

Unlisted real estate funds



7.1 The explosion of unlisted real estate funds

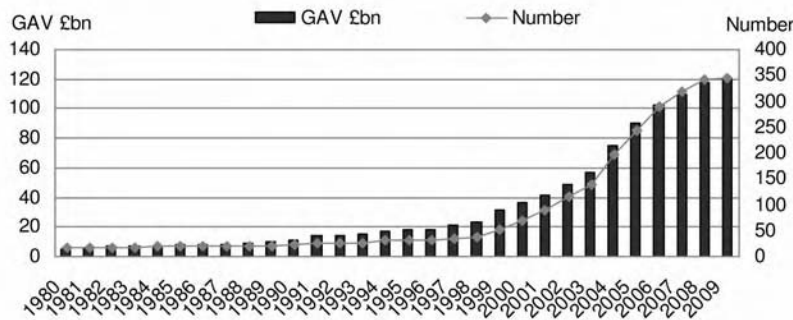
Over the period 1998–2007, a change in the investment strategy of pension funds and other professional investors generated an increased investor appetite for global real estate investment. The world's top investors went global, and real estate investment managers facilitated this through the creation of innovative indirect real estate investment solutions. The most popular of these indirect solutions can be called real estate funds. While the REIT market has seen steady growth in the US and in European and Asian markets as the necessary legislation has been passed, it is the universe of unlisted real estate vehicles that has recently grown more dramatically.

7.1.1 The appeal of the unlisted fund

The pension fund and the insurance company typically invest in property to achieve diversification and liability matching. Because some of the diversification advantages of real estate will be lost by using liquid securities, unquoted vehicles offer advantages.

However, some liquidity can be achieved by the manager arranging matched bargains between buyers and sellers, or by the manager dealing directly with the market through an open-ended structure. In addition, there is often a healthy secondary market for units in both open- and closed-ended funds (see section 7.5.4).

Figure 7.1: Growth in UK unlisted real estate funds, 1980–2009



Source: Property Funds Research, January 2009

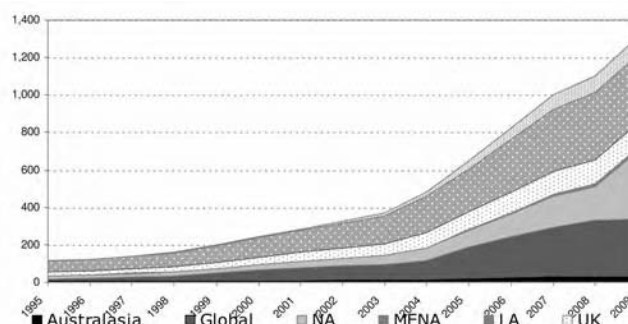
Liquidity will be promoted by widening the net of potential buyers, and some funds are established offshore largely to improve liquidity by attracting tax-exempt international investors. Increasing harmonisation of rules and taxes can be expected to allow European pension funds to invest cross-border without penalty, and liquidity will improve as a result.

Property unit trusts or unit-linked pension or insurance products have been regarded as perfectly adequate vehicles for providing pension funds or insurance funds with a means of diversifying into domestic property, but these have been supplemented by specialist closed-ended funds. As a result, growth in the gross asset value held in UK unlisted funds has been around 15% since 2000. This data, compiled by UK research firm Property Funds Research (PFR), is illustrated in figure 7.1.

In Europe, the number of funds in the PFR Universe grew on average by over 20% per annum over the past 10 years. Over the same period, GAV grew by 14% annually in the European market while explosive, albeit more recent, growth is evident in Asia and the emerging markets. This had become a truly global phenomenon which greatly facilitated executable global real estate investment strategies and expanded the investable opportunity set for the benefit of many.

The global real estate fund market can be categorised in several ways. There are listed funds and unlisted funds, although a more

Figure 7.2: Growth in the PFR database of unlisted indirect vehicles, GAV (€bn)



Source: Property Funds Research, January 2009

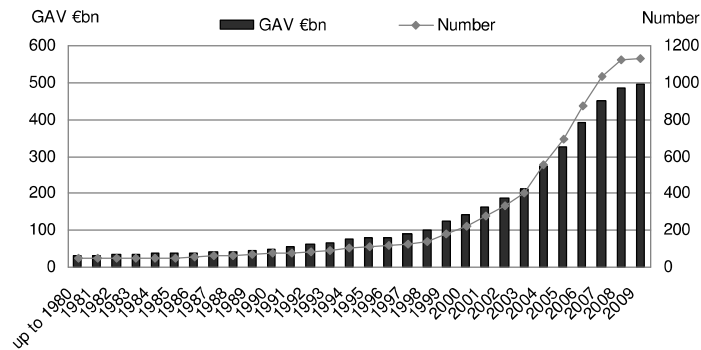
useful distinction is between those actively traded on major stock exchanges and those which are not; there are open-ended and closed-ended funds, both listed and unlisted; there are low-risk core funds and high-risk private equity or opportunity funds; and there are funds for private investors and funds for institutional investors. There are also different legal forms of fund: the most common forms of UK unlisted fund structures include limited partnerships and property unit trusts.

7.1.2 The global unlisted property market universe

PFR's estimate of the size of this market is around \$2.3trn (€1.8trn), of which data is held on funds with over \$1.6trn or €1.2trn in gross assets at the end of 2008. This accounts for around 14% of all global investable property (see section 7.3). The universe of unlisted property vehicles grew dramatically between 2003 and 2008. This explosive growth is demonstrated in figure 7.2.

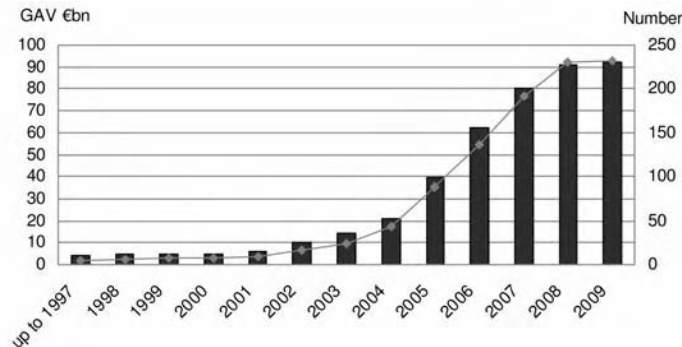
The largest markets in PFR's vehicle universe are those of continental Europe, the UK and North America. As figure 7.3 shows, growth in the European market, including the UK, was rapid until 2007 but began to tail off in 2008, as focus turned to the emerging markets of Asia, the Middle East, Africa and Latin America. From 2004 onwards, Asia in particular experienced a boom, as shown in figure 7.4.

Figure 7.3: Growth of the European (inc. UK) unlisted indirect market



Source: Property Funds Research, January 2009

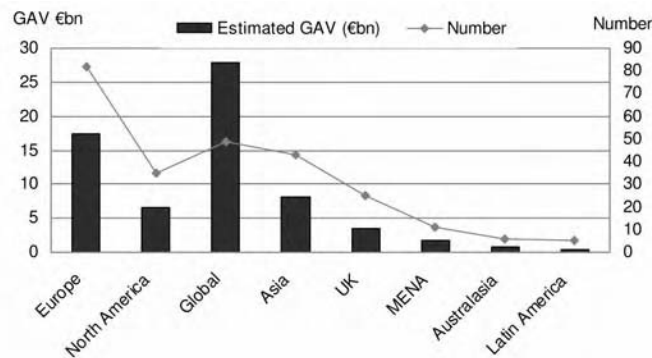
Figure 7.4: Growth of the Asian unlisted indirect market



Source: Property Funds Research, January 2009

Nonetheless, as figure 7.5 shows, Europe was the single most popular target location for funds launched in 2008 by both estimated GAV and number. Asian funds were second most popular in terms of estimated GAV, while global funds surpassed all single region funds by estimated GAV and number. North American funds were also popular, with 35 being launched in that year. By the beginning of 2009, there had been a marked global slowdown in fund launches.

Figure 7.5: Total number of vehicles launched in 2008 by location and value



Source: Property Funds Research, January 2009

7.2 What is a real estate fund?

One of the primary drawbacks of investing in direct real estate is the lumpy, illiquid nature of the asset class (see chapter 1) and a move to indirect investment is an appealing alternative. As this chapter will illustrate, real estate funds *per se* do not solve the liquidity problem, but some formats are more liquid than direct real estate holdings. Private real estate equity funds (sometimes referred to as unlisted, or non-listed funds) primarily include open-ended core funds and closed-ended private equity real estate (or opportunity) funds.

The recent pace of change in investor attitudes has been rapid. Taking UK pension funds as an example, balanced, unlisted real estate funds began to dominate institutional investment strategies early in the new millennium, and domestic multi-manager mandates, which focused on these funds rather than direct real estate, became common. In 2005–06, pan-European pension fund mandates became typical and global multi-manager mandates and global listed/unlisted mandates started to appear.

Given time, the standard pension fund mandate will almost certainly become global, and will continue to require the development of more global listed and unlisted funds. This is generally a good thing. High-quality real estate is a fundamental necessity for a developed

global economy, and continued improvements in transparency are both essential and inevitable in the drive to attract institutional investment in the global markets that are most in need of capital investment.

These markets will also offer both diversification and the highest rewards, and unlisted real estate funds clearly have the potential to play a significant part in this process.

7.3 How much global real estate is in unlisted funds?

The value of global commercial real estate owned by institutional investors was estimated to be around \$16trn (€12.6trn) at the end of 2006 (see chapter 2). This is the investable stock, meaning stock that is of sufficient quality to become an institutional investment product, and which therefore represents the potential for growth in securitised products if owner-occupation rates were to tend to zero.

UK-based real estate funds specialist Property Funds Research (PFR) has made estimates of the gross asset values (GAVs) of stock held in both listed REITs and property companies and unlisted funds. The €12.6trn investable stock of real estate can be broken down to the regional level and further disaggregated by ownership structure (see table 7.1).

Table 7.1: The global real estate investment universe (€bn)

	Europe	Asia	Emerging	North	Total
Size of market (€m)	4,951	2,681	378	4,577	12,587
Listed market size (€m)	433	1,049	216	493	2,191
Unlisted market size (€m)	850	343	32	577	1,802
Direct market size (residual) (€m)	3,668	1,289	130	3,507	8,594

Source: Property Funds Research, RREEF, EPRA, December 2008

Publicly available REIT and property company market capitalisation data has been used and grossed up as shown to reflect the use of debt in the capital structure of the typical listed company. This represents around €2.2trn, or 17%, of the global market gross asset value.

PFR estimates that the much less mature unlisted real estate fund market has a value of \$2.3trn (€1.8trn), around 14% of the investable stock, and that Europe (excluding the UK) represents the biggest component of this market, holding around 47% of the global unlisted fund market (by number of funds). Unlisted fund GAVs have been estimated by PFR using a combination of individual fund data from the PFR fund universe (over 2,350 funds worth \$1.6trn or €1.2trn, a 66% sample: see table 7.2) and extrapolation. The US and hence North American data is a minimum estimate.

Table 7.2: PFR's unlisted fund vehicle universe (€m)

Regional focus	Estimated GAV (€bn)	Number
Europe (ex UK)	388	866
Global (pan-region)	327	310
North America	212	357
UK	133	365
Asia	99	261
Australasia	32	92
Latin America	11	67
Africa	4	19
Middle East	2	19
Total	1,208	2,356

Source: Property Funds Research, January 2009

According to PFR estimates, therefore, the €12.6trn investable market splits as follows. €4trn or just over 30% of the total stock is held by listed and unlisted real estate vehicles, with 17% held in listed vehicles and 14% in unlisted funds. PFR's estimate of the size of the unlisted fund market is a minimum of around €2.2trn, of which data is held on over €1.2trn. The remaining €8.6trn, or 68% of the global universe, splits into directly held investment stock and owner-occupied real estate.

The global market is split by GAV into 50% Europe, 25% North America, 18% Asia and 8% emerging markets. Within this split, Europe is relatively fully supplied with unlisted product, while Asia is undersupplied. Asia, on the other hand, has been well served by the listed sector, and (with emerging markets) has the fastest-growing unlisted fund market.

7.4 Unlisted fund structures

Being unlisted means there is no requirement to be public, so unlisted fund data is hard to find. PFR holds the largest global dataset of unlisted funds. INREV (The European Association for Investors in Non-Listed Real Estate Vehicles) is also tracking the market and promoting best practice, as is AREA (the Asian Real Estate Association) in Asia, and IPD produces directories of unlisted real estate funds. There are other information sources, such as Prequin and Private Equity International, aimed primarily at the higher-risk opportunity fund sector. Information on REITs and other listed funds is more readily available (through, for example, NAREIT — the National Association of Real Estate Investment Trusts — and EPRA, the European Public Real Estate Association).

PFR suggests that there are four popular legal structures in use globally. These are (i) companies; (ii) partnerships; and (iii) trusts, all backed by the general body of law relevant to each; and (iv) contractual agreements, backed by special laws, especially common in Germany, France and Luxembourg.

In the UK, core (lower risk) real estate funds are typically open-ended property unit trusts, while private equity real estate funds are all closed-ended limited-life structures. Liquidity is the key issue that defines the relevant structure. A REIT or listed fund can usually be traded quickly on a major stock exchange, but an unlisted fund cannot. Investors in unlisted funds need to know how they can receive their money back, and how much they will get.

In the absence of an active secondary market for units in unlisted funds, which appears from time to time in the UK but does not generally exist anywhere in the world, the open-ended fund appears to guarantee 'redemption' of capital by the manager at something close to net asset value; in the absence of this, closed-ended funds have to have a termination date at which point all assets can be sold and capital returned. This is dealt with further in section 7.5.4.

7.4.1 Limited partnerships

Conceived by the Limited Partnership Act of 1907, this vehicle became popular in the UK real estate market in the 1990s. The limited partnership (LP) enables a pool of investors to invest together in one or more assets. The number of partners is now unlimited in number, one of which, the general partner (GP), must have unlimited liability

while the other partners have limited liability. The investment vehicle is tax transparent.

It is common practice that limited partnerships have a predetermined lifespan, usually between six and 10 years. There is a statement of intent, when the partnerships are established, that at the end of the period the partnership will be wound up and the assets disposed of, although this need not be the case if the partners vote to extend the vehicle life.

LPs can be complex in their management structures, but a GP will usually be created by the originator of the concept and/or will act as lead investor. The GP may be a special purpose company owned by more than one lead investor, and will have unlimited liability in respect of the partnership. The GP will usually appoint an operator, required by the Financial Services Act (FSA) of 1986 to be an FSA regulated body, which will be responsible for a defined set of administrative functions.

In establishing the pool of capital required, the GP may appoint a promoter to raise capital from limited partners; in some cases, the promoter may be the originator of the concept and seek a GP to act as lead investor. Limited partners will contribute capital and may form an advisory board, but cannot be seen to be making decisions without losing their limited liability status. Limited partners may contribute non-executives to the GP.

The GP will also appoint an investment manager or an asset manager; in turn, the investment or asset manager may appoint a real estate manager. The relationships of promoter, operator, GP and asset manager can be subtly or obviously connected: in some cases, the same financial services group will provide all of these functions.

7.4.2 Property Unit Trusts (PUTs)

In practice, PUTs fall into four categories: exempt, non-exempt unauthorised UK trusts, authorised PUTs and offshore trusts.

PUTs can either be authorised or unauthorised.

Unauthorised PUTs

The much more common unauthorised PUTs are unregulated unit trust schemes and may only be offered to institutional investors. There is an exemption from capital gains tax where all issued units are held by

investors who are themselves wholly exempt from capital gains tax or corporation tax (primarily pension funds and charities). The requirement is that units are held only by “pension funds, charity or other investors which are exempt approved or treated as approved under chapter 1, part XIV of the Incomes and Corporation Taxes Act 1988 or otherwise permitted by the Inland Revenue to hold units without prejudicing the exemption of the trust from tax on capital gains under Section 100(2) of the Taxation of Chargeable Gains Act 1992”.

Investors in unauthorised PUTs tend to be professional investors. While the operator/manager of the fund will be regulated in the UK by the Financial Services Authority (FSA), the fund itself will not be subject to the regulations set down by the FSA. Accordingly, the fund may be run with more flexible investment objectives and restrictions to meet the investment needs of more sophisticated investors. These objectives and restrictions will in some cases be the responsibility of a supervisory board representing the interests of investors.

Authorised PUTs

Authorised PUTs are designed primarily for retail investors. The Financial Services (Regulated Schemes) Regulations 1991 led to the authorisation of unit trusts as real estate funds. The authorised property unit trusts (APUTs) were designed primarily for retail investors, giving them a medium whereby they could invest in units of a collective real estate fund offering exemption from capital gains tax on disposals of investments in the fund, with income taxable in the fund at 20%. On distributions from the fund there is no further tax liability for corporate or exempt investors, but no credit of the tax paid in the fund is available.

This structure is therefore less attractive to exempt funds as there is an absolute tax cost, which can be avoided by investing through an unauthorised unit trust. Given this, and the restrictions placed on investment and liquidity, the structure has had very limited impact.

Offshore PUTs offer greater flexibility, as they are tax effective for a greater range of UK and international investors. The vehicle can be more efficient for both tax-exempt and taxable institutions. Non-resident PUTs, which are structured to give unit holders immediate entitlement to any income, are tax transparent for income — thereby giving a cash flow advantage and preventing possible tax leakages — and are also exempt from capital gains tax at the level of the PUT by virtue of non-residence. In addition, these vehicles are less heavily regulated.

PUT structures can be complex. A supervisory board may be appointed to represent what is usually a large pool of investors. The supervisory board will appoint a trustee to operate the fund, and an investment manager to buy and sell assets and act as issuer and redeemer of units. The promoter or originator of a PUT will usually be the investment manager, who will then appoint the supervisory board and effectively appoint the trustee; but there have been recent examples of supervisory boards terminating their investment manager's contract and appointing a new manager. This is different from the LP model, in which the GP cannot usually be removed and also appoints the asset manager, which is often a connected company.

The largest UK PUT is the Schroder Exempt Property Unit Trust, established in 1971, with a real estate portfolio valued in June 2007 at in excess of £2bn (falling to £1.6bn as a result of revaluations and redemptions by June 2008).

7.4.3 Property Authorised Investment Funds (AIFs)

UK Real Estate Investment Trusts (REITs) were launched on 1 January 2007. Given that REITs were tax transparent but APUTs were not, the UK Government considered the tax position of Authorised Investment Funds (AIF) investing in real estate in order to try to produce a level playing field between listed and unlisted funds. As a result, the point of taxation was moved in the 2007 budget from the AIF to the investor, with the effect that investors face broadly the same tax treatment as if they had owned real estate or REIT shares.

Access to the AIF tax regime is available only to AIFs whose investment portfolio comprises predominantly real estate or shares in UK REITs. However, unlike REITs, FSA regulations require property AIFs to value their fund each day.

Property AIFs can be constituted either as Authorised Property Unit Trusts (APUTs) or as Open-Ended Investment Companies (OEICs). APUTs can convert to AIFs, but any new property AIF regime will be available only to those established as OEICs.

There are other categories of funds that could consider joining the Property AIFs regime: in addition to the existing UK-based retail APUTs these include offshore unit trusts (constituted as qualified investor schemes) and new funds constituted as retail funds or qualified investor schemes in the form of an OEIC.

7.4.4 Managed funds

Managed funds (life managed property pension funds) are the insurance companies' equivalent of the pension funds' property unit trust. They are usually managed by insurance-based fund managers. Managed funds are unit-linked funds. Some are sold to retail clients; some are sold only to institutional investors.

The same fund may have both investor types, and charge different fees based on the source of capital. In return for an investment in a managed fund, a life policy is issued by the life company to the pension fund.

7.4.5 Funds of funds

There are four ways to invest in unlisted funds. Investors may:

- a) select a single diversified fund;
- b) use advisors or an in-house team to select a group of funds;
- c) appoint a discretionary manager to select a group of specialist funds (a multi-manager mandate); or
- d) invest in a fund of funds.

The multi-manager and fund of funds models are highly appropriate for pension funds of significant size without expert in-house teams.

A fund of funds is a wrapper placed around other wrappers (the underlying real estate funds). As in a multi-manager mandate, two sets of fees are charged: one by the fund of funds manager, and a second layer by the managers of the underlying funds. The fund of funds manager needs to justify the additional layer of fees either by the additional diversification and risk reduction produced by the strategy, or by its skill in identifying and sourcing excellent underlying funds, or both.

The first large real estate fund of funds was launched in 2005, but this market has grown rapidly, and as at May 2008 PFR held data on over 100 real estate fund of funds products. The vast majority of UK funds of funds are open-ended, investing in a mix of open-ended and closed-ended specialist funds. The majority of continental European funds of funds are closed-ended.

7.5 Characteristics of real estate funds

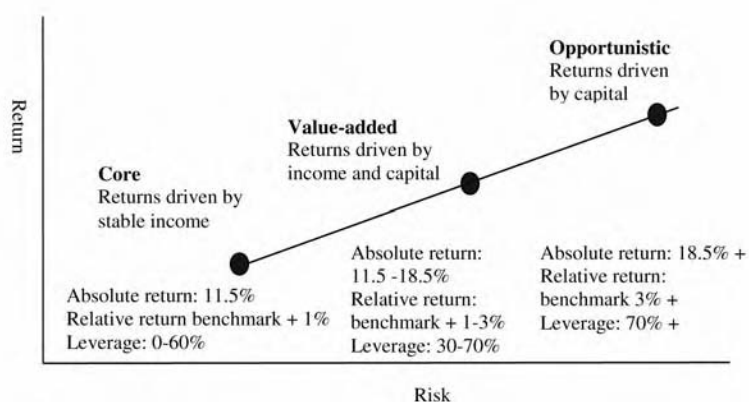
PFR held detailed information on 381 UK unlisted real estate funds as at May 2008 (365 at January 2009: see table 7.2), with a total gross asset value of around £116bn. This dataset is used as in the following descriptive statistics.

7.5.1 Style

Funds are differentiated by risk types. Some industry participants have distinguished funds by using four styles — core, core-plus, value-added and opportunity. The vehicles included in PFR's universe are classified as being one of three styles (core, core-plus/value-added and opportunity) while the trade body, INREV, similarly recommends three styles: core, value-added and opportunistic. This classification system has become the industry standard.

Figure 7.6 illustrates the INREV criteria used to distinguish global unlisted fund styles.

Figure 7.6: Unlisted fund risk styles



Source: Property Funds Research, 2008

Core funds are low-risk funds with no or low gearing, often open-ended, and should aim to closely replicate returns on the IPD UK

index of direct real estate. The INREV definition of a core fund is as follows:

- a) the fund assets provide stable income returns, which are a key element of the total return;
- b) its overall target (post tax and fees) return is up to 11.5% per annum, or its target return (post tax and fees) is less than 1% above a specified property or peer group benchmark; and
- c) its permitted capital leverage ratio is below 60% of gross asset value.

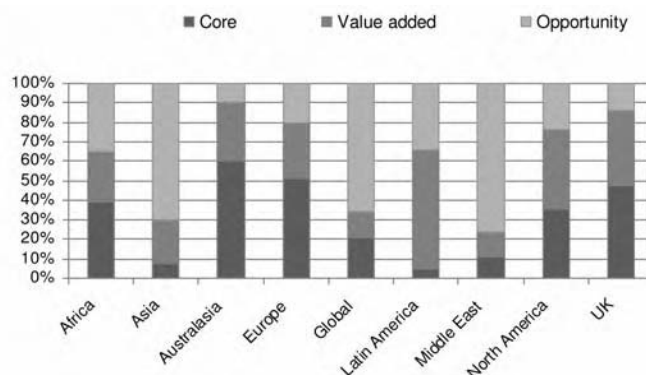
Value-added funds have some potential for value-enhancement through re-letting empty space, refurbishment work, or other active asset management activity. The INREV definition of a value-added fund is as follows:

- a) returns are driven by a combination of income and capital return;
- b) its target (post tax and fees) return is between 11.5% and 18.5% per annum, or its target return (post tax and fees) is 1–3% above a specified property or peer group benchmark; and
- c) its permitted capital leverage ratio is between 30% and 70% of gross asset value.

Opportunity funds are higher risk, higher target return funds with high levels of gearing. The INREV definition of an opportunistic fund is as follows:

- a) returns are driven primarily through capital return;
- b) its target (post tax and fees) return is in excess of 18.5% per annum, or its target return (post tax and fees) is greater than 3% above a specified property or peer group benchmark; and
- c) its permitted capital leverage ratio is in excess of 70% of gross asset value.

PFR data as at May 2008 shows an even split of core and core-plus/value-added funds — roughly 45% each of the database — with the remaining minority constituted by opportunity funds. Until the end of the 1990s European value-added and opportunity funds were barely in existence. At the beginning of the 1990s, core funds accounted for 97% of the market by GAV. This compares to just over 60% at January 2008. Opportunity funds experienced rapid growth between 2000 and

Figure 7.7: Vehicle style by regional focus

Source: Property Funds Research, January 2009

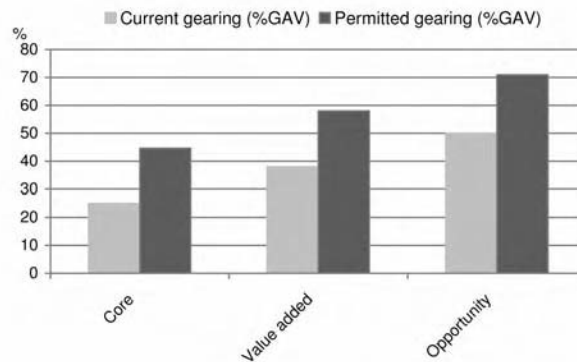
2003 but value-added funds then emerged as the style of choice. The majority of funds launched between 2005 and 2008 were value-added.

Figure 7.7 shows that core funds tend to be the style of choice for the more developed markets of Europe, North America and Australasia, while opportunistic funds are a significant fund type in most developing markets (with Africa currently dominated by the developed South African market).

PFR also records permitted gearing based on the level of debt in a vehicle as a percentage of GAV. Funds have permitted gearing levels ranging up to 85%, although typical gearing levels are far more conservative than this. Figure 7.8 illustrates that (as at January 2009) all vehicle styles carry a lower level of debt than is permitted, as the average is affected by funds that are not fully invested. Actual gearing levels average 25% for core funds, just below 40% for value-added funds, and around 50% for opportunity funds. Permitted gearing levels are around 45%, 58% and 70% respectively.

Vehicles in PFR's universe have a variety of investment restrictions aimed at limiting the risk of a particular portfolio of investments. Diversified funds may be permitted to invest between 30% and 50% of GAV in a particular sector. Pan-European funds may have prescribed limits on the countries in which they can invest, which may be anywhere between 30% and 50% of GAV in each country. Development

Figure 7.8: Current and permitted gearing by fund style



Source: Property Funds Research, January 2009

is limited to anywhere between 10% and 30% of GAV. There is likely to be some kind of investment restriction based on the amount invested in any single asset, typically in the region of 15% of GAV. Similarly, income restrictions are likely to be placed on a fund. Income derived from a single tenant/company is typically limited to around 15% of GAV.

7.5.2 Domicile and structure

Limited partnerships make up roughly 40% and unit trusts make up around one-third of the UK universe by number of funds, but PUTs are larger in terms of current and target gross asset values (£490m and £350m respectively for PUTs compared with £210m and £255m for LPs). The UK is the most popular domicile, as would be expected given that UK limited partnerships appear to be the vehicle of choice. Channel Islands funds (usually PUTs) define 30% of the sector.

7.5.3 Sector focus

As at January 2009, 44% of UK unlisted funds by number in the PFR database were diversified. Many more funds than is represented in the IPD direct real estate index were targetting residential and other real

estate, including healthcare, student housing and infrastructure. Retail was the most popular 'traditional' sector, with 13% of funds by number, then offices, with 10%.

7.5.4 Open or closed?

Twice as many funds by value are closed-ended rather than open-ended (69% against 31% by number respectively, and 58% against 42% by value). Over 50% of funds by value are closed to new investment, mostly closed-ended funds that had completed capital raising but including a very small number of open-ended funds that had closed their doors to new investment.

7.5.5 Target equity and permitted gearing

The average target equity level per unlisted fund is approaching £161m. Defined as a percentage of gross target assets, permitted gearing levels vary from zero to 90%, with most funds limited to between 50% and 70%. Core funds' permitted gearing levels averaged 40%, core-plus/value-added 43% and opportunity 70%. Permitted gearing levels are shown in more detail in table 7.3.

Table 7.3: Permitted gearing levels

Levels of permitted gearing (% of GAV)	%	Number
0–9	6	12
10–19	2	3
20–29	8	15
30–39	3	6
40–49	2	3
50–59	23	44
60–69	23	44
70–79	23	43
80–89	7	14
90	2	4
	100	188

Source: Property Funds Research, January 2009

7.6 Liquidity and valuation issues

7.6.1 Liquidity

The lumpy, illiquid nature of real estate as an asset class means that indirect investment may be an appealing alternative. However, liquidity in unlisted funds is generally limited, although different fund types offer different degrees of liquidity. Open-ended funds offer monthly, quarterly, or annual redemptions, although sometimes with an initial lock-up period of three or four years. Following the example provided by the relatively mature UK market, there is an increasingly active secondary market in European closed-ended funds and this may develop in international markets. Nonetheless, closed-ended funds generally offer little liquidity.

Given that unlisted funds are not stock market traded, an alternative mechanism is needed to provide this liquidity. The key issue is whether the fund is open-ended, semi-open-ended or closed-ended.

Open-ended fund units can be redeemed on demand, and new investors will normally be allowed and encouraged to buy new units on demand. The manager will issue units at NAV plus an allowance for the costs of buying new properties with the new cash (the offer price), and will undertake to return capital to the investor at the latest NAV estimate less a deduction for trading costs (the bid price). (Technically, the NAV is adjusted to offer price by adding real estate acquisition costs and offer is reduced to bid by deducting the round trip costs of buying and selling real estate.)

Semi open-ended funds will have a 'lock-up' period, typically up to five years, during which investors are not allowed to redeem units and after which limited redemptions will be permitted.

Open-ended and semi-open-ended funds can have infinite lives, and this is an obvious attraction for managers. Closed-ended funds, on the other hand, have a limited number of units in issue at any time (hence the term) and do not have a redemption facility, so that investors are reliant upon secondary market trading, which with some notable exceptions may be thin or non-existent. The manager of a closed-ended fund is therefore forced to offer a termination date at which investors can force assets to be sold and capital returned. This is typically 6–10 years from launch.

Despite the obvious appeal of the open-ended structure, there are severe limitations. Investors will not redeem units from the manager if they can sell units in the secondary market for a higher price, and new

investors will not subscribe for new units if they can buy units for less in the secondary market. Where there is a balance of buyers and sellers, buyers and sellers will deal directly with each other at something close to mid price (half way between bid and offer), and the bid-offer spread imposed by the manager is not justified because there is no need to undertake any direct real estate trading to grow or reduce the real estate portfolio. The manager may then wish to orchestrate a secondary market, either in search of broking fees or to offer a service to investors and to maximize the market appeal of the fund.

The open-ended structure can be fatally flawed in 'one-way' markets where there is a large preponderance of buyers or — much worse — sellers. A rush of buyers can flood the manager with cash, thereby diluting the real estate return delivered by the fund and damaging the manager's performance. A rush of sellers can be much more damaging. Unfortunately, there may be a double problem in such circumstances.

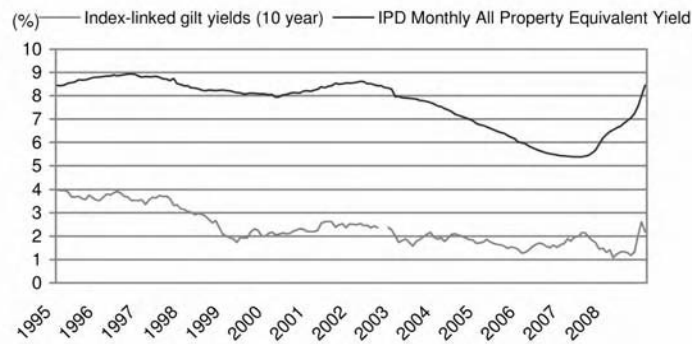
If a majority of investors feels that the time is right to sell real estate units, this may be for either or both of two reasons. First, investors may feel that the units are fairly priced but that the future market return will be relatively unattractive. Second, investors may feel that the units are overpriced and will wish to exploit a pricing anomaly by selling. On several occasions, with late 2007 being the latest example, these two factors combined to create the equivalent of a 'run on the bank'.

In 1990, Rodamco, then an open-ended Netherlands fund, was forced to close its doors to prevent investors from exiting. In 2005, German open-ended funds suffered a large exodus of investors, forcing an immediate revaluation and audit of one large fund and the risk of its closure through mass withdrawals. Following this, the pricing of German open-ended funds was publicly debated, fraud was discovered in two cases and questions about investor protection were openly raised.

In 2007 in the UK, a weakening real estate market was coupled with the predictable conservatism of valuers reluctant to mark prices down without clear evidence and yet strong external evidence in the derivatives and REIT markets of much lower real estate prices. The September quarter-end valuation of most open-ended funds was too high. Professional investors, primarily fund of funds managers, wished to exploit this anomaly by selling over-valued units in open-ended funds. The reaction of several open-ended fund managers was to defer redemptions and to reduce the valuation retrospectively, thereby preventing investors from exiting at valuation. At the time of

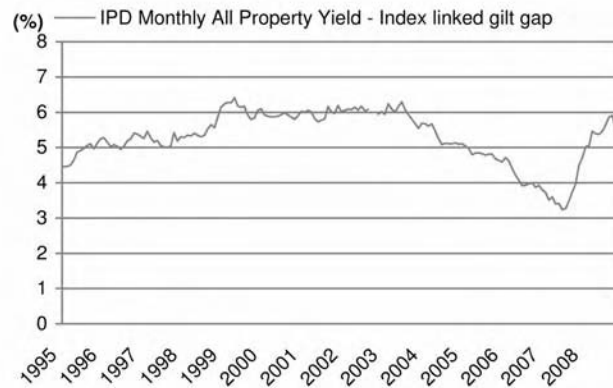
writing the consequent damage caused to the open-ended fund industry is difficult to quantify but may prove to be significant.

Figure 7.9: Real estate yields and index-linked gilt yields, 1995–2008



Source: IPD, FT, Property Funds Research, 2009

Figure 7.10: Real estate yields less index-linked gilt yields, 1995–2008



Source: IPD, FT, Property Funds Research, 2009

7.6.2 Valuation

As the secondary market trading of funds has begun to grow, pricing of these units has begun to take place at discounts and premiums to net asset value. This challenges market convention, as, unlike REITs, which trade in the stock market at market-determined prices in real time, unlisted funds are priced by reference to market valuations. For higher-risk opportunity funds, valuations may be irregular and unimportant, as investors expect to see a return of capital within three to seven years and interim valuations may not be helpful where development or other value-adding activity is the key focus of the fund. For low-risk core funds with longer or indefinite lives regular valuation is a more accurate and necessary indicator of the manager's progress, and monthly valuations are not uncommon, so secondary market premiums and discounts can appear to challenge the published valuation.

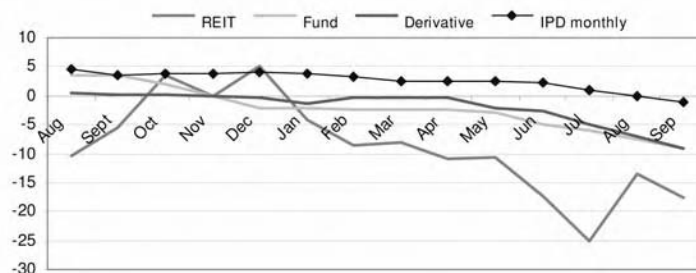
In late 2007, the UK real estate investment market had entered a period of relative crisis. Prices had been falling, liquidity had disappeared, and open-ended funds had closed their doors to those trying to exit. Why the loss of liquidity? Why had investors suddenly become trapped within an asset class — and an apparently liquid structure — that had been performing so well but suddenly froze? The answer lies in the unique nature of real estate as a 'big ticket' asset class, but also in the defects inherent within the practice of real estate valuation.

Figure 7.9 shows real estate yields and index-linked gilt yields for the period 1995–2008. It shows a remarkable correlation. The market appears to treat these asset types similarly, as excellent inflation hedges. However, by late 2006 the gap had closed, making real estate relatively expensive. This is illustrated more clearly in figure 7.10.

Real estate was looking expensive at the beginning of 2007. By this point, average premiums to NAV on unlisted funds had begun to fall, followed quickly by falls in REIT premiums and derivative margins. However, it was not until the summer of 2007 that returns on the IPD monthly index — the best indicator of prices in the direct UK market — begin to turn down.

Figure 7.11 shows average three- (calendar) year real estate swap margins over LIBOR from August 2006 to September 2007, turning from 0.4% over LIBOR to 9% under LIBOR (Merrill Lynch estimates). Unlisted fund premiums over NAV fell (according to Jones Lang LaSalle estimates) from 4% on average to –9% in September. REIT prices collapsed from premiums to NAV at the start of 2007 to big discounts by summer 2007.

Figure 7.11: REIT and unlisted fund discounts to NAV, real estate swap margins over LIBOR, IPD monthly returns, August 2007 to September 2008



Source: IPD, JLL, CBRE, Merrill Lynch, Property Funds Research, 2009

Meanwhile, the IPD monthly index (unlike the other indicators, including income) produced its first negative return (−0.1%) in September 2007. This — at the very least — suggests some lagging in the IPD monthly index.

Why has the IPD monthly index lagged other real estate indicators? The answer lies in the nature of the asset class and the conservatism built into UK real estate valuation practice.

7.6.3 Real estate as an asset class

Real estate is just one of a set of conventional and alternative assets for investment funds and must compete directly with them. In the UK and US over the long term, equities have performed best, real estate second best and bonds worst. But in the UK the volatility of real estate, as measured by the standard deviation of those returns, is much lower than the other two.

However, there are problems with this argument. The capital values of real estate used in the performance calculations are produced by valuations and are not transaction-based. It is commonly argued that the way in which valuations are produced means they tend to lag market movements, producing a lagging effect in the performance figures that tend to smooth the peaks and troughs of movements in prices (see chapter 1).

Valuation issues, along with considerations of liquidity and the depreciation of real estate, have been cited as issues that have been used to disadvantage real estate in the asset allocation process. Yet when these differences are exposed they provide an opportunity for professional investors to make money through the identification of pricing anomalies, which hedge funds (for example) increasingly try to do. In the UK, the recent introduction of a UK REIT and the development of derivative products are both illustrations of the driving together of real estate and the capital markets, the opportunity for arbitrage and the impossibility of real estate appraisal methods standing apart from these markets. This is a good thing for markets, investment managers and investors.

7.6.4 How market prices are estimated

However, real estate is different from liquid assets because market valuations are required for performance measurement purposes. The established doctrine underpinning the identification of market value requires best evidence of trading prices of other similar assets. This doctrine is underpinned by the courts and by the perceived best practice of other competent practitioners.

‘Other similar assets’ is invariably interpreted as other similar *real estate* assets; and the use of transactions in similar properties means that a lag is built into real estate valuations. From 1996–2006, a period of rising prices, IPD estimates that sale prices were around 3% higher than valuations. This suggests some lagging of valuations. As a result, few analysts accept that appraisal-based indices reflect the true underlying performance of the real estate market. Such indices fail to capture the extent of market volatility and lag underlying performance.

Real estate valuation is founded primarily on the use of comparable sales evidence. Similarity in real estate characteristics is paramount and good recent comparables may be rare. Hence the evidence used to value a property as at 31 December 2007 may be collected over the period July to December. In a rising or falling market, this will again result in a lower variance of prices. As a result, valuations will be based upon the previous valuation plus or minus a perception of change, and the perceived changes, unless the subject of very reliable transaction evidence, will be conservative.

There may also be client influence. The way property fund managers are typically rewarded, with an annual fee and a performance

fee based on delivered returns with no reference to risk, may mean they will benefit greatly from a particular performance outcome, which will earn a bonus or carried interest, or support a track record to win or retain fee-earning business.

There are circumstances in which clients and other stakeholders may put pressure on the valuer to report a specific outcome. For example, in early 2006, some German open-ended funds with unit prices set by valuations were subject to very high withdrawals from investors, and it has been suggested that this was because investors did not trust the valuation-based price levels.

Given that valuations tend to lag price increases and falls, valuations in a bear market will not follow price reductions down as quickly as they occurred. If this bear market continued for a long term, which was the case in Germany, valuations could become higher than prices. It is not surprising therefore that investors would be nervous of this cocktail of moral hazards, with plenty of incentives for the funds to influence valuers, and that some investors lost confidence in the valuation levels being reported.

In the UK, there is thankfully no evidence of client influence maintaining artificially high price levels (Baum et al, 2003). However, there is a secondary market for units in unlisted funds. There is also a growing real estate derivatives market, and a REIT market, not to mention a securitisation (CMBS) market. All offer pricing indicators to valuers of direct real estate. Yet while there was patent overpricing in a falling market in the second half of 2007, valuers claimed a lack of comparable evidence, with few transactions.

Evidence is all around in the capital markets and unlisted real estate vehicles, and valuers are beginning to be influenced by the evidence provided in increasingly integrated markets for direct real estate and real estate funds.

Their professional integrity, and a clear absence of client influence, is paramount to the working of the unlisted real estate fund market.

7.7 The case for and against unlisted real estate funds

7.7.1 The case for unlisted real estate funds

Unlisted real estate funds can diversify real estate specific risk

A great deal of money is needed to build a diversified real estate portfolio. The capital investment required to mimic the performance of a real estate index depends on both the efficiency of diversification within the segment and upon the average lot size within each segment. Investors with higher levels of risk aversion require more capital investment in real estate segments in order to reduce the specific risk component of the portfolio to the desired level.

For example, Baum and Struempell (2006) found that over £1bn is needed to build a diversified portfolio of London offices with a 2% tracking error. This presents a very strong case for using an unlisted fund focused on London offices. Assuming that such a fund is financed by 50% debt and 50% equity, 20 investors committing £25m each will produce enough capital to achieve the diversified fund. Yet the investor's £25m is enough to buy only one or two London offices of average lot size.

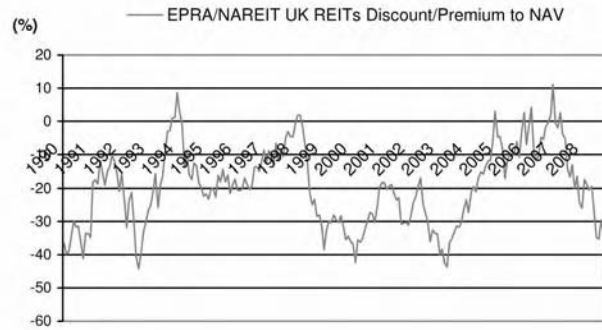
Unlisted funds are priced by reference to NAV

The above argument could also be used to justify investments in listed property securities. However, the pricing of listed REITs and property companies will vary from real estate prices and in the short to medium term (0–5 years) distort the performance of the securities relative to the underlying real estate market. Since 1990, US REITs have traded at discounts and premiums varying from –35% (in 1991) to +30% (in 1997).

Figure 7.12 shows the premium and discount to NAV (net asset value) that coloured the performance of the UK PropCo/REIT sector over the period 1990–2008. It shows how there is some short-term volatility, and that significant discounts to NAV can affect pricing for periods as long as five years.

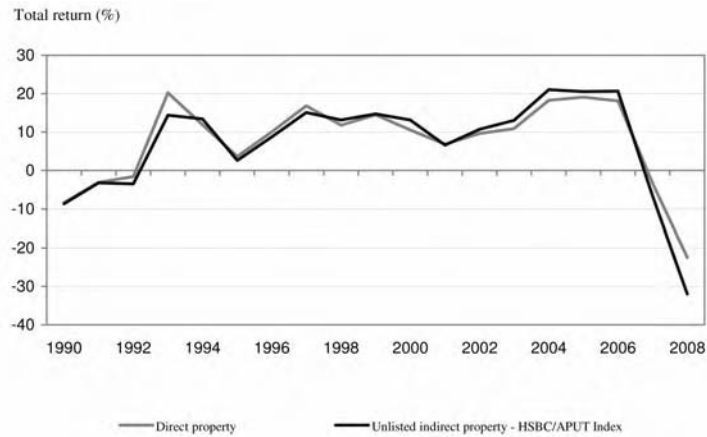
On the other hand, core open-ended unlisted funds appear to track real estate NAVs. Figure 7.13 shows how core (lower risk, often open-ended) UK funds have tracked the UK IPD index of direct real estate returns.

Figure 7.12: UK REIT pricing relative to NAV, 1990–2008



Source: Property Funds Research, EPRA, 2009

Figure 7.13: UK core unlisted funds — performance relative to NAV



Source: Property Funds Research, AREF, 2009

This could be highly misleading. Figure 7.13 shows how appraisal-based returns on core funds track appraisal-based returns on the index. It does not purport to show how trading prices track the index (see figure 7.11). This became a problematic issue in 2007-08, as described in section 7.6.2.

Unlisted funds provide access to specialist managers

It is likely to be the case that specialist managers, meaning experts in a market sector or a specific geography, will produce better performance than a manager or investor located in a single market yet attempting to buy assets globally. PFR global data shows that the majority of closed-ended unlisted funds are typically focused on a geography (India, London) and sector (shopping centres, London offices). Good fund and manager selection can lead to the holy grail of lower risk and higher returns.

7.7.2 The case against unlisted real estate funds

Investing in unlisted funds suffers from four key challenges. First, cash may not be taken immediately by the discretionary manager, fund of funds or selected fund(s). This produces a slow expected cash drawdown profile. Second, the initial performance will be coloured by the costs involved in the manager buying the initial portfolio, producing what is known as the J-curve effect. Third, manager fees can challenge thoughtful investors. Finally, trading prices may not track NAV, even for open-ended funds.

The drawdown profile

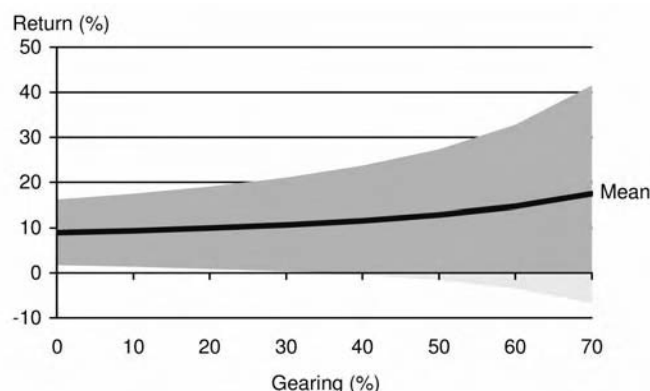
Managers will not wish to draw cash immediately for a variety of reasons, the key issue being their desire to deliver real estate returns not coloured by cash returns. Hence, cash is drawn from investors as and when it is needed to complete the purchase of assets. The result is a delay in attaining full exposure.

Gearing and the J-curve effect

The performance of an allocation to unlisted funds will also be damaged in the short term by the costs involved in the manager buying the initial portfolio. The result can be poor short-term performance. In the early years, newly launched funds' performance can be negative relative to the direct real estate index — but after fund costs are amortised, and the gearing in the unlisted fund takes effect, the unlisted funds can outperform the direct market.

The typical European fund, whether core or value-added, is likely to be somewhat different from a UK open-ended fund. It will probably

Figure 7.14: The impact of gearing on return



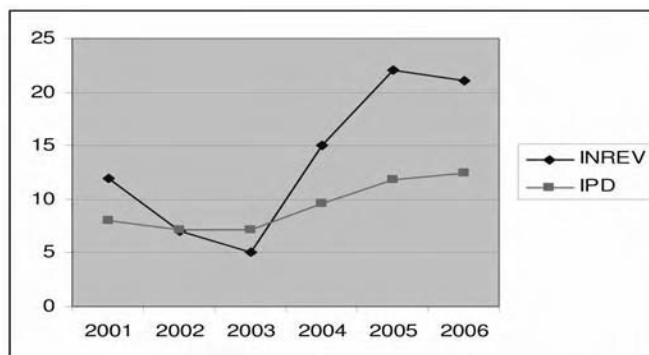
Source: Baum and Struempell, 2006

be geared and closed-ended. Adjustments will therefore need to be applied to the direct real estate risk, return and correlation data that encouraged investment in real estate.

A financial structure of 50% equity and 50% debt means that only half of the required investment is needed to attain the same exposure. This increases the appeal and efficiency of unlisted vehicles even more. Unfortunately, this factor carries with it financial risk, which, to some extent, will offset the reduction in specific risk. It is known that gearing increases risk and volatility. It also makes performance more responsive to interest rates and the bond market, depending on whether the interest rate is fixed or floating. Debt can alter the cash flow, and will typically decrease the investor's income return. In summary, the risk of a geared fund is likely to be higher than the risk of an ungeared fund, as shown by figure 7.14, in which the shaded area shows the likely spread of returns, increasing as gearing increases.

Hence the price of specific risk reduction achieved by unlisted vehicles may be higher volatility introduced by gearing — albeit balanced by higher prospective returns.

The INREV Index, which began in 2001, measures annual net asset value (NAV) based performance for non-listed real estate funds investing in Europe. The 2006 Index release covered 206 funds with a

Figure 7.15: The J-curve effect

Source: INREV, IPD, Property Funds Research, 2006

NAV of €153bn. Performance from 2001–06 averaged 13.67% compared with 9.35% for the ungeared direct property market measured by the Investment Property Databank (IPD pan-European index).

The INREV index (see figure 7.15) describes a classic J-curve relative to the market, showing how fund set-up and acquisition costs damage early year returns as funds are being established. Figure 7.15 also shows how funds outperformed the direct index by around 10% per annum over the 2005–06 period.

In the INREV index release for 2006, INREV reported fund returns split by gearing level. A low-g geared fund has a gearing level of less than 50% of NAV (gearing of roughly 33% of gross asset value or GAV); medium gearing is defined as 50–150% of NAV (33–60% of GAV) and high gearing is above 150% of NAV (above 60% of gross asset value or GAV).

In 2006, INREV-classified, high-g geared funds outperformed low-g geared funds with returns of 29.9% against 10.2% respectively. This huge difference may be explained by other factors as well as gearing, but it almost certainly illustrates the power of leverage in a strong capital growth environment.

Excessive fees

Fees charged by the manager of a real estate fund (or a fund of funds) will usually be charged on an annual *ad valorem* basis, typically between 50bp and 100bp every year on a growing gross asset value, despite the fact that much of the manager's activity is front-loaded. In addition, performance fees may be charged and related to absolute returns or returns relative to an index. Often, the use of high gearing will mean that the manager has increased the risk profile of real estate investing but, to the extent that this delivers extra returns, will be paid for the risks taken with client's capital. These issues are challenging for managers to justify.

In addition, double fees charged in funds of funds may be hard for clients to bear. Managers need to be able to justify the additional fee layer by proven added diversification and risk reduction, or alternatively by the provision of expert access to outperforming managers at a reduced cost.

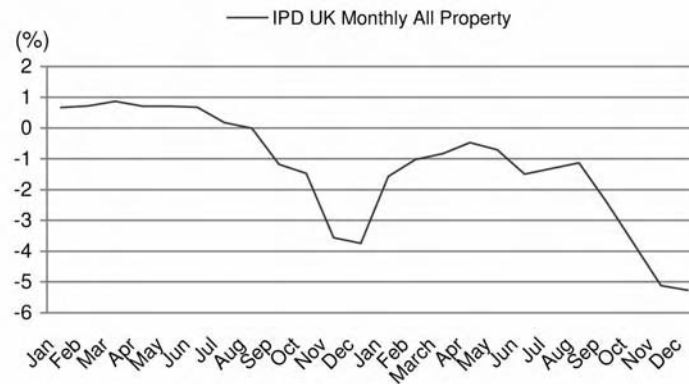
Do trading prices track NAV?

A large component of the case for unlisted real estate funds, as argued above, is that unlisted funds are priced by reference to NAV and can therefore be expected to deliver property-style performance, whereas REITs and listed property companies exhibit volatility and correlation with equities. But the events of 2007-08 call this into question.

Take the case of a UK open-ended fund in mid-2007. The fund is valued monthly by a well-known chartered surveying practice/property services provider. The valuation instruction is to estimate the asset value of the properties in the fund; any adjustments needed to estimate the fund net asset value are usually undertaken internally as an accounting function, dealing primarily with the addition of cash holdings and the deduction of debt.

From January 2007 to June 2007, the IPD monthly index had been showing positive capital growth of between 0.27% and 0.46% for each of the six months of the first half of the year (see figure 7.16). The fund also showed positive NAV growth.

In the summer of 2007, there was a change in market sentiment. This was evidenced by some circulars from fund managers to their clients warning of poor returns to come. It was reflected to some extent in the IPD monthly index, which produced its last positive total return of the cycle in July, disguising a tiny fall in capital value of 0.22%,

Figure 7.16: IPD UK monthly index, monthly total returns, 2007–08

Source: IPD

followed by a negative capital return in August of 0.4%, marking a turning point in retrospective but hardly indicative of a crash. The fund's values were flat over this period, as they were through the end of September. However, the IPD monthly index for September had taken a more significant downward turn of over 1.5%, a figure that was not available to the valuer of the fund's properties at the time the September valuation was produced. The effect of this was that the fund's values stayed flat over the summer quarter, while the IPD monthly index fell by over 2% for the quarter.

Open-ended fund units can be redeemed on demand, and new investors will normally be allowed and encouraged to buy new units on demand. The manager will issue units at NAV plus an allowance for the costs of buying new properties with the new cash (the offer price), and will undertake to return capital to the investor at the latest NAV estimate less a deduction for trading costs (the bid price). (Technically, the NAV is adjusted to offer price by adding real estate acquisition costs and offer is reduced to bid by deducting the round trip costs of buying and selling real estate.)

Open-ended funds in the UK typically have quarterly redemptions. The quarter-end NAV is important, as it sets the bid and offer price. For example, the relevant data for the fund might be as follows:

Figure 7.17: Secondary trading premiums (discounts) in UK closed-end funds and UK REITs, August 2006 to December 2008



Source: EPRA, JLL, 2009

- The fund's net asset value is £995.05m. The number of units in issue is 19,082,778. The NAV per share is $\text{£}995.05\text{m} / 19,082,778 = \text{£}52.15$.
- The offer price — the price paid by an investor on entry — is set at NAV plus 4.75% = $\text{£}52.15 \times 1.0475 = \text{£}54.63$.
- The bid price — the price received by an investor on exit — is set at offer price less 6.25% = $\text{£}54.63 \times 0.9375 = \text{£}51.21$.
- The bid-offer spread = $(\text{offer} - \text{bid}) / \text{offer} = (\text{£}54.63 - \text{£}51.21) / (\text{£}54.63) = 6.25\%$.
- Mid price = $(\text{bid} + \text{offer}) / 2 = (\text{£}54.63 + \text{£}51.21) / 2 = \text{£}52.92$.

In mid-October 2007, the fund's manager found itself in a 'challenging' position. Market sentiment had clearly changed. The UK REIT market had moved to huge discounts to NAV, moving downwards from a small premium in March 2007 to a discount touching 20% in September 2007 (see figure 7.17).

Meanwhile, the fund's NAV had stayed flat over the summer. Unlisted funds in general were in a strange position — secondary

trading had dried up as the market sought a new price level, as Jones Lang LaSalle's (JLL's) estimates of closed-ended fund premiums and discounts show. Only by November had the repricing become evident.

Professional investors could see a clear arbitrage opportunity, and were prompted to exploit it. They served redemption notices effective at the end of September, expecting to be paid out at the NAV-based bid price. This was broadly the same as it had been in June, at the peak of the market, but by October values were clearly falling. The manager was faced with the prospect of selling properties in a very weak market for prices that would clearly not be as high as the September NAV.

This might be a fair game as far as the exiting professional investor would view it, but it might not be fair from the perspective of an existing unitholder who wishes to stay in the fund. If a large number of properties are sold considerably below NAV but existing unitholders are paid out at NAV, the remaining unitholders suffer the loss. If this is the case, then all unitholders will be tempted to exit at the same time, challenging the continued existence of the open-ended fund, which has been a perfectly acceptable and stable investment for many small pension funds for over 15 years since the last market crisis of 1991.

The trust deed allowed the manager to defer redemptions, and also to make adjustments to the NAV in exceptional market circumstances. It was judged that these circumstances were indeed exceptional, and a large discount was applied to the NAV in October, and a further discount was applied in January; redemptions were deferred, but sales took place and exiting investors (who had been able to withdraw their redemption notices give the downward price revision) were paid out on time, albeit at the lower bid price, by now revised down to around 80% of the NAV.

The consequences are disturbing. While unlisted fund NAVs may continue to track the IPD index (see figure 7.13) and demonstrate high correlation, there is less reason to suppose that will reflect either trading prices of funds on the secondary market, or the prices received by investors exiting open-ended funds. Nonetheless, given the history of the UK market, it may be that this is a once in 17-year event (see chapter 2).

7.8 Performance measurement and return attribution for property funds

7.8.1 *The asymmetry of performance fees*

As explained in section 7.2, performance fees may be charged by managers of unlisted funds, especially those at the riskier end of the spectrum, and will be related to absolute or relative returns.

The use of high gearing increases the risk of the client's capital and should generate extra returns. This can be called beta investing, whereby the manager increases the exposure of the client's capital to the market (see chapter 5). It is different from alpha investing, whereby the manager uses skill to outperform the market competition at the relevant risk level. It can be expected that more focus is placed on defining and distinguishing alpha and beta investing in real estate funds, if only because performance fees charged purely for beta are commonplace, yet plainly unfair.

This issue, among others, will add to the debate about transparency which is necessary to bring self-regulation to a growing and globalising market for real estate funds. Aided by the participation of world-class global managers and investors, real estate funds are likely to be the engine that drives best practice in a truly international real estate market.

Since the mid-1990s, in a generally strongly performing property market, fund managers have been able to raise significant capital for unlisted funds that reward them with performance fees, without the manager necessarily being able to provide clear evidence of historic outperformance against market benchmarks or targets.

Table 7.4 shows the delivered and expected returns on a series of high-return funds with typical performance fees or carried interests. The average difference between the gross of fees IRRs earned by the fund and the net IRRs delivered to investors is just over 5%, or just over 20% or one-fifth of the gross IRR. This is a substantial additional fee load for the investor and should therefore be justified in a relative context.

Property Funds Research data suggests that typical annual fund management fees, excluding performance fees, average around 0.8% of gross asset values, taking away less than 1% return every year. Hence the fee impact shown in table 7.4 seems high, and is explained by 'carried interest' or performance fees. High fees may be justified if the manager has earned the fee through the exercise of skill. But, as we have seen, a higher-risk portfolio should outperform a lower-risk

Table 7.4: Total returns, fund series — fee impacts (rounded)

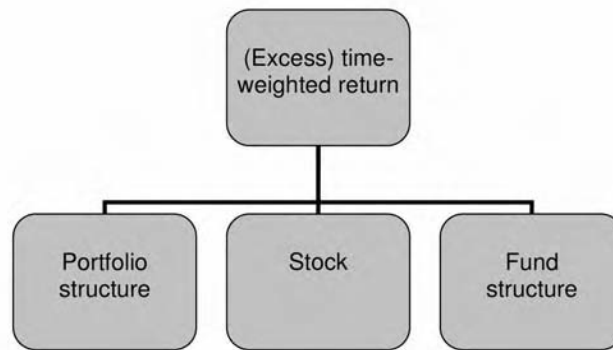
Fund	Gross IRR (%)	Net IRR (%)	Fee impact (%)	Fee impact (%)
1	29.0	25.0	4.0	13.8
2	17.0	13.0	4.0	23.5
3	33.0	25.0	8.0	24.2
4	35.0	30.0	5.0	14.3
5	27.0	21.0	6.0	22.2
6	46.0	37.0	9.0	19.6
7	21.0	16.0	5.0	23.8
8	34.0	27.0	7.0	20.6
9	16.0	13.0	3.0	18.8
10	20.0	15.0	5.0	25.0
11	18.0	14.0	4.0	22.2
12	20.0	16.0	4.0	20.0
13	14.0	12.0	2.0	14.3
14	20.0	15.0	5.0	25.0
Mean	25.0	19.9	5.1	20.5

Source: Baum and Farrelly (2008)

portfolio on a risk-unadjusted basis. This means that the manager could earn a high fee by taking risk with the client's capital. Performance fees should reward alpha, but they may reward pure beta. In addition, performance fees may represent a form of free option (asymmetrical, as options tend to be) for the manager. High returns may lead to high fees (there is an 85% correlation between the gross IRR and the fee impact in table 7.4) and limit the investor's upside without limiting the manager's upside; while the opposite situation may describe the downside, as the investor will directly suffer, but the manager will not.

Hence there is a large incentive for managers to create high returns, which is good; but whether alpha or beta delivers those returns may be immaterial, and that is not good.

Figure 7.18: Time-weighted return attribution for a property fund



Source: Property Funds Research

7.8.2 An attribution system for funds

To enable performance fees and track records to be judged, risk and return attribution systems need to be developed for property funds and property fund managers. As an example, Baum (2007) focuses on the additional return and risk contribution of fund structure — gearing, for example — to the traditional structure and stock factors. Under this proposed approach, it is necessary to take away vehicle return effects in order to expose the property effect, and then to deduct the structure contribution to reveal the stock contribution.

Fund structure is a factor specific to property held in a vehicle or wrapper. This factor will have an impact on the returns from listed REITs and property companies and from unlisted funds alike. There are two main drivers of the fund structure impact: fund expenses and management fees; and leverage.

Baum (2007) uses empirical evidence derived from the IPD UK Pooled Property Fund Index, measuring the fund structure effect by taking the fund returns, the funds' quarterly gearing levels, interest rates and annual fee structures, and 'degearing' the gross of fee returns. Deducting this vehicle impact leaves the property contribution. Deducting the structure contribution to the property return from the derived property level return series produces the stock contribution to return (see chapter 5).

Using the sets of data described above, the tracking errors of 18 funds against the IPD UK Pooled Property Fund Index were computed. In addition, depending on the funds' reporting and data availability, the earliest available period for each fund in which all necessary data were available was used to predict the tracking error given the above approach. The actual fund tracking errors (over the time periods corresponding to each fund's data availability) were then compared with the predicted fund tracking errors. The fit between actual and predicted fund tracking errors was higher than the fit between actual and observed property tracking errors, validating the inclusion of gearing and fee factors in a fund risk measure.

Bostwick and Tyrell (2006) show how leverage can change the relationship of return and risk non-proportionately. Nonetheless, as illustrated in Baum (2007) and CBRE (2008) it is generally accepted that the greater the use of debt finance the greater the risk of a property fund or portfolio. Hence, while there may be some skill in financial structuring, pure leverage is largely a beta generating activity. Expenses and fees simply limit the impact of that beta contribution. Hence fund structure adds beta.

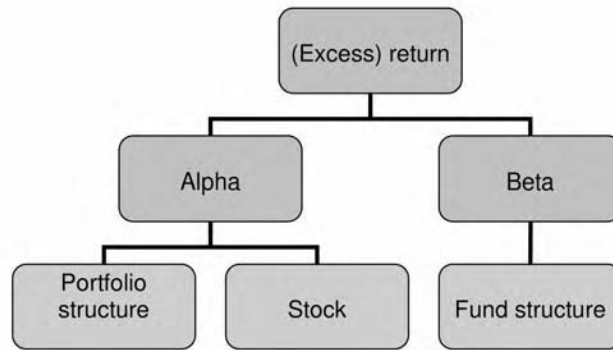
As discussed above, if all portfolio segments are of similar risk, then positive excess returns generated by the portfolio structure relative to a benchmark will produce alpha. If they result from taking overweight positions in high-risk markets, then they generate beta. In the context of unlisted funds, which are largely owned by diversified investors or by fund of fund managers, much of this risk is diversified away. Hence, unless we can observe a strong bias to emerging markets in the portfolio structure, we can suggest that structure contributes alpha.

The same argument can be broadly applied to stock. Property selection can deliver higher initial returns through skill or through taking risk, but unless we can observe a strong bias to risky property types through, for example, pure development exposure or high vacancy rates, then the stock impact can be assumed to deliver pure alpha. This taxonomy is illustrated by figure 7.19.

Finally, the unlisted fund draws capital from investors over a period of time which could be as much as four years. The timing of the drawdown is within the manager's control, meaning that an IRR approach is appropriate for return measurement. The benchmark, however, will report a time-weighted return, so that the difference can be attributed to investment timing and fund drawdowns.

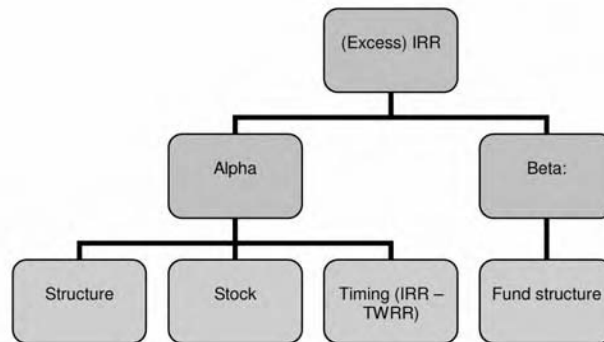
We arrive at a four-stage first tier of alpha/beta IRR attribution, illustrated by figure 7.20. This is as follows.

Figure 7.19: Time-weighted alpha and beta attribution for a property fund



Source: Baum and Farrelly (2008)

Figure 7.20: Money-weighted return attribution for a property fund



Source: Baum and Farrelly (2008)

- Fund structure, which is largely the leverage impact, will contribute primarily to beta. Fees will limit the return, however created, and performance fees create a non-symmetric return delivery, which is problematic for investors and can, for ease, be assigned to beta.

- Portfolio structure needs to be judged as either an overweight position to more risky, or less risky, markets, which will produce a beta impact, or as a set of positions with no greater or lesser market risk, in which case any extra return created through portfolio structure is wholly alpha. For most core and core-plus funds this is most likely to be an alpha-generating activity.
- Stock selection also needs to be judged as favouring more or less risky assets, which will produce a beta impact, or as a set of investments with no greater or lesser market risk, in which case any extra return created through stock selection is wholly alpha. For most core and core-plus funds, this is most likely to be an alpha-generating activity.
- The return impact of timing is attributed to the movement of capital into and out of the fund. The manager's skill in investment timing, which is an alpha activity, would be reflected in this effect. This will be of greater importance in value-added and opportunistic funds, which have shorter investment horizons and look to distribute capital back to investors more quickly.

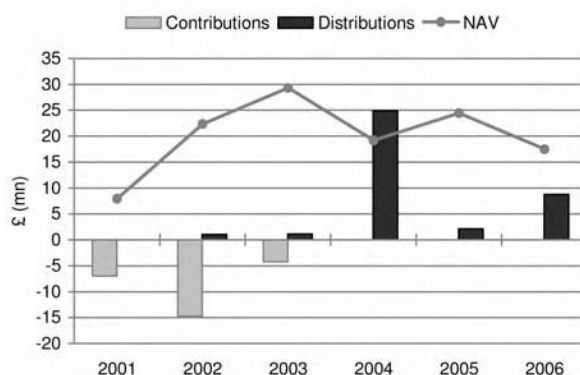
None of the above is intended to suggest that isolating and measuring alpha or beta will be easy or non-controversial. The choice and/or availability of benchmarks, in particular, are limiting factors.

Judging whether greater risk is being taken at the structure or stock level will be a matter of opinion and is therefore a pragmatic question.

7.8.3 Alpha and beta in property funds: a case study

We use a case study to illustrate the property fund attribution framework set out above.

The case study examines a closed-ended, value-added, UK-focused unlisted fund, which commenced its acquisition programme in 4Q 2001 and was effectively liquidated by 4Q 2006. Quarterly performance data was made available for this entire period, although we only had sufficient data to conduct full attribution analysis from 1Q 2002. The fund purchased 22 assets with an average book cost of £4.5m and a total portfolio book cost of £99m. Equity contributions totalled £26m and leverage ranged from 65–70% throughout the fund's life.

Figure 7.21: Cash flow profile, case study fund

Source: Baum and Farrelly (2008)

The average holding period of the assets was 2.5 years. The manager was looking to exploit deal-making and transaction skills. This level of turnover is not unusual for value-added and opportunistic funds, but it is relatively high. As a result, capital was distributed back to investors soon after the investment period had been completed, as illustrated by the overall cash flows of the fund shown in figure 7.21. Thus, the timing effect was expected to be significant.

For property fund attribution analysis, both the fund and property level time-weighted returns were available, but only cash flow data at the fund level was available. The property-level time-weighted returns were calculated by IPD and the time-weighted fund returns and cash flow data for the fund were provided by the manager. (We excluded the first quarter's performance for detailed attribution analysis as time-weighted property level returns were not available.)

The fund had a mandate to invest across the UK, so we chose to perform the property fund attribution analysis against the UK IPD universe. The fund was very concentrated from a portfolio structure perspective, with holdings in only four of the 12 UK PAS segments and 55% in one of these. Under Baum and Key's (2000) style definitions we would label this fund manager as specialist, where the manager is holding high weights in segments where selection skills are believed to be strong.

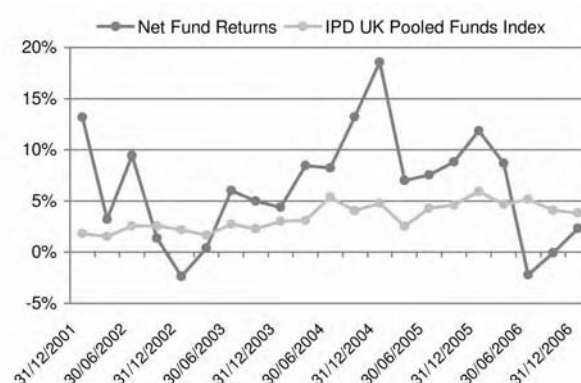
The results of the attribution analysis are detailed in table 7.5. Addressing property level performance first, the fund has produced relative outperformance of 1% per annum over the five-year measurement period. The manager has underperformed, due to portfolio structure, by almost 2% per annum.

Performance attribution suggests that the manager has outperformed due to stock selection. With such a relatively high stock score and relatively concentrated segment exposures, we can say that the manager has outperformed by concentrating in preferred segments. However, at this stage we cannot be sure whether this outperformance has been driven by any alpha, or is simply the result of higher relative risk in the portfolio.

Table 7.5: Property fund return attribution (%)

	2002	2003	2004	2005	2006	5 year
Property level						
Property TWR	12.6	10.5	23.7	25.5	8.8	16.0
Benchmark TWR	9.2	10.5	17.4	19.1	18.5	14.9
Relative	3.1	0.0	5.4	5.4	-8.2	1.0
Structure score	-2.8	-3.4	-2.3	0.6	-0.2	-1.6
Selection score						
(two component)	5.7	3.4	6.9	4.7	-8.0	2.4
Fund level						
Gross TWR	15.7	20.1	73.1	52.3	5.1	31.0
Gross fund structure score	2.8	8.7	40.0	21.4	-3.4	12.9
Net TWR	11.8	16.7	57.6	40.1	8.7	25.6
IM fee reduction	-3.4	-2.9	-8.9	-8.0	3.4	-4.1
IM fee reduction	25.0	17.1	21.1	23.3	-70.1	17.2
Net fund structure score	-0.7	5.6	27.5	11.6	-0.1	8.3
Net MWR						29.9
Timing score						4.3

Source: Baum and Farrelly (2008)

Figure 7.22: Quarterly time-weighted returns — fund versus IPD Index

Source: Baum and Farrelly (2008)

The fund structure effect is presented on a gross and net basis. The gross total returns encompass leverage and all expenses associated with the fund bar investment manager fees, inclusive of performance fees.

The gross structure added 12.9% to the property level return. Fees to the fund manager reduced the gross structure effect by 4.1% (or 17.2% in relative terms), and this impacts on beta. Outperformance peaked in years three and four of the fund, when investments were being realised and value-added initiatives completed.

Finally, over the measurement period the timing of property cash flows added 4.3% to the time-weighted total return, to give investors an IRR of 29.9%. We were unable to conclude how much of this was attributable to alpha, although we suspected that the manager had delivered outperformance given the relatively short hold period of assets in the portfolio.

The fund's annualised total time-weighted return over the measurement period was 25.6% versus its benchmark return of 14.9%. However, the fund's annualised standard deviation was 23.0% compared with the benchmark equivalent of 5.3%. We therefore proceeded to employ the CAPM model to assess the risk-adjusted performance of the fund over the performance measurement period to complement the above attribution analysis. The result is an alpha of zero but a positive and significant beta.

Table 7.6: Case study alpha and beta estimates for case study net total returns

	Alpha	Beta
Coefficient	0.00	1.73
t – statistic	–0.04	1.98
R – squared	0.18	
Observations	20	

Source: Baum and Farrelly (2008)

Unfortunately the CAPM regression is not particularly robust statistically, with the alpha co-efficient being insignificant. However, the beta co-efficient is significant and the equation provides some insight into performance. It is suggested that much of the outperformance was the result of higher beta and also the timing of sales and purchases.

The high beta reflects the level of gearing at the fund level, and the asset level and portfolio structure risk. The beta co-efficient is also much higher than previous UK property fund beta estimates that have focused on the pooled managed fund universe, and typically have low levels of gearing and are well diversified.

The performance data suggests little evidence of alpha. A CAPM equation did point to positive alpha, although this was insignificant. The combination of structure and stock appears to add 1% return.

This is a small fund, and statistical significance may be elusive. Nonetheless, it appears that a regression-based CAPM approach confirms that there is no evidence of alpha in these performance results. Beta, on the other hand, is significant.

7.9 Unlisted fund performance: conclusions

The growth seen in the unlisted market has helped facilitate growing cross-border property investment in Europe and across the world. Unlisted funds are now the preferred conduit for investors who are looking to invest in direct property outside of their own domestic markets. There is therefore a requirement for greater resources and

methods to analyse these vehicles and critically examine whether managers can demonstrate reasons for their historical track record and evidence of outperformance to justify performance fees.

We used a case study of a single value-added unlisted fund to compare traditional attribution results with an examination of CAPM-style alpha and beta return attribution.

Fund structure, which is largely the leverage impact, contributes primarily to beta. In the case study, we found this effect to be very large.

Portfolio structure needs to be judged either as an overweight position to more risky markets, or less risky markets, which will produce a beta impact, or as a set of positions with no greater or lesser market risk, in which case any extra return created through portfolio structure is wholly alpha. For most core and core-plus funds this is most likely to be an alpha-generating activity.

Stock selection also needs to be judged as favouring more or less risky assets, which will produce a beta impact, or as a set of investments with no greater or lesser market risk, in which case any extra return created through stock selection is wholly alpha. For most core and core-plus funds this is most likely to be an alpha-generating activity.

The return impact of the timing of drawdowns can potentially be attributed to the manager's skill in timing. This is an alpha activity, although this is difficult to measure in practice.

A full analysis of unlisted fund performance will become increasingly necessary. This will require the use of both performance attribution approaches and a professional and pragmatic interpretation of the results, for the benefit of both manager and investor alike.