 17 UK investment houses holding real estate assets under management in the UK of nearly £180bn, together with foreign funds in excess of £515bn. Although focused on UK practice, the questions, where possible, examined practice in foreign markets as well as in the UK. In addition, two detailed case studies of changing attitudes to benchmarking have been undertaken using UK funds where formalised benchmarking processes were established in the early 1980s and where property ownership within these portfolios pre-date the MSCI/IPD database.

The structure of the paper is as follows. The next section examines the use of benchmarks, distinguishing between benchmarks and indices. The following section considers the nature of real estate indices, and how they are constructed. The different approaches to benchmarking are then set out. The subsequent section details the different types of investment funds and proposes potential drivers of benchmark choice. These encompass both internal characteristics of the funds and external influences, namely globalisation and market conditions. The role of these factors is assessed in the empirical analysis, but first the data is explained. The second part of the paper is structured to consider in turn the use of different types of benchmarks, the role of clients, the impact of benchmarks on asset selection, the impact of the global financial crisis and globalisation on practices, and finally the potential for using transaction-based indices to complement existing benchmarks.

II Use of Benchmarks

A benchmark may be narrowly defined as a point of reference that is used to compare investment performance, and which contributes to the evaluation of the effectiveness of the implementation of investment strategies across asset classes. Benchmarks allow returns and their variations to be measured and attributed, thereby making it possible to determine how effectively managers have performed against them. Benchmarks can also be used to compare the structure and the weighting of property portfolios to the constituents of a particular index. A benchmark may not just be simply about financial performance in terms of returns but also about perceived risk relative to an industry norm. Risk in this context can be viewed as either that characterised by the benchmark itself or the level of risk that reflects permitted deviations from the benchmark. Benchmarks are useful to evaluate the performance of active investment strategies or to summarise the performance of any given segment of the market. Such segmentation may be geographical, by land use sector/segment, etc.

It should be made clear at this point that benchmarks and indices are not the same thing. They are related but should not be confused. Conceptually, an index is an historical record of the performance of a market or defined market segment, whereas a benchmark is a yardstick defined for the purpose of assessing the performance of investors (or managers) participating in those markets (see also MSCI, 2014a). An index becomes a benchmark when it is used as a reference point to quantify the relative performance of an asset or a portfolio of assets (Serrano and Hoesli, 2009). It can be argued, however, that the primary role of a benchmark is to characterise an investment mandate set by its client or objective. The assessment of performance relative to that mandate remains important, but secondary.

A benchmark should also be distinguished from a target. A target is not used as a formal comparator of performance. Nevertheless, benchmarks can be used as targets to decide remuneration of investment managers. In this way the difference between the returns on the benchmark and fund portfolios would therefore be ascribed to the skill of the investment manager (Brown and Matysiak, 1995). Investment managers may also operate within guidelines that set limits on permitted deviations in portfolio construction, which can determine the impact of benchmark composition on the standard, 'day-to-day' investment process. For most asset classes investment performance can be compared with either an agreed index of returns from an investment universe or an appropriate index of investment opportunities.

III Real Estate Indices

The choice of a real estate index is not straightforward because not only do the construction methodologies vary from index to index but so also does the breadth of market coverage and their representativeness. Geltner and Ling (2001) also argue that there is a conflict between a single index that is simultaneously applicable for both benchmarking and the wider function of asset class research. This is a global issue, and an array of academic papers have detailed the differences and issues for both listed and unlisted real estate (see Boudry et al, 2013; Partners, 2014; Serrano and Hoesli, 2009). In the unlisted sector of the UK the commonly used benchmarks for market comparison and benchmarking are based on data provided by MSCI, formerly known as IPD (Investment Property Databank). IPD was established by a range of surveying practices and institutional investors to pool data.

IPD began to generate a reliable UK-specific commercial property index in 1985 but incorporated data back to 1981 using data from some funds and the valuation agencies sponsoring the database. It is an appraisal-based index (i.e. not based on transactional data). The value of the December-valued IPD UK Annual Universe in 1985 was £26.4bn with data from 188 funds being incorporated in the index. Within three years, the universe had risen to £46.6bn with 216 funds contributing to the data set. It is fair to say that the publication of the IPD index was the catalyst for the introduction of benchmarking in the UK in the 1980s. The practice grew quickly and at the start of the 1990s, the index was being used to a significant extent for benchmarking purposes (Trevillion et al., 2018). By December 2017, the December-valued 'universe' totalled £217.5bn reflecting the data supplied by 276 portfolios (Teuben and Bothra, 2018).

Increasingly MSCI are extending their indices to international markets and now have property indices covering most of the European markets, Japan, Korea, New Zealand, South Africa and the US. They also have a Global Composite Index, and composite Pan-European, Central and Eastern Europe and Nordic indices.

In the US, the NCREIF Property Index (NPI) has been the main standard for evaluating unlisted commercial property performance. The NCREIF Property Index is also an appraisal-based index. The NPI was launched in 1982 (with data going back to 1977) and was the first attempt to build a comprehensive index that represented the performance of the commercial US real estate market. It consists of over 35,000 properties and over 150 open-ended and closed-ended funds valued at US$559bn at the end of Q4 2017 (NCREIF, 2017). The NPI Trends Report is a quarterly report that tracks the changes in both capitalisation rates and net operating income (NOI). Data is shown both equal weighted and value weighted. In addition, vacancy rates are presented by property type and by region.

A key question for appraisal-based indices is what is the significance or bias of these indices as benchmarks in terms of smoothing market trends, kurtosis in the distribution of returns and not capturing turning points. In contrast transaction-based indices measure market movements and returns on investment, based on the actual prices of properties sold. These types of indices are in their relative infancy. The first real attempt at a commercial real estate transaction-based index was that launched by The Massachusetts Institute of Technology Center for Real Estate (MIT/CRE) in 2006. Based on the transaction prices of properties sold from the NCREIF Index database, it developed a 'hedonic' price index that used the recent appraised values of those properties, adjusted by their individual characteristics, to construct an average price for each period (Geltner and Pollakowski, 2007; Partners, 2014*)*.

Another transactions approach to producing quality-controlled property price indexes is the 'repeat-sales regression' (RSR) technique that has long been applied to residential markets in the USA and other countries (Geltner and Pollakowski, 2007). In an RSR index, the database on which the regression is estimated consists purely of properties that transact at least twice in the historical sample. The regression allocates price changes to individual periods of time. Real Capital Analytics and MIT / CRE launched a commercial real estate index that adoptd tis approach in 2006. It is fundamentally comparable to typical securities indexes, such as stock market indexes, which are based on same-stock price changes from one period to the next (Geltner and Pollakowski, 2007).

A second generation of the index was launched in 2011 by Moody Investor's Service and RCA, based on price changes in the US and UK. It is now simply known as the RCA Commercial Property Price Index (RCA CPPI) and provides a broad measure of commercial property price trends. RCA is the first and only producer of an international transaction-based price index. The RCA CPPI covers the traditional commercial property types (office, industrial, retail) as well as apartments and hotels encompassing North America, Europe and Asia-Pacific. These transaction-based indices could be applied as a benchmark measure or indeed simply values of transactions to complement appraisal-based valuations (see also Chegut et al, 2013).

CoStar also produce a transactions-based index for the US (CoStar 2019) using the repeat-sale regression technique. Although the MSCI index is appraisal based the possibility of using the data set to explore transaction data in more detail has also been explored (Devaney and Martinez Diaz, 2011).

However, there are drawbacks to transactions-based measures with regard to opacity, market coverage and data requirements. In particular the use of the repeat sales technique invariably removes a substantial proportion of the actual transactions conducted from the sample. This is noted in Chau et al (2005) who suggested that only 23% of transactions in Hong Kong over a ten-year period were repeat sales. The Chegut *et al* (2013) study establishing a London

commercial property price index noted that the unfiltered repeat sales sample of transactions only exceeded 200 in the peak year of 2006 and remained at less than 150 from 2008 through to the end of its analysis in 2011. Standard filtration techniques reduced this modest sample even further. Removing the majority of investment transactions and relying on a small sample of repeat sales to produce effective metrics that are open to challenge. In particular Geltner and Ling (2007) note that this can create error and bias.

In addition to these indices there are AREF (Association of Real Estate Funds), Lipper and Morningstar indices. The AREF index is a value weighted quarterly index of the net asset value of its constituent property funds. This index covers the UK retail pooled property fund market. Lipper indices track the financial performance of different types of managed fund strategies. The set of indices developed by Morningstar track a range of asset performance on a global basis.

IV Different Approaches to Benchmarks

There are three approaches to applying real estate investment benchmarks. These are peer comparison, relative return and absolute return, and they are considered in detail below.

A Peer Comparison

.

In the case of peer comparison, a peer universe is used to reflect the performance of 'competitor funds' (Geltner and Ling, 2007). It is typically a real estate index that is derived from the collective investment activities of fund managers. The universe can be the basis of relative performance of investment managers. It could be disaggregated for those funds that invest and manage real estate in the same style or specialist area and with similar investment strategies as that under consideration, e.g. large/small life and pension funds or similar sized and managed retail funds. The definition of size may be explicit, e.g. £50-500m or relative to the size of the benchmarked fund e.g. half to double the size. In the UK, this peer group comparison has been accepted by many investors and their advisors for nearly two decades (Rutter, 2013), and in some cases, over three decades (Trevillion et al, 2018). The peer group may be defined by the components of a transparent index e.g. that defined by the MSCI/IPD or by the group of funds defined by the Lipper or Morning Star indices. The principal benefit of this approach is that it is a transparent method for the comparison of the constituent funds and proves relatively easy for advisors to understand and advocate.

There are issues with the use of the MSCI/IPD index as a peer benchmark as they are derived from data provided by a range of different types of funds including charity funds (tax issues) and comparative funds being on manifestly different strategies, e.g. long income funds. Similarly there is a major question as to whether geared funds, such as listed REITs, can be reasonably compared to such an index or other real estate market-based indices. The returns are not comparable because gearing will exaggerate cyclical upturns and downturns. In principle de-gearing techniques could be applied to address this problem. There is also the issue of accounting for fees in net returns to investors.

B Relative Return

Relative return benchmarks are closely related in as much as the fund performance can be measured relative to the 'peer universe' but it may simply be the return that an asset class achieves over a period of time compared to the market or sector of a market as a whole. The

relative return being the comparison (difference or ratio) between the absolute return achieved by the asset/fund and the return achieved by its comparative benchmark. A relative return allows the evaluation of a manager over and above what an investor could achieve by investing directly into an index or the respective benchmark.

C Absolute Return

An absolute return benchmark assesses the return of a fund/portfolio/asset over a period of time relative to an investor's target rate of return. The latter will require some assessment of the risk premium attached to property over and above some 'risk free rate' rate of return, e.g. 10-year government bonds. The methodology has the advantage compared to other benchmarking methods in that it is simple and allows the direct comparison of performance, not only against the investors target rate of return but also against market returns globally. This approach also reduces the scenario whereby managers are rewarded when delivering negative total returns to end investors simply because their returns have proved 'less negative' than the benchmark as a whole, or managers being rewarded for beating the benchmark although they have delivered relatively poor returns

In the UK for practical purposes peer and relative benchmarks are predominantly determined by reference to the MSCI/IPD indices as a representation of the market (see Abbott, 2015). Nevertheless such market indices as benchmarks suffer from their use for geared funds as returns are magnified against the market in an upturn and collapse in a downturn. This problem was exposed in the boom and then bust following the GFC (Jones et al, 2017). This means that, if the objective of the benchmark is to provide a representation of deliverable returns to end investors, unadjusted versions of market indices should not be used. This conclusion applies irrespective of whether an index is constructed via a valuation or transaction data approach.

V Types of Investment Funds and the Application of Benchmarks

UK financial institutions investors can be differentiated into pooled, retail and segregated funds, although there is a degree of overlap. A pooled fund has investors that combine their capital into an investment account. Groups such as investment clubs, partnerships and trusts use pooled funds to gather resources to invest. A pooled fund could be a specialist vehicle as well. Investors in pooled funds include financial institutions and a range of funds, such as property unit trusts, property authorised investment funds, open ended investment companies, Jersey property unit trusts, and club funds. Many of these are retail funds that are open ended and invest monies that are derived from selling units primarily to individual investors, with units typically priced on a daily trading basis. In some cases, they are open to institutional investment as well. Segregated fund is a term that is used interchangeably with the term separate account. It is a portfolio managed for a single investor. This term could encompass public or private pension funds, insurance companies, charities, sovereign wealth funds, etc. Some of these funds are also specialist funds that are dedicated to a particular strategy, sector or target return. Investment managers/funds that specialise in a particular sector or segment are often referred to as pursuing an 'investment style' (Lee, 1999).

Given this range of investors and the approaches to benchmarks noted above the initial premise of the paper is that the choice of benchmark(s) will depend on the type of fund and the specific requirements of its mandate driven by investors/clients. In particular, income-orientated funds may prefer income-related benchmarks rather than total return-based benchmarks. 'Style' or 'property type' based funds as noted above are logically measured against a defined property-type benchmark to address how their specific sector/segment performance relates to the broader property market. The different fund characteristics in turn mean that aggregate market-based

indices may not necessarily be appropriate. Overall the choice of benchmark as argued above is dependent on the type of fund, the characteristics of the investment house and the investment objective defined by a client. However, this is a static perspective and ignores the potential for change stimulated by the restructuring of real estate investment caused for example through globalisation and a transformation of market fundamentals. The role of these factors are considered in the empirical analysis, but first the data is explained.

VI Data

The study is based on semi-structured interviews with fund managers in 17 investment houses with real estate assets under management in the UK of nearly £180bn (representing over 30% of the property investable universe in the UK (see Mitchell, 2017)) and foreign funds under management in excess of £515bn. The respondents were selected through purposive sampling. A breakdown of the types of funds covered by the sample is given in Exhibit 1. The organisations questioned represented different types of funds and clients – segregated (separate), institutional and retail. The survey also encompassed three managers of segregated listed real estate funds but these entities are not considered in this paper. Many of the pooled funds incorporated not only institutional funds but also retail funds. A small proportion of the funds covered were sovereign wealth funds. As Exhibit 1 demonstrates the seventeen organisations were often responsible for more than one type of fund. In fact eleven investment houses managed both segregated and pooled funds. In addition, two detailed case studies of changing attitudes to benchmarking are presented. These case studies are UK funds that formalised benchmarking processes in the early 1980s and whose property ownership within these portfolios pre-dates the MSCI/IPD database. The evidence from these sources is now reported. As it is based on small numbers of respondents and qualitative data no tabulations are presented.

VII Evidence on Benchmarking Choice

The empirical analysis first reviews the type of benchmarks applied by type of fund and then specifically examines the role of clients in their choice. The section subsequently relates benchmarks to asset selection. It then turns to consider how and why benchmarks have changed over time. Finally it assesses the potential use of transactions based indices.

A Market Benchmarks

Assessing performance against market-based (relative and peer) benchmarks is widespread in the real estate investment business. Our survey finds as anticipated that most institutional investors task their fund managers with achieving a return in excess of the market, which by default in the UK is evaluated with reference to an MSCI/IPD index. Both of the case studies in Exhibits 2 and 3 provide more detail on the application of this data. One large institutional house even uses MSCI-based benchmarks for their daily-priced funds. The precise deviance range from the index varies with institutional fund (see below).

Smaller investment funds (with funds under management of less than £5bn) also use the AREF indices based primarily on retail funds, as well as the MSCI/IPD Quarterly Property Index. The use of the NFI ODCE (NCREIF Fund Index Open End Diversified Core Equity) as a benchmark is common for funds based in the US, and is linked to their mandates.

There is little use of Morningstar or Lipper market benchmarks. Nonetheless, in one large investment house all of the daily-priced funds use a Morningstar benchmark. Another uses Lipper for pooled retail funds and several other pooled funds but our survey suggested that this

is not normal practice. Interestingly, there are funds that focus on the Far East that are not bench marked at all with risk effectively managed at the individual asset level.

B Absolute Benchmarks

Absolute benchmarks are utilised more by smaller funds. The medium sized houses interviewed in our study (£5-12bn) showed an inclination to manage segregated funds with absolute benchmarks. This may be because of the lack of a representative market benchmark for funds of smaller size. In the larger houses (with funds over £12bn) there appears to be no massive appetite for absolute benchmarks. Where they are used they are confined generally to either income funds or larger value funds with legacy being a significant issue. This could be more about the characteristics of the fund houses themselves rather than the funds per se. Almost all houses use absolute benchmarks irrespective of style or type where no transparent market indices are readily available for benchmarking purposes. This is true of many foreign markets.

UK clients who have separate accounts (either direct or multi-manager) are mainly using absolute benchmarks in the form of inflation (Retail Price Index) plus targets, rather than the risk free rate of return plus risk premium. Typically the 'plus' element of these benchmarks varies between 2-7% depending on the maturity of the fund (less mature pension funds for example accepting lower required returns because of their lower liabilities in the short term with more mature funds requiring a higher 'plus'). In the majority of cases, funds in the survey using absolute benchmarks typically aim to use them over a seven to ten year period. This is seen as allowing a longer term view to be taken and permits managers more freedom in constructing portfolios. One investment house interviewed uses index-linked bonds for 'absolute' benchmarking purposes.

Many clients/funds with absolute strategies combine absolute benchmarks with peer or relative market benchmarks. Although they wish to hold the business to account on the basis of absolute benchmarks, they still want to compare performance against the market. In the words of one respondent:

"this provides protection for our investors. If there is a huge boom in the market, which diverges significantly from their absolute benchmark, then the investors want to know. The use of market based comparisons (not necessarily formal benchmarks) in addition to absolute benchmarks gives clients comfort." (Life and Pensions, Institution)

C The Role of Clients

The choice of benchmark as noted above is dependent on the objectives of the fund. With the development of indices there is the potential for fund management to become very accountable to client performance targets. The role of the client where one exists is likely therefore to be crucial in the choice of benchmark of a fund.

Our survey highlights that clients of segregated (separate) funds are involved at all stages of the benchmarking process whether in the origination, oversight or in the process of change, although internal governance systems can be involved to varying extents. It seems to be the case that clients (often advised by consultants) have the final say on the benchmark (although not for pooled funds) but that various intermediaries are involved both in the day-to-day assessment of the benchmark, the origination and in any change. In the case of one of the large houses, there is a tri-partite approach to establishing the benchmark between strategy/research, investment governance and the fund manager. The rationale for the benchmark operates around the question of what is a realistic workable target? In particular, what is the clients' appetite for risk

and how can that be reflected in the benchmark? What do they want, for example, in terms of short termism and volatility?

The practicalities of this relationship between client objectives and benchmarks are illustrated by the views of one large private equity fund manager. He took the view that clients wanted direct property performance as efficiently and effectively as possible and that they were aware that heavy net investment dragged down relative performance against the market benchmark. The clients did have the scope to state that it was not a good time to be investing whenever they thought this was the case. On the other hand a number of interviewees expressed dissatisfaction with the effectiveness of the chosen benchmarks for specialist funds, for example those available for 'long income' funds and cautioned against these portfolios being incorporated into the use of more 'generalist, balanced' benchmarks.

Pooled funds are ostensively not external client-driven given their very nature, with more decision-making undertaken by governance and other internal committees, but for many funds they are driven by investment mandates that can be viewed as an internal client. As one Life and Pensions Institution respondent noted,

"What they put into their models determines their benchmark. If they want the market returns they will use/recommend MSCI or Morningstar."

D Impact of Benchmarks on Asset Selection

A key perceived issue in the use of peer-based benchmarks is a tendency to encourage herding, with implications for the weights between property sectors or segments and the localities of individual assets in a fund's portfolio. The issue is compounded by advisors who may not have great experience in commercial property. The use of peer or market-based benchmarks can constrain strategy and encourage beta tracking, affecting the whole management of a fund in terms of its structure. There is no real evidence of this in our survey. Many funds in our survey that use the MSCI/IPD benchmark are conscious of this question and many argue that they did not follow the industry-wide weightings slavishly. As one fund puts it, it is "*trying not to let MSCI/IPD determine their structure.*" In some cases managers in the sample have big tolerance bands, up to plus or minus 20 percentage points. This finding is consistent with a study of UK property investment funds from the last decade. Henneberry and Roberts (2008) found the range of property use classes allocation weightings vary from plus or minus 5 per cent to plus or minus 20 per cent of the MSCI/IPD database. The most frequent variation in their study was plus or minus 10 per cent.

One major investor in the survey highlights the need to distinguish between asset allocation and asset selection. For market-based benchmarks with shorter time horizons, it has a sharper view of asset selection, which will subsequently have a knock on effect on asset allocation. Many funds argue that management should only use a market benchmark for comparison and not necessarily as a strategy tool. Respondents often comment that indices are backward rather than forward looking. A minority view, however, is that the MSCI/IPD indices have too much impact on portfolio structures with managers too focused on weightings and not the sustainability of underlying income.

Beyond the question of the impact of benchmark on asset selection it is important to remember that there are other important factors that impinge on asset selection that link to the duration of the fund, type of target and size of fund. In particular, one respondent notes,

"There are points in the cycle when allocation [sector] is important and where selection [stock] is important." (Investment Manager)

Overall survey respondents underplayed the role of benchmarks in asset selection. In contrast a wider view of peer benchmarking, raised by one investment house, is namely the question of data provision per se and its contribution to herd behaviour. The argument is that investors are conditioned by receiving the same (or similar) forecast and performance data from a small number of sources. The contention is that these data sources frame if not dictate decision-making in the industry especially the institutional space. This view is reinforced by most respondents (but not them!) believing that other funds religiously peer benchmark against MSCI/IPD indices.

E Changes to Benchmarks over Time

Benchmarking in the UK was formally established with the arrival of the MSCI/IPD. Most fund houses in our survey indicate a reluctance to change benchmarks regularly as they frequently framed the investment mandate. A large fund house articulates that there is a variety of internal reasons why benchmarks may be changed, including the running down of a specific fund, changes in fund structure and revisions to the investor base. In other words benchmarks may be periodically reviewed to ensure they are fit for purpose. The most obvious reason for change being is the benchmark still relevant? Our survey found that changes are rarely fundamental in terms of the nature of the approach to benchmarks (relative, absolute, peer, etc.) but more often relate to change in the composition or scale of the original benchmark.

The two case studies are both long-standing funds that predate the development of the benchmarking culture that began in the late 1980s. One is a unit-linked fund and the other is a balanced portfolio, but both demonstrate how the industry has evolved over time, including, in particular, the greater transparency required today. Despite having broadly the same objectives, they have changed their benchmarks as both property market circumstances have changed and data availability has improved. While the case studies demonstrate a process of continuous adaptation in the decision making processes with new technology, both funds have only changed their benchmarks a limited number of times in four decades. In the main, these changes were driven by the use of increasingly sophisticated approaches to the MSCI/IPD database.

The property boom of the 2000s followed by GFC clearly had the potential to generate a major rethink of the use of benchmarks. During the boom (2002-mid-2007) there was a rapid growth in fund levels followed by contraction (mid 2007-2010) during the bust (see Jones et al, 2017). One major issue that arose was that a fund may have beaten its benchmark but underperformed its peers' unit price performance owing to differing levels of gearing/cash. However, the evidence from our survey finds that while the GFC caused a dramatic collapse in property values, with severe consequences for some property funds, it has not generally changed the policies on the type of benchmark applied. On the other hand, the subsequent subdued macroeconomic environment together with changed market fundamentals have meant that funds have reappraised the numbers and targets inherent in their existing benchmarks. This is illustrated by the changes implemented by the case studies in Exhibits 2 and 3. The unit-linked fund of Case Study 1 adapted its benchmarks in the aftermath of the GFC to take account of a requirement to have liquid assets to address sudden redemption requests. The revised benchmarks continued with an MSCI/IPD index but added a listed property index and a cash index.

The legacy of the GFC is also found in a greater wariness about real estate cycles, such that investors/clients are very sensitive to strategy drift at different stages in the cycle. Investors also want less risk and debt in vehicles. The impacts therefore have been on the goals of funds, in terms of reducing risk and gearing, and the levels applied to absolute benchmarks in terns of RPI plus, given the low interest and bond rates applicable in the post GFC environment. It could be the value of the plus element in RPI (+) is amended or, alternatively, the inflation measure used in the definition.

One respondent suggests that more benchmarking has followed the GFC, with managers preferring market benchmarks and investors wanting absolute ones. Some of these policies are reflected in the following quotes:

"Still use absolute benchmarks over 7 to 10 years and relative benchmarks over 3 years." (Investment Manager)

"Important not to believe or follow a dream on what property can do." (Investment Manager)

"Prior to the GFC, many fund managers were allowed to drift from the mandate(s) implied by their benchmark(s) in order to secure enhanced returns. Over a significant period of time, higher asset prices fuelled ever-greater risk exposure, resulting in a deeper misalignment between portfolios and their benchmarks. You could view this as a failure of the investment managers themselves and the wider controls, governance structures, etc. under which they operated." (Investment Manager)

Curiously the main impetus of change in recent times has been the globalisation of real estate investment that has wrought issues around the nature of the main market benchmarks, the MSCI/IPD indices. In particular, its representativeness in certain segments of the market has been questioned as globalisation has led to significant investment by foreign investors into the UK, and into London in particular. As these investors are not contributors to the MSCI/IPD data the issue began to become significant in the second half of the 2000s. The impact has primarily affected the number of central London offices in the MSCI/IPD data with foreign investors now dominating the ownership of this particular market (Jones, 2018; Jones et al, 2017). Given the London office market is now dominated by foreign investors, funds that own such offices in the capital are arguably not able to realistically assess their returns relative to a peer benchmark. The degradation of the London sample (whereby assets and portfolios leave the benchmark dataset and are not replaced) is stimulating reassessments of its use by individual funds. In this regard MSCI has itself published analysis in this area, suggesting that they capture 41% of the 'professionally managed' UK market (Teuben and Bothra, 2018). The counter argument is that the database covers that part of the market that is the most relevant for the investment houses using it.

The ramifications are seen in the Case Study 2 fund that has changed its benchmark three times since 2011 in response to the changing composition of the MSCI/IPD data. This particular fund has been in existence for decades with essentially the same objectives. However, in an era where the primary market database has undergone fundamental change reflecting the structure of the industry there has been a process of benchmark reappraisal and adaptation.

F Transactions based Indices

As part of any rethink there is the alternative of transactions based indices. Previous studies as noted above have emphasised the power of transactions based indices. However, the survey finds no enthusiasm in the UK for using these indices as benchmarks although they are seen as

analytical tools. They are used by investment houses to gauge the dynamics of the market but in the words of one respondent,

"We are a long way from trusting them enough to bet our performance on it.", and
"… would be interested in transaction-based indices as an early warning system." (Investment Manager).

As analytical tools these indices are seen as potential sources to support strategy as the following notes,
"… particularly at very specific points in the market cycle, when asset prices change rapidly." (Life and Pensions Institution).

There is a recognition that such indices are used in listed asset markets to offer some sort of comparison but they are only seen as having a role when there are enough transactions. While there are concerns around the lack of comparability and reliability that exist in appraisal-based indices transaction approaches are primarily seen only as augmenting them. These views are seen in the following quote:

"There is a consistent valuation framework in existing benchmarks but there is not a consistent sample of transactions and never will be." (Investment Manager).

VIII Conclusions

The genesis of real estate benchmarking in the UK in the mid-1980s was the establishment of the MSCI/IPD database. It enabled the investment performance of traditional and alternative asset classes to be compared against an MSCI/IPD index of returns. Like NCREIF in the USA this market database is derived from periodic appraisals. These indices can be used as a reference point for peer and relative benchmarking but funds can also apply an absolute benchmark approach. Absolute benchmarks take the form of inflation plus a target, typically ranging between 2-7%

Our survey finds that the choice of benchmark for funds is dependent on the type of fund, the characteristics of the investment house, clients where appropriate, and their investment objective. Small and medium sized funds apply absolute benchmarks most with large funds disinclined. Absolute benchmarks are also utilised by all types of funds where there is no transparent market index available, for example in foreign markets. Many clients/funds with absolute benchmarks may also use peer or relative approaches in tandem. For UK larger institutional funds assessing performance, whether on a relative or peer basis, there is widespread reference to an MSCI/IPD index. Smaller investment houses (with funds under management of less than £5bn) also utilise the AREF indices. Clients, if applicable, are very active in the choice of benchmarks that in turn is related to investors' objectives. Given that benchmarks that centre on indices are backward looking there is a debate about their implications for asset selection and potential herd behaviour. It seems likely that the use of market indices at the very least has had a cumulative impact on institutional portfolios.

Given that most funds' objectives/mandates do not fundamentally change over time there is an expectation that benchmarks are not altered on a regular basis. However, the use of benchmarks has become more sophisticated, as the examples in the case studies demonstrate, with, in some cases an investment approach based on more than one benchmark. In this regard the consequences of the GFC reveal unanticipated questions about individual fund structures, in terms of leverage and cash holdings. It shows how the use of one simple market benchmark alone failed to accommodate these characteristics by focusing on return and ignoring the

inherent risk. Going forward it is possible to see that market and absolute based benchmarks need to capture different elements of risk within a more transparent approach to investment. In particular absolute benchmarks can be seen as an investment beta, or systematic risk, and market benchmarks represent the alpha or specific risk.

The recent past has also seen the emergence of a willingness to alter benchmarks more often. Increasing short-termism, the transformation of market fundamentals in the aftermath of the GFC, including subsequent low interest rates, and a search for income have led to a re-appraisal of what real estate offers as an asset class, and therefore, what benchmark is appropriate. In addition, globalisation has led to a specific issue about the MSCI/IPD data as international investors have bought UK real estate, especially in central London, reducing its market coverage. As benchmarks MSCI/IPD appraisal based indices are no longer necessarily true representations of the whole market. On the other hand investors are not yet prepared to place their trust in transactions based indices.

In summary the last thirty years or so has seen the adoption and development of real estate benchmarking, such that it is now at the heart of fund portfolio management. Yet over the last decade the combined ramifications of the GFC and globalisation of real estate investment have meant that doubts about benchmarking practice have increasingly come to the fore. Today the questions are whether the nature of existing benchmarks are appropriate and there is a continuing move toward the use of alternatives.

References

Abbott, M., Benchmarks and measuring performance – what is changing?, *IPF Focus January 2015*, IPF, London, p17, 2015.

Boudry, W.L., Coulson, N.E., Lee, S., Kallberg, J.G. and Liu, C. H., On indexing commercial real estate properties and portfolios, *Journal of Real Estate Finance and Economics,* 47, 617-639, 2013.

Brown, G. and Matysiak, G., Using commercial property indices for measuring portfolio performance, *Journal of Property Finance*, 6, 3, 27–38, 1995.

Byrne, P. and Lee, S., Chegut, A.M., Eichholtz, P.M.A. and Rodrigues, P., The London commercial property price index. *Journal of Real Estate Financial Economics*, 47, 588-616, 2013.

Chau, K. W., Wong, S. K., Yiu, C. Y. & Leung, H. F., Real estate price indices in Hong Kong. *Journal of Real Estate Literature,* 13, 337-356, 2005.

CoStar. CoStar commercial repeat-sale indices. Methodology CoStar, Washington DC. 2019. https://www.costargroup.com/docs/librariesprovider3/pr---ccrsi-files/ccrsi-methodology.pdf?sfvrsn=2 (Accessed December 2109)

Devaney, S. and Martinez Diaz, R., Transaction based indices for the UK commercial real estate market: an exploration using IPD transaction data. *Journal of Property Research,* 28, 4, 269-289, 2011.

Geltner, D. and Ling, D., Ideal research and benchmark indexes in private real estate: Some conclusions from the RERI/PREA technical report, *Real Estate Finance*, 17, 4, 1-12.2001.

Geltner, D. and Ling, D., Indices for Investment Benchmarking and Return Performance Analysis in Private Real Estate, *International Real Estate Review*, 10, 1, 93-118, 2007.

Geltner, D. and Pollakowski, H., *A set of indexes for trading commercial real estate based on the Real Capital Analytics Transaction Prices Database*. MIT Centre for Real Estate RCA-based Indexes White Paper September, 2007.

Gatzlaff, D. and Geltner, D., A Transaction-Based Index of Commercial Property and its Comparison to the NCREIF Index, *Real Estate Finance*, 15, 1, 7-22, 1998.

Henneberry, J. and Roberts, C, Calculated Inequality? Portfolio Benchmarking and Regional Office Property Investment in the UK, *Urban Studies*, 45, 5/6, 1217-1241, 2008.

Jones, C., Supply of investable buildings, chapter in B. D. MacGregor, R. Schulz and R. K. Green (eds), Routledge Companion to Real Estate Investment, Routledge, Abingdon, 2018.

Jones, C., Cowe, S. and Trevillion, E., *Property Boom and Banking Bust – The Role of Commercial Lending in the Bankruptcy of Banks*. Wiley Blackwell, Chichester, 2017.

Lee, S., Style analysis and property fund performance, *Journal of Property Investment and Finance*, 17, 2, 145-156, 1999.

Mitchell, P., *The Size and Structure of the UK Property Market*, IPF, London, 2017.

MSCI, IPD *Indexes and Benchmark Methodology Guide*, MSCI, London, 2014.

NCREIF, *ncreif.org, 2017* (Accessed December 2017).

Partners Group, *Partners Group Research Flash, Private Real Estate: In Search of the Appropriate Benchmark*, Partners Group, Baar, Switzerland, 2014. https://www.partnersgroup.com/fileadmin/user_upload/Documents/Research_PDF/20141022_REAL_Private_real_estate_-_in_search_of_the_appropriate_benchmark.pdf (Accessed July 2018)

Rutter, G., The benchmarking of property fund performance – 'Under Pressure'? *IPF Focus April 2013*, IPF, London, 2013.

Serrano, C. and Hoesli, M., Global securitized real estate benchmarks and performance, *Journal of Real Estate Portfolio Management*, 15, 1, 1-19, 2009.

Teuben, B and Bothra, H., *Real Estate Market Size 2017*, MSCI, London, 2018.

Trevillion, E., Gardner, A, Cowe, S. and Jones, C., *Current Practices in Benchmarking Real Estate Investment Performance*, IPF, London, 2018.

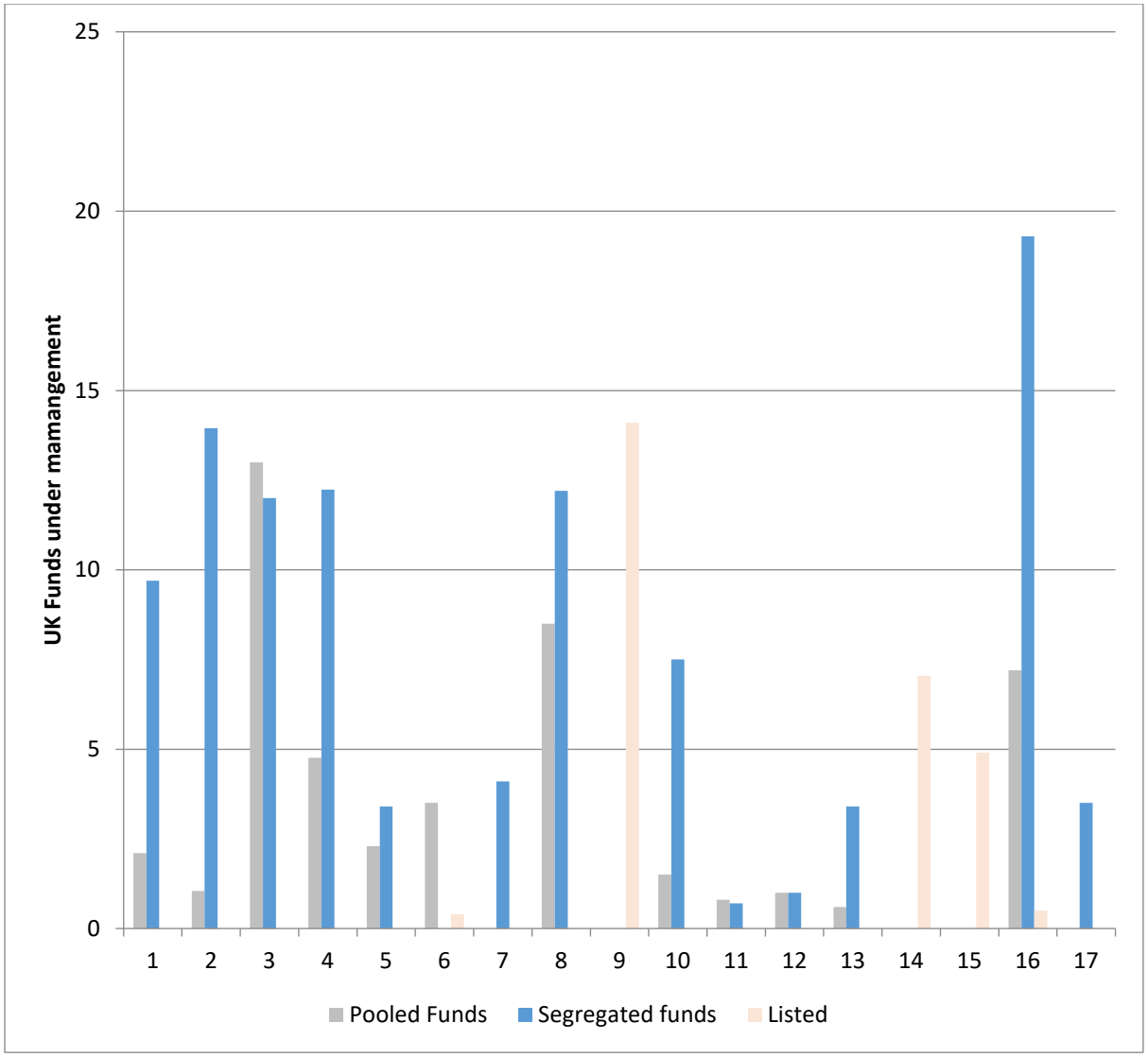

Exhibit 1 Breakdown of Contributors to Sample by Investment Vehicle Structure

Exhibit 2

CASE STUDY 1 THE BENCHMARKS OF A LONG-ESTABLISHED UNIT-LINKED PROPERTY FUND

Case Study 1 is of a unit-linked property fund, formed in the early 1980s. Over its first 37 years, it has only been managed by three individual fund managers. All three were interviewed for this case study. The fund was sub-divided internally into a life assurance fund and a pension fund. From the property manager's point of view, the fund was regarded as a single fund with a single cash flow. For the first six or seven years, the fund had no official benchmark. Benchmarking was still in its infancy. Attempts at benchmarking used the offices' marketing departments to find out competitor funds' unit prices and compare with one's own. That comparison focused more on performance rather than any true benchmarking exercise.

Benchmark A

Formal benchmarking arrived with the establishment of IPD. The fund was only the second fund to be placed in the IPD Universe. The first genuine benchmark was therefore adopted around 1987/88. It used the embryonic data from the newly published All Funds Index from IPD and was simply: *"All funds in IPD Annual Index*".

Benchmark B

From 1990 a more rigorous approach is applied, aided by the rapid acceptance of performance measurement by institutions and of IPD in particular. It was now possible to construct a meaningful benchmark that combined funds of a similar size and of similar investment objectives, namely: *"All unit-linked funds in IPD Annual Index between 50% and 150% of the value of the fund assets"*. At this time the fund's benchmark report was not published until the end of the second quarter of the following year and pressure built up from both the fund management side and the marketing/risk teams for a more frequent comparison. Consequently, the practice grew of informally using both the IPD Monthly Index and the monthly unit price performance (from the likes of Lipper or Statspack) as a proxy for assessing the fund's performance during the year.

Benchmark C

By the end of the last century, the unit-linked universe and value of the funds being captured and measured by IPD was sufficiently large to enable the targeting of a more relevant benchmark. As a result a further change occurred in 1999 as the fund continued to increase in size, when the benchmark was changed to: *"All unit-linked funds in IPD Annual Index*". However, Benchmark C did still suffer from the fact that the index was published only once a year. The fund manager, the marketing department, risk departments, etc, were all seeking more frequent comparisons. The IPD Quarterly Index was about to be launched and that would address many of these concerns.

Benchmark D

In the late 2000s, the fund moved to its current set of three benchmarks - Direct property: "IPD All Funds Quarterly Index"; "UK shares (REITs): "EPRA/NAREIT UK index"; and Cash: cash index. The change in the benchmark was driven by the change in investment policy, brought about by the GFC, notably the need to have more liquid assets to cope with sudden redemption requests. Although the three separate components were appropriately benchmarked, the overall fund was not, meaning that, while all three asset components could outperform their benchmarks, the overall fund may under or over perform at a unit price level. Overall fund performance (the unit price) continued to be monitored informally through Lipper.

The change in investment policy and, consequently, the benchmark, to address liquidity issues, implies that investors in the unit-linked fund indirectly influenced the choice of the benchmarks at that point. Notwithstanding this, no other benchmark change over the years came about through investor influence.

Exhibit 3

CASE STUDY 2 THE BENCHMARKS OF A BALANCED MULTI-ASSET FUND

Case Study 2 is of a balanced institutional portfolio within a substantial multi-asset investment house that has invested in commercial real estate over a long time period. This real estate portfolio has been in operation for decades and is a segregated mandate that accepts no external investment. It retains substantial holdings across the three 'traditional' UK property sectors of retail, office and industrial. The portfolio also invests directly in some of the more recently established 'alternative' sectors. The portfolio now sits within an expanded real estate offer that includes retail investment products, specialist and international investment vehicles.

In the course of this study, the authors have spoken directly with members of staff who carried and retained responsibility for the development and implementation of benchmarking policy leading towards its formal establishment, with the adoption of IPD in 1985. Prior to that date monitoring was very rudimentary comprising crude cash flows of the portfolio. The fund has participated in IPD benchmarking since its foundation. Since that time the portfolio has had only five managers, and this has contributed to the stability of the fund with consistent preference for relative benchmarking.

Benchmark A
From the outset until 2003 the benchmark applied was the returns of "*Non-unitised life funds*" in IPD.

Benchmark B
By the late 1990s and early 2000s, the mis-selling of endowment policies produced serious challenges for life assurance companies, particularly in relation to their 'with-profits' business. These policies proved not to be value for money and fell out of favour with the public (Jones et al, 2019). There was also increased competition driven by the establishment and success of lower-cost unit-linked vehicles. This led to a major reduction in the number of non-unitised life funds so the benchmark was redefined in 2004 as "*Life funds greater than £1bn*" in the IPD database.

Benchmark C
In a similar vein, the benchmark had to be adjusted again to reflect changes and consolidation in the market after the GFC. As a result the benchmark was changed in terms of extending it to encompass pension funds and at the same time reducing the threshold size required. In addition, one IPD market segment was deleted from the benchmark as the view was taken that the sample contained in that data was not representative of that particular subsector. The benchmark was then defined from 2011 as "*Life & Pension Funds >£500m, with specific benchmarking data removed*" from the IPD database.

Benchmark D
In 2015 a decision was taken to remove the exclusion of benchmarking data on the subsectot agreed when implementing the previous change in 2011. The benchmark therefore was simplified to "*Life & Pension Funds >£500m*".

Benchmark E
In the middle of 2018 the benchmark was changed to the IPD "*Quarterly Universe*". The principal driver behind the change was again the declining sample of the database.