

Adding listed real estate to an unlisted real estate portfolio: What are the risk and return implications?



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Background and reasons for this study

Recent evidence suggests that there is a reluctance by a number of institutions to incorporate listed real estate into their real estate allocation (Moss and Baum 2013).

This is despite the significant amount of work undertaken by both practitioners and academics on the beneficial impact of adding listed real estate to a portfolio. It has been shown that REITs can act as both a return enhancer and diversifier in a mixed asset portfolio (Lee, 2012), and adding listed real estate to an unlisted portfolio can enhance returns as well as liquidity (NAREIT, 2011). REITs are seen to produce real estate returns over the medium (3 year) term (Hoesli and Oikarinen, 2012), as well as having useful predictive properties (Cohen & Steers 2009).

We are interested in this paper in discovering the performance implications for investors who choose to combine listed with unlisted. Does the portfolio return improve over all stages of the cycle, and is the increased portfolio volatility more than compensated for by both superior returns and enhanced liquidity?

There are a number of reasons why this is particularly topical and relevant, and which suggest that there will be an increase in interest in using listed real estate in asset allocation. These include, but are not limited to the following:

- 1) Most recently, and of most relevance to investors, the decision by the UK's National Employment Savings Trust ("NEST") to include a 20% allocation to real estate in its DC fund, and for that 20% allocation to be executed via a hybrid vehicle (managed by Legal and General) which comprises a 70% weighting to UK direct property via their unlisted fund, and a 30% weighting to listed real estate via a Global REIT tracker fund.
- 2) An increase in the emphasis placed by investors and consultants on liquidity post the GFC. This clearly is an advantage for listed real estate.
- 3) A critical focus on costs at the asset management level, which suits listed real estate at the expense of direct real estate.
- 4) Significant growth in "real asset" allocations (i.e. real estate, commodities, and infrastructure). A number of commentators (Towers Watson, JP Morgan, Brookfield et al.) have suggested that this real asset allocation could increase to 20% of portfolio weightings.
- 5) Greater use of alternative risk measures to standard deviation (volatility), such as maximum drawdown. Volatility has always been seen by non-users of listed real estate as a major disadvantage.

Prima facie, a simple, cost effective, and mechanistic approach to combining listed and unlisted real estate should satisfy the criteria outlined above. To assess whether this is the case we need to examine in detail the risk and return implications of adding (global) listed real estate to an (UK) unlisted real estate portfolio.

I am grateful to Kieran Farrelly of the Townsend Group for providing the data on UK fund performance as well as comments on this paper.

Summary of findings

The key finding in this study is the extent to which unlisted real estate portfolio returns are enhanced by adding listed real estate. At the most basic level, over the 10 year period studied, adding 30% global listed exposure to UK unlisted funds would have added 30% in absolute terms and 50% in relative terms to the performance of unlisted funds in isolation.

Period	Total returns (%)		
	UK Unlisted Funds	Global listed funds	70% unlisted 30% listed
June 03-June 2013	60.98	160.95	90.97

In terms of breaking down these returns into different periods of the cycle, the addition of a 30% listed allocation would have equated, in absolute terms, to an additional 22% portfolio return in 2003-07, and an extra 13% in the period of QE led recovery 2009-2013. Whilst this was to be expected during the property driven bull market due to the gearing, and predictive power of listed real estate what we believe will surprise many is:

- i) the consistency of return enhancement in positive or stable market conditions, and
- ii) the fact that during the GFC the inclusion of a 30% listed real estate weighting led to only a marginal (-2.2% over a two year period) diminution in returns. This represents an extremely small cost when taken against the dramatic improvement in liquidity as a result of the listed weighting.

The table below quantifies the return enhancement of adding (30% and then 50%) listed real estate to an unlisted portfolio over the cycle. We have modelled this by using actual fund data for returns rather than indices.

Market type	Period	Return enhancement	Return enhancement
		30% listed %	50% listed %
Rising property values	June 03-June 07	22.00	36.67
Global Financial Crisis	July 07 -June 09	-2.20	-3.87
QE Led recovery	August 09 - June 13	12.98	20.61

Differences from previous studies

We believe that there a number of reasons why this brief paper is different from previous studies, and adds to the current thinking on asset allocation in real estate.

Firstly, we have taken actual fund data rather than index data. A number of previous studies have used the IPD Index as a proxy for direct real estate and an EPRA Index as a proxy for listed real estate. The sample we have used in this study comprises UK unlisted real estate funds, and Global listed real estate funds. The reason for using funds data is that we are interested in the investor level returns, and capturing tracking error from a benchmark. For the single series of returns we use an unweighted average of the fund returns. The sample comprises five of the largest unlisted UK property funds, and four of the leading global real estate securities funds. We have chosen global listed funds for reasons of liquidity, diversification, fund availability, and the Legal & General / NEST precedent.

Secondly, rather than use a single period, or peak to trough periods, we have broken down the ten year period (2003-2013) into three distinct stages of the cycle. We believe that this allows asset allocators to assess how listed and unlisted perform at times when real estate criteria is a key driver, as well as times when macro

themes are the most significant determinant of returns . This will allow allocators to alter weightings of the listed/unlisted balance according to the stage of the cycle.

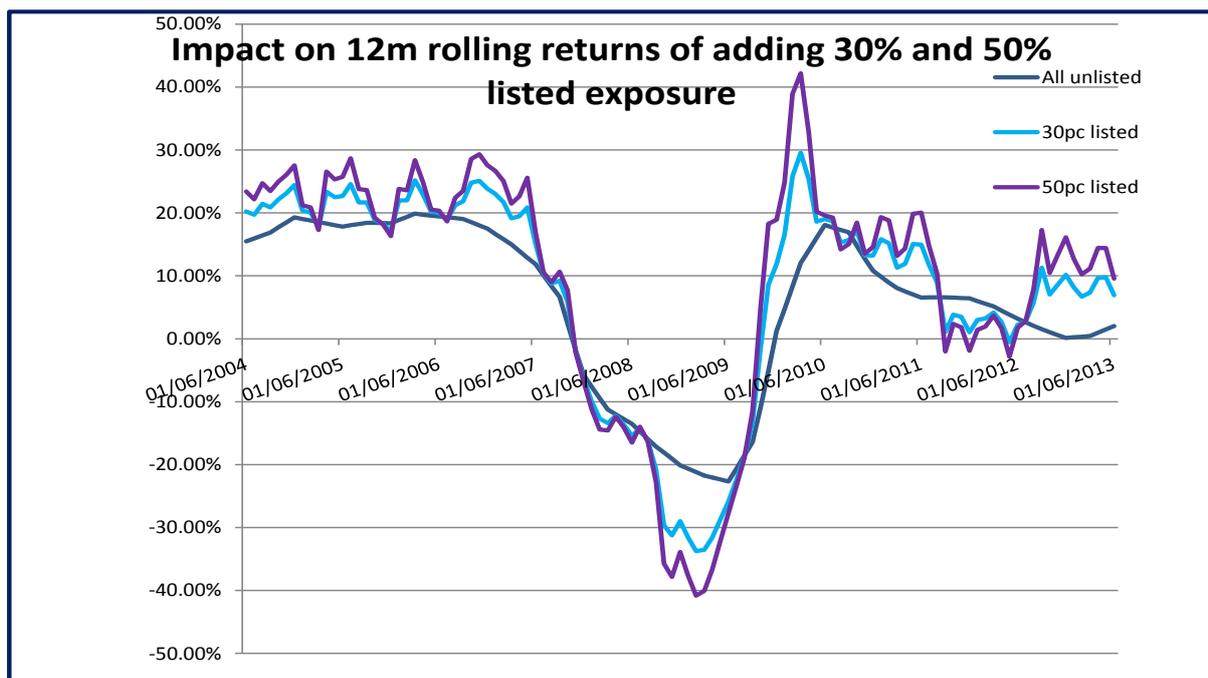
Thirdly we have shown the impact of three different thresholds of listed real estate on portfolio performance (0%, 30%, and 50%), which are maintained throughout the period. We have not used any portfolio optimisation techniques to determine weightings.

The study findings

Firstly, we examine the impact on returns. We have used 12month rolling returns, with monthly frequency for valuations. Our data starts from June 2003, so the first data point is June 2004. We believe that showing the results on a rolling monthly basis shows a far better impression of the dynamics and quantum of the results.

The pattern is as we would expect, given the gearing, predictive nature, and equity market characteristics in the listed sector, namely that when direct real estate values are rising steadily (2003-2007) listed real estate enhances unlisted returns, when real estate values are falling (2007-2009) they detract from performance (but only marginally), and when capital values are steady (+/- 2% p.a.) the result will be more dependent upon non real estate influences.

However, what is noticeable about the graph below is the consistency of the return enhancement from adding listed. Of the 109 months in the period listed real estate enhanced returns in 72 (i.e. 66% of them).



Source: Consilia Capital. Townsend, Bloomberg

The next question to be asked is regarding the cumulative impact of these gains, and what strategies could be used to minimise the maximum drawdown seen from 2007-2009. To do this we need to divide the study into three clearly identifiable periods:

- i) Rising property values – June 2003 to June 2007
- ii) The global financial crisis – July 2007 to June 2009
- iii) The QE led recovery September 2009 to June 2013

As can be seen from the table below, the results are a compelling case for incorporating listed into an unlisted portfolio.

At a time of rising property values, returns from listed (in this case global) funds were almost double that of UK unlisted funds. Perhaps surprisingly at a time of financial distress and dislocation, returns on the listed funds were only marginally worse (-44% vs. -33%) than for unlisted. At a time of market recovery and stabilisation of values returns from listed funds were more than double those of unlisted funds.

Market type	Period	Number of months	Total Unlisted return %	Total Listed return %
Rising property values	June 03-June 07	48	81.79	155.12
Global Financial Crisis	July 07 -June 09	24	-33.13	-44.31
QE Led recovery	August 09 - June 13	48	31.32	68.22

However, we need to dig a little deeper to discover the stability and distribution profile of these returns, as they could be distorted by one or two months' data. One of the most common refrains from managers not using listed is the volatility of returns and the fear of getting the market timing wrong. We show below the average monthly changes in each of the periods, which highlights consistency of listed real estate return enhancement in times of improving or stable real estate values and only marginally inferior returns at times of severe market dislocation.

Market type	Period	Average Unlisted Monthly return	Average Listed Monthly return
Rising property values	June 03-June 07	1.25%	2.03%
Global Financial Crisis	July 07 -June 09	-1.66%	-1.91%
QE Led recovery	August 09 - June 13	0.59%	1.40%

The next stage is to see the impact on portfolio returns of adding listed real estate in different weightings. The table below shows the difference in total returns in each period of adding first 30% and then 50% listed real estate exposure to an unlisted real estate portfolio. This demonstrates an extremely compelling case for listed real estate. Adding 30% listed real estate weighting improves returns by 22% at a time of rising property values, reduced them only marginally (-2.2%) at a time of severe market dislocation, and has enhanced them by 13% thus far in the QE led recovery.

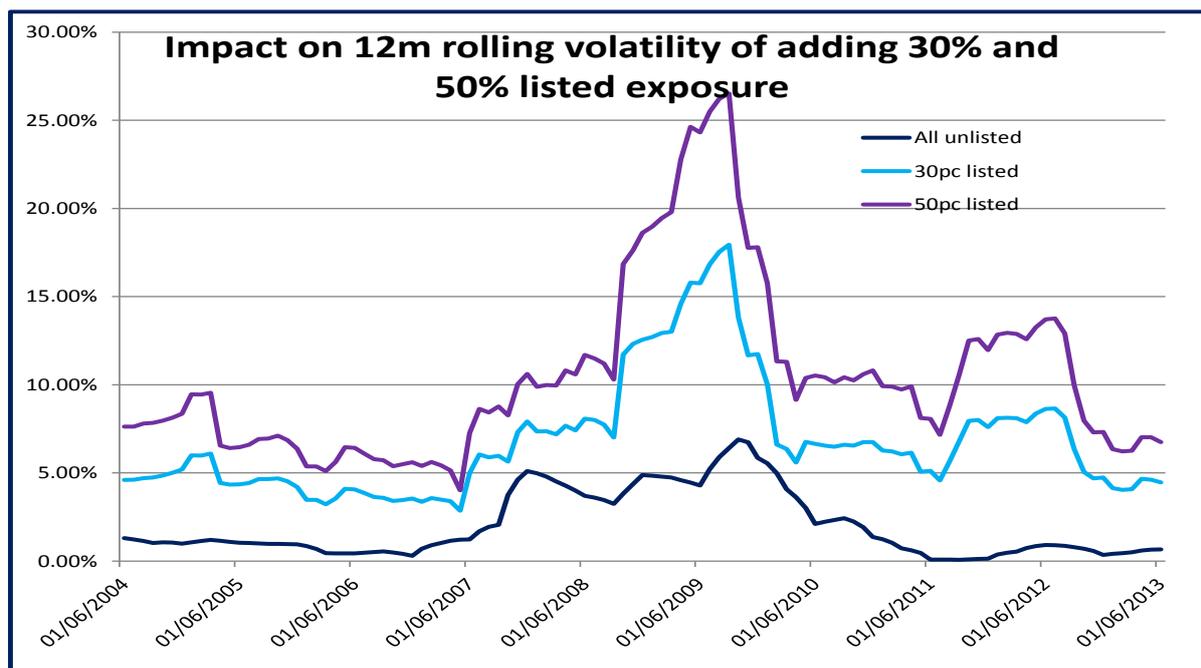
Market type	Period	Return enhancement 30% listed %	Return enhancement 50% listed %
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The table above shows the total return differences over the period. We now break this down further, and below we have shown the return enhancement on a monthly basis.

Market type	Period	Return enhancement 30% listed %	Return enhancement 50% listed %
Rising property values	June 03-June 07	0.25%	0.41%
Global Financial Crisis	July 07 -June 09	-0.21%	-0.28%
QE Led recovery	August 09 - June 13	0.27%	0.44%

Volatility

Having looked at the impact on returns we now turn to the impact on volatility, using a similar approach to that taken with returns. As before we have used 12month rolling volatility, with monthly frequency for valuations. Our data starts from June 2003, so the first data point is June 2004. Again the pattern is broadly as would be expected, with the portfolio volatility increasing with the percentage of listed added. However, we would point out that the returns data we have taken for the unlisted funds is based on stated NAV, and takes no account of secondary pricing. If we were to take account of this (which broadly mirrors the NAV based pricing in the listed sector) then the difference between the volatility of listed and unlisted would be far smaller.



Source: Consilia Capital. Townsend, Bloomberg

Looking at the breakdown of volatility by period we can see that taking fund NAVs rather than secondary pricing volatility has reduced post GFC whilst the price of liquidity in listed funds is reflected in the maintained higher level of volatility post GFC.

Market type	Period	Average Unlisted Volatility	Average Listed Volatility
Rising property values	June 03-June 07	0.88%	11.73%
Global Financial Crisis	July 07 -June 09	4.02%	23.93%
QE Led recovery	August 09 - June 13	1.85%	21.24%

Conclusions

A number of funds have the ability to include listed real estate in their portfolio but choose not to do so. Similarly a number of investors do not regard listed real estate as part of their real estate allocation. These results demonstrate very clearly how the returns of a portfolio of UK unlisted real estate funds can be enhanced by the addition of (global) listed real estate funds in a very simple and straightforward manner. This was shown without altering initial weightings. In our next paper we will explore strategies for enhancing returns even further by incorporating certain rules based allocation strategies.

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