# Defined contribution schemes and the listed sector

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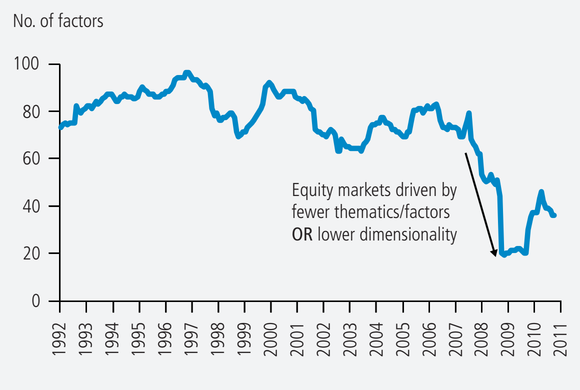
**There has been much debate recently regarding defined contribution (DC) pension schemes and the manner in which real estate can form part of the default option. As a result there has been a dramatic increase in the demand for information and understanding of the characteristics of the listed sector. This article attempts to put the UK and global listed sector into context, using Macquarie's proprietary global database, and to increase the awareness of the benefits of using the listed sector in a real estate strategy.**

## Reasons for the interest in the listed sector

- Convergence of returns has led to a reassessment of risk factors across investment products

The convergence of (negative) returns across asset classes, between 2007 and 2009 has ended, and we are now seeing a sharper divergence of risk-adjusted returns between asset classes and the re-assessment of specific risk factors as global economic recovery continues. This can be illustrated by looking at the number of factors that drive global equity markets over time, i.e. market dimensionality. Figure 1 shows that from 1992 to 2007 there were between 60 and 100 factors that accounted for divergence of performance between sectors. In 2008-09, this shrunk to only 20, but has since doubled.

**Figure 1: Market dimensionality – Number of thematics driving global equity markets**




Source: Macquarie European Quantitative Research, October 2010

Put simply, when all asset classes are driven by a small number of factors then correlations increase and assumptions regarding historic correlations and diversification benefits are re-assessed. One of the assumptions most severely tested is the perceived lack of volatility in direct and unlisted real estate vehicles. As we have now seen in the downturn, the valuation methodologies used by these forms of real estate investment significantly underestimate true volatility.

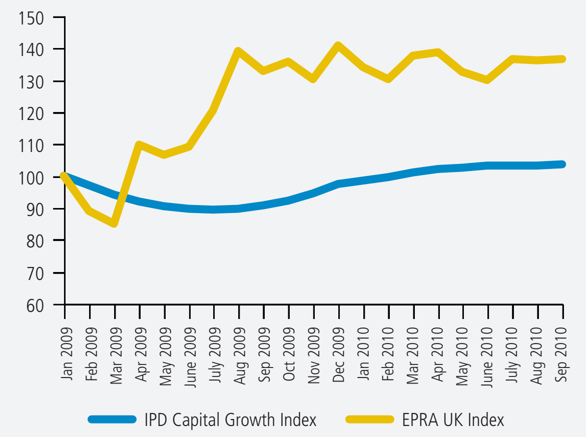
- Increased importance of liquidity in investment strategies/products

One of the key lessons of the last three years has been the importance of liquidity within all investment products. As a result, we are aware that a number of managers of unlisted funds have been examining the listed sector to see whether this could provide a level of liquidity that unlisted vehicles do not offer, particularly during periods of increased redemption requirements in their vehicles. The debacle in the German open ended fund market highlighted this issue and frustrated, and continues to frustrate, both retail and institutional investors. New legislation by the German government further exacerbates the issue.

- Timing advantages of the listed sector has become apparent

The speed of the recovery caught all market participants by surprise. The expected gap between redemptions slowing, cash becoming available for investment and forced sellers providing attractive opportunities for re-investment did not materialise. The listed sector, however, provided investors with a liquid and effective way to participate in the anticipated recovery ahead of the eventual yield compression, which was not available in unlisted vehicles.

**Figure 2: IPD Capital Growth Index vs EPRA UK Index since January 2009**




Source: Bloomberg, Macquarie Research, October 2010

## The UK listed market – the investable universe

By number, the UK has one of the largest sectors globally, but because of the 45% decline in commercial real estate values from peak to trough, and the fact that after the initial flurry of rescue rights issues in 1Q 09 there has been little secondary issuance, its weighting in global portfolios has reduced over the last three years. Other regions have recapitalised to a greater extent, and seen continued interest in the listed sector. Figures 3 and 4 show all listed UK real estate stocks by style and structure.

## Figure 3: UK listed market – by style

| Sub-sector | Numbers of stocks | Total market cap £m | Average daily turnover £m | Volatility 30D | Dividend yield % |
|---|---|---|---|---|---|
| UK Major | 5 | 18,184 | 11.00 | 18.62 | 4.50 |
| Central London specialists | 5 | 5,699 | 1.67 | 20.36 | 1.34 |
| Alternative | 11 | 2,762 | 0.43 | 23.76 | 2.76 |
| UK Fund | 13 | 2,874 | 0.22 | 25.40 | 5.37 |
| Entrepreneur | 9 | 2,407 | 0.50 | 26.34 | 0.87 |
| Overseas | 58 | 3,929 | 0.06 | 39.96 | 1.22 |
| Residential | 5 | 1,026 | 0.16 | 25.45 | 1.78 |
| Agency | 6 | 875 | 0.16 | 34.00 | 2.23 |
| Retail specialist | 7 | 724 | 0.11 | 18.51 | 2.31 |
| Developers | 7 | 691 | 0.20 | 39.50 | 0.36 |
| Industrial | 3 | 576 | 0.39 | 39.67 | 3.34 |
| UK small cap | 21 | 332 | 0.01 | 38.21 | 1.55 |
| **Total** | **151** | **40,179** | **14.91** | | |

Source: Bloomberg, Macquarie Research, March 2011

## Figure 4: UK listed market – by structure

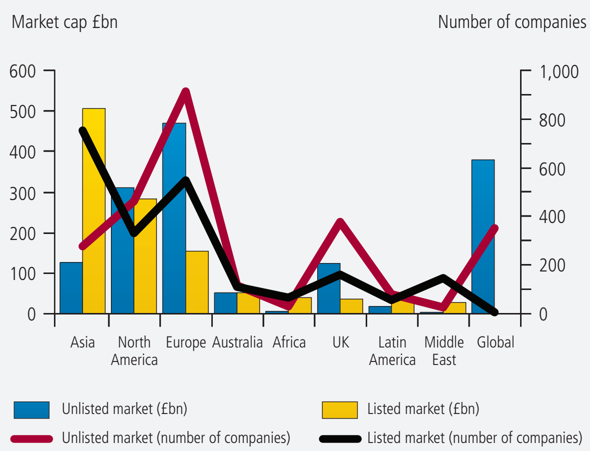
| Sub-sector | Numbers of stocks | Total market cap £m | Average daily turnover £m | Volatility 30D | Dividend yield % |
|---|---|---|---|---|---|
| REIT | 18 | 23,760 | 3.59 | 22.91 | 3.92 |
| PropCo | 105 | 12,679 | 0.16 | 33.15 | 1.25 |
| Closed End Fund | 28 | 3,740 | 0.13 | 38.23 | 3.20 |
| **Total** | **151** | **40,179** | **0.58** | **32.85** | **1.93** |

Source: Bloomberg, Macquarie Research, March 2011

- Comparison with the unlisted sector

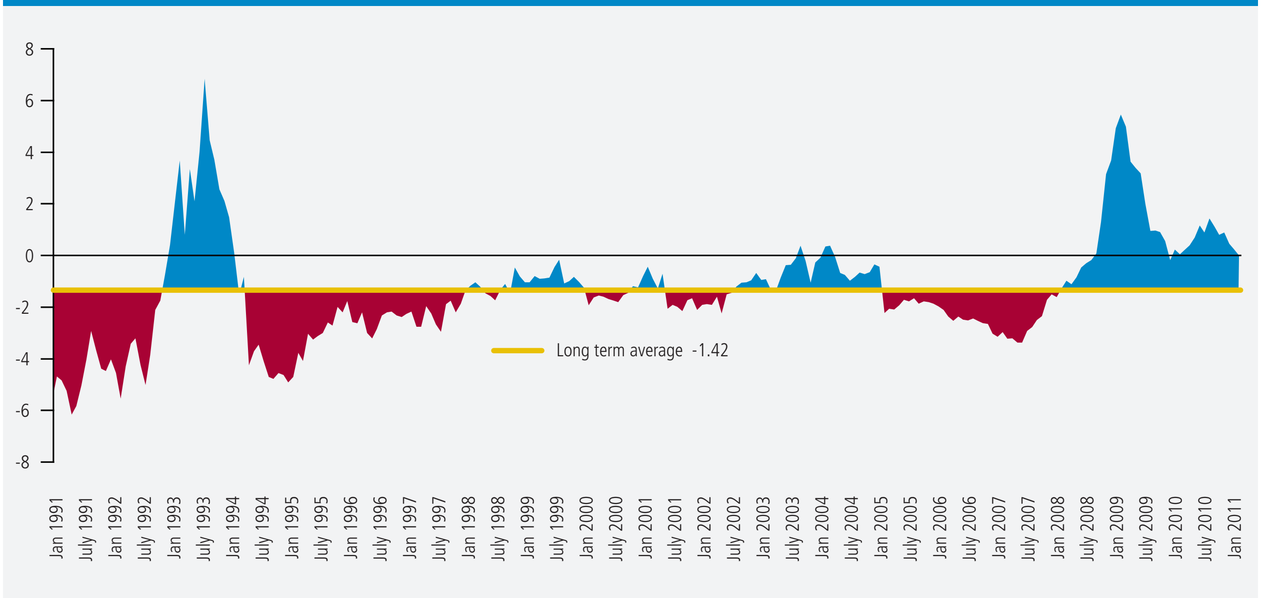
As can be seen in Figure 5 opposite, the major differences in the investment opportunity set of the listed sector and the unlisted sector are the relative importance of listed in Asia, unlisted in Europe, and the number of dedicated global unlisted funds. It should be noted that, in this simplistic representation, the scale of the listed universe is under-represented as we have taken market capitalisation for listed, compared to gross asset value for the unlisted sector.

## Figure 5: Listed vs unlisted companies in leading locations




Source: Property Funds Research, Bloomberg, Macquarie Research, October 2010

Figure 6: Long-term dividend yields vs 10-yr bond yields




Source: Bloomberg, Macquarie Research, March 2011

## Relative valuations

It is worth remembering two points regarding UK property securities valuations. Firstly, prior to 2007 listed property companies had contingent capital gains liabilities which were not netted off their stated NAV figures. These arose because of the longevity of asset / portfolio ownership and the sharp rise in values from 2004. This tax liability would be crystallised if the entire portfolio were to be sold. On average (and obviously it varied according to the period of ownership of the portfolio and the stage of the cycle) it equated to around 15-20% of the NAV, which was reflected in the average discount to NAV of 17.9% between 1989 and 2007.

Post REIT conversion, these liabilities have been extinguished via payment of a conversion charge. Therefore, ceteris paribus, the sector can be expected to trade 15-20% higher, i.e. close to parity at a time of stable or modest capital growth. Analysing the NAVs for the sub-sector categorisations outlined in Figure 3 shows that the highest growth areas (Central London specialists) are trading at a premium to their last stated NAV, the leaders are broadly at par, and the illiquid, small caps are trading at a decent discount.

It can therefore be seen that there is no issue with REITs trading at a premium to NAV, assuming that the implied capital growth rather than material decline in the underlying portfolio is likely, and that the management team warrants a premium to the collective valuation of the assets. It should also be noted that if the shares are not trading at close to NAV, the secondary issuance vital for the sector to grow will not occur as equity issues will by definition be dilutive.

On a global basis it should be noted that UK REITs are trading at a significantly lower dividend yield than Europe, Australia, Canada, Hong Kong, Japan, Singapore, and less surprisingly, South Africa. In terms of NAV, the UK is trading at close to par, with the US REITs at a significant premium and Singapore REITs at a significant discount.

The second valuation measure most commonly used is dividend yield relative to bond yield. Again, for historical accuracy, it should be noted that prior to REIT conversion, most 'PropCos' were relatively low yielding, choosing to keep retained profits to fund acquisitions and developments rather than distribute to shareholders. Now that there is a minimum required payout ratio the yield comparison is far more meaningful. As shown in Figure 6, on average UK REITs are now trading at close to parity with 10-year bond yields. This decline in relative dividend yields is justified, given that dividend growth is set to return in 2011-12, but we expect UK bond yields to rise to a more normalised 4-4.5% compared to their current 3.7%. To justify a discount, UK REITs need to demonstrate their ability to generate revenue cashflow, and thus dividend growth.

## Direct property and the listed sector

- Correlation

Research carried out by EPRA/Cohen & Steers highlights the lead/lag, relationship between the direct and the listed market. While listed remains a proxy for direct real estate investment over the medium to long term, the listed market offers a directional indication of underlying real estate values.

The conclusions of the research were:

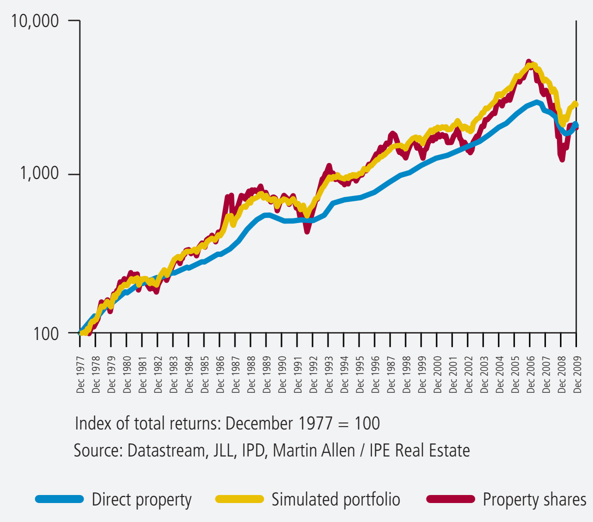
- Listed property companies tend to lead the returns of direct real estate by approximately six months. Interestingly, the lag has decreased to around three months for the US and UK market since 2007;
- While the listed performance is directionally accurate, the returns tend to overstate the eventual reported direct market moves;
- The propensity of listed markets to lead the direct markets may be related to the inefficient transfer of information in direct markets;
- The stronger the factors that delay information transfer in direct markets, the longer the gap between the markets' return series.

## Blending direct and listed – relative returns

(co-author Fraser Hughes, EPRA)

At its simplest, listed exposure can be added to enhance liquidity of a product to meet investor requirements, or a trading strategy can be developed to arbitrage between the two markets. On a straightforward rolling 10-year basis between 2000 and 2010, the FTSE EPRA/NAREIT UK Price Index outperformed the IPD UK Capital Index for nearly 75% of the duration. On the other hand, IPD UK total return outperforms the FTSE EPRA/NAREIT UK total return for 90% of the time. The listed sector trades within the boundaries of the direct benchmark.

**Figure 7: Total returns from blended portfolio**




Source: IPD, EPRA, March 2011

The next step is to examine how a simple rules-based strategy can arbitrage between direct and listed. At a strategic level, we use a simple portfolio, comprising 50% direct property and 50% listed property, as starting point. A series of thresholds is calculated around the long term average discount to NAV (-18%) over the entire period. This can of course be recalibrated throughout the course of the strategy. An upper and lower threshold is set at two thirds of one standard deviation – approximately 9%, either side of the long term average discount. The weighting to listed property is adjusted 150bps for each month that listed property trades below (or above) the thresholds. For example, if the discount to NAV trades at 20% for a cumulative five-months period, 7.5% extra is allocated to the listed allocation. Once discounts to NAV trade within the upper and lower band, weights revert to 50/50.

By combining the direct and listed market over the period and employing the trading strategy, it is possible to outperform both the direct and listed markets by some margin – see Figure 7. This approach generates an average annual return premium of over 100bps over that on direct property over the 32-year period between 1977 and 2009. As might be expected, the volatility of the returns generated by the simulated portfolio sits between that on direct property and that on listed property. Yunus, Hansz & Kennedy (2010) analysed the long-run relationships and short-run linkages between the private and listed real estate markets of Australia, Netherlands, UK and the US. Results indicate the existence of long-run relationships between the public and private real estate markets of each of the countries under consideration.

## Summary

We are now seeing the first products developed that seek to combine underlying real estate exposure with the investor requirement for liquidity. Given the importance of liquidity in DC schemes, and their expected growth, attention is firmly focused on providing a (more) liquid real estate solution for this market. The listed sector will play an important role in providing this liquidity. In addition, exposure to the listed sector provides the ability to access geared sector exposure ahead of a recovery in values, and in a downturn the ability to acquire assets at below market value;

Overall, we believe that, if used properly, there will be an improvement in risk-adjusted returns and liquidity by adding listed exposure to direct or unlisted exposure.