Real Estate Portfolio Strategy and Product Innovation in Europe

Hoesli, Martin E.; Lekander, J.

FACULTE DES SCIENCES ECONOMIQUES ET SOCIALES

HAUTES ETUDES COMMERCIALES

Real estate portfolio strategy and product innovation in Europe

Martin HOESLI
Jon LEKANDER

HEC GENÈVE

UNIVERSITÉ DE GENÈVE

Real estate portfolio strategy and product innovation in Europe

Martin Hoesli* and Jon Lekander**

Abstract

Property as an asset class is in a period of transition. The establishment of indices throughout Europe adds transparency and expectations of increasing sophistication. Also, changes in the legal framework create new ways to gain exposure to real estate. We first discuss the various equity real estate investment vehicles, highlighting the pros and cons of each type of vehicle for an institutional investor. We then turn to analyzing the impact that these changes are likely to have on real estate markets. Last but not least, we discuss the impact these changes have on the ability to manage the equity real estate exposure of a portfolio.

Keywords: real estate allocation, portfolio strategy, investment vehicles, real estate products
JEL Codes: R33, G23

*University of Geneva (HEC and SFI), Switzerland and University of Aberdeen (Business School), U.K., email: martin.hoesli@hec.unige.ch
**Aberdeen Property Investors, Stockholm, Sweden, email: jon.lekander@aberdeenpropertyinvestors.com

Real estate portfolio strategy and product innovation in Europe

1. Introduction

The benefits of including real estate in a mixed-asset portfolio have been well documented (e.g., Hoesli and MacGregor, 2000, chapter 10). These include risk diversification and liability matching characteristics. Property returns are weakly correlated with stock returns, with the diversification benefits also largely stemming from property's low (often negative) correlation to bonds (Hoesli, Lekander and Witkiewicz, 2004). More specifically, the diversification gains originate in the real characteristics of property in general, and the inter-temporal behaviour of the actual and expected income stream to property in particular. Property is subject to the same dynamics as are bonds in terms of interest rate movements (that is when interest rates decrease, the property yield also tends to decrease), but the late cyclicality of the income stream tends to have a larger impact on the overall return to property. This effect on the income stream usually occurs late in the business cycle, at a point when interest rates tend to increase resulting in a weaker bond market performance.

The second benefit of property as an investment class from an institutional perspective is the long duration of property assets which in combination with the common contractual tie of rents to the rate of inflation offers a match to long term liabilities. This has led many to use an asset-liability management (ALM) framework to assess the benefits from including real estate in mixed-asset portfolios (e.g., Chun, Ciochetti and Shilling, 2000; Craft, 2001).

The long term asset allocation related benefits of property are, however, not the only thing an institutional investor needs to consider. Property offers high risk-adjusted returns, in part due to the liquidity premium. The relatively predictable income stream from property also offers

an attractive opportunity for investors accepting gearing. In a low interest rate environment, this can appear as a 'free lunch', as the return on equity of geared property investments well exceeds the perceived risk to property investments.

There are also drawbacks to investing in property, such as the lumpiness of assets, information asymmetries and barriers to entry[1]. Indeed, building values tend to be large and properties are by their very nature indivisible, the seller of an asset generally has an information advantage over the buyer and substantial capital is needed in order to invest in property without being exposed to too much asset specific risk. Another drawback is the management of assets, which requires an organization and personnel. This risk puts the investor in a situation of being the manager of an operating company rather than being an investor.

Property as an asset class is in a period of transition. The establishment of indices and the growth of international service providers throughout Europe add transparency and expectations of increasing sophistication. Another result of the increased transparency is that cross border investments are now more substantial, increasing the within property diversification benefits[2]. The international diversification gains stem from the local nature of the assets as the income and market valuation of an asset largely depend on its attractiveness as well as the local economy. Thus, despite the fact that the capital is becoming international also in the real estate sector, the return generating function of the assets remains very much tied to the local economy.

[1] See also Hoesli and MacGregor (2000), chapter 2 and Miller and Geltner (2005), p. 440.
[2] For a review of the literature on the benefits of international real estate diversification in real estate, see Wilson and Zurbruegg (2003), and Sirmans and Worzala (2003).

Historically, direct investments via an in-house organization in the domestic market have been the most common way to achieve an exposure to the property market. With the introduction of new investment avenues, however, more and more investors are using third party managers or indirect vehicles to achieve well balanced domestic and international property exposures. These new avenues include outsourcing of the management of assets, the growth of the non-listed property fund industry, the establishment of REIT-like structures in an increasing number of countries and the creation of a derivatives market.

The aim of this paper is to provide a contribution toward a better understanding of the various avenues to equity real estate investment and of the likely effects of the wider array of investments on European real estate markets and on investors' strategy options. In the next section, we discuss the various ways of gaining exposure to the equity real estate market. The focus is primarily on major differences in the legal structure, pricing and tax status of these vehicles. We then turn to examining the effects on real estate markets of this wider array of investment vehicles (section 3). In section 4, the impacts of these new avenues on the real estate strategy of investors are examined. Finally, section 5 contains our concluding remarks.

2. Types of real estate exposure

One way of viewing the increasing number of avenues to real estate exposure is the well known four-quadrant model, consisting of the two dimensions equity/debt and private/public. These two dimensions capture much of the complexity which investors face when choosing an investment approach. This model is shown in Figure 1.

As for other capital markets, property markets offer two fundamentally different investment forms in relation to the risk profile of the investment: equity investment and investment into debt instruments. On the equity side, a long equity position offers the investor an exposure to the return on equity of real estate assets. Thus, the return is in one way or another tied to the income return in conjunction with the market's valuation of future cash flows. Debt investing is more closely tied to the pricing of risk in relation to the risk free rate of return from short term government bonds and the pricing of the risk of debtor default. In this paper, we focus exclusively on equity instruments.

Property markets also offer two practical avenues to exposure; either through investing in the public (listed) market or over the private market. The public market is characterized by a standardized exchange or other organized trading place, thereby creating the basis for transparency, liquidity and pricing efficiency. In contrast, the private market is characterized by a lack of a standardized market place. This has an effect on transaction costs in the broadest sense, transparency and market efficiency. As mentioned above, all these aspects are typically more investor friendly on the public market. The private market can, however, offer investors excess returns from information asymmetries, liquidity premiums from the illiquidity of the assets/investment and attractive risk diversifying characteristics. The public market does not offer the same diversification benefits as the private market. Further, there can be significant deviations from NAV over extended periods of time and the volatility on the public market is usually greater as a result of the greater liquidity of public assets.

Examples of real estate assets traded over a public market are Real Estate Operating Companies (REOC), tax transparent publicly listed companies (REITs; Real Estate Investment Trusts stems from the U.S., but there is a family of similar structures globally) and

real estate backed debt instruments (MBS; Mortgage Backed Securities, a pool of individual debt contracts structured into a traded security). Examples of private approaches to real estate exposure are portfolios of directly held real estate, real estate funds, and single loans backed by real estate. The latter types in each category are debt investments which fall outside the scope of this paper.

We now turn to analysing private and public equity real estate investments in more detail, and also to discussing real estate derivatives.

2.1 Private equity real estate investments

Direct real estate is the traditional avenue to real estate investing. Owning real estate directly offers the diversification benefits investors seek, grants the investor full control of the strategy and management of the portfolio, and is (with a few exceptions) tax transparent for institutional investors. These benefits come at a cost, however, some of the most obvious ones being: large lot sizes, low liquidity, information asymmetries and management intensity. The large lot size, and also heterogeneity, of real estate result in that a manager, even if the portfolio is large, has a degree of unsystematic risk (see also Miller and Geltner, 2005, p. 440). Second, direct real estate investments are illiquid; it can easily take between three to six months to transact an asset. Third, the direct real estate market is ripe with information asymmetries; a seller of an asset by definition has more information than the potential buyer. This is further amplified if international investments are taken into account, in which case a foreign buyer is at an information disadvantage not only with regards to the information at the asset level, but also with regards to market-wide information (see also Hoesli, Lekander and Witkiewicz, 2003). Finally, real estate is a management intensive asset during the whole

cycle of the investment (from the technical management of the assets, to the leasing activities, refurbishments, and transaction and strategy dimensions of the portfolio).

For international investments, an investment in a Joint Venture (JV) makes it possible to align the interests of a local partner with those of an international investor. JV structures, however, are far from easy to access and are not harmonized, leading to difficulties in initiating and managing these exposures.

Another avenue to exposure is the private fund market, i.e. dedicated investment vehicles set up for the sole purpose of placing investor capital in the property market. The funds tend to retain the diversification benefits of the direct market (Table 1), while at the same time (in most cases) addressing the information asymmetry problem (by aligning the interests of the manager with those of the investors), especially in the context of international investments, and giving debt-constrained investors access to the ability to gear the exposure. These funds can take a number of different forms, from specific legal forms tailored for real estate funds (German open-ended funds, GEOFs[3]) to private equity (in its broadest sense) structures. The latter are typically closed-ended structures (also referred to as nominal return/IRR structures) with pre-defined life duration. The specialized legal forms are typically tailored to create the prerequisites for some type of liquidity, while the private equity structures are instead limited life.

Making an illiquid asset liquid is not, however, without problems; an open-ended structure must in some way handle the potential redemption from investors. As transacting the underlying asset can at the best of times take from three to six months, the fund must in some

[3] For a discussion of the history, construction and characteristics of German open-ended funds, see Focke (2006).

way guarantee that it can meet this potential outflow of capital. The natural resolution of this is to match the time the investor receives his/her capital with the time it takes to liquidate an underlying asset from the fund's portfolio. The drawback of this solution is that the sale of the asset could be decided by the ability to sell the asset, not necessarily to the benefit of remaining investors. A second solution would be to create a liquidity reserve in the form of cash or money market instruments. This has the disadvantage of hurting the performance of the fund given the low return on cash. A third alternative is to use leverage to manage the outflow of capital. This is not entirely unproblematic either as leverage is used to manage liquidity, not necessarily to the benefit of the fund. A fourth alternative is to provide a match between a seller and a buyer (match-to-match liquidity). This solution also has drawbacks, however, as there is no guarantee that a buyer can be found and also the bid-ask spread may be such that the benefits of investing in real estate will be mitigated.

This is why there has been a tendency for institutional vehicles to be closed-ended, although there has been a recent increase in the interest for open-ended structures. A closed-ended fund is very closely related to a private equity investment. The investor commits capital to a fund, which has either already seeded the property portfolio with assets, or has not (blind pool). During the course of the life of the fund, investors receive a cash dividend, stemming from the income return of the underlying portfolio. After a predetermined number of years the fund's portfolio is wound up, and the proceeds distributed to the investors. At this stage the IRR (internal rate of return) target of the fund is either fulfilled or not. Given that most such funds have been created quite recently, there is no evidence on the probability of achieving the target return. It is obvious that such probability should depend on the state of the market at the time of maturity. This undoubtedly constitutes a risk factor of such investments, which in our view is often understated by investors.

Figure 2 shows the GAV (gross asset value) of closed-ended private funds (excluding GOEFs) over the period 1963-2005. As can be seen, the growth of such funds has been substantial since 1997, with a GAV of €bn 297 for year 2005. Figure 3 depicts the breakdown between finite and infinite life funds as a percentage of GAV for various investor types in 2005. It appears that private retail investors invest exclusively through open-ended funds, while a mixed behaviour emerges for institutional investors.

For an investor, the establishment and growth of the fund industry have several benefits, in terms of the ability to expand the scope of the strategy for the real estate exposure. These include:

- Access to specialized asset management abilities in the context of a well balanced overall portfolio strategy. A professional real estate investor has an expertise in a number of segments, most usually offices and residential. Moving outside these sectors can, even though the rationale is correct, be very hazardous as sector or niche specialist competence is needed to achieve the desired exposure. In these situations, the 'top down' rationale for investing into a niche market might be better met by utilizing an external resource specialized in this niche, thus resolving the operational hazards in implementing the desired strategy;
- Ability to reduce information asymmetries when entering new markets. By investing through private funds, the investor in effect externalizes the operational implementation of the predefined strategy. As the manager has a focus on the specific strategy of the fund, and should have the resources necessary to implement the strategy, he/she should be better able than the investor to address information asymmetries;

- Diversification of specific risk (i.e., divisibility of assets). As mentioned above, even large investors have a degree of specific risk in their portfolios. A way to reduce this specific risk is to pool investments with those of other investors. By pooling investments, for instance through a fund, the same unit of investment is subject to less risk than if the investment was made directly into an asset. This offers both large and small investors the ability to reduce the specific risk component of the portfolio, and move towards the market risk level.

2.2 Public equity real estate investments

Listed real estate offers an opportunity to invest into real estate holding companies without the problems associated with investing into private real estate. As discussed, the issues associated with the latter include information asymmetries, operational risks and liquidity. REOCs, however, suffer from taxation issues as the companies pay corporate tax. This is not the case for direct real estate if held by institutional investors. This has caused many institutional real estate investors to view listed real estate investments as less return efficient. The establishment of REIT-like structures addresses the issue of tax efficiency, while continuing to offer investors the benefit of lessening the information asymmetry problems for unknown markets, increasing the potential for liquidity, and diminishing the operational risks of implementing international real estate strategies.

Public real estate, however, tends to be more highly correlated with the stock market than with the real estate market on a one year holding period basis (see Table 2). Further, listed real estate tends to be more volatile than direct investments due to the fact that listed securities are traded daily (see Table 3). Also, the price of real estate securities regularly

deviates from the NAV. Viewed from another perspective, the short term valuation of listed real estate is subject to relative sector views on the stock market, and less to the valuation of the underlying assets. Thus it would appear that the full desired diversification benefits that real estate can generate are not achievable through listed real estate, at least not on a one year holding period basis. In spite of this, real estate securities have still been shown to provide diversification benefits for common stock portfolios (Liang, Chasrath and McIntosh, 1996; Gordon, Canter and Webb, 1998).

There are some signs that the REIT market is becoming more closely related to the direct real estate market. Clayton and Mackinnon (2003), for example, use a multi-factor approach to investigate the link between securitised real estate returns and stock, bond and direct real estate returns. They report that the REIT market went from being driven largely by the same economic factors that drive large cap stocks through the 1970s and 1980s to being more strongly related to both small cap stock and real estate-related factors in the 1990s. The declining relation between REIT and common stock markets has also been documented by Khoo, Hartzell and Hoesli (1993), and Ghosh, Miles and Sirmans (1996). Hoesli and Serrano (2007) provide international evidence on this issue.

If the holding period is extended to longer periods, the linkages of listed real estate with direct property market increase substantially (see Figure 4). This would indicate that the valuation of the listed assets over time approaches the fundamental valuation, which is amply supported by the academic literature. Mei and Lee (1994), for instance, report that REIT and direct real estate markets are driven by the same underlying real estate factor (see also Gyourko and Keim, 1992). More recently, Pagliari, Scherer and Monopoli (2005) control for property-type

mix, leverage and appraisal smoothing and find that the mean and volatility of the two types of real estate are not different from a statistical perspective.

The positive impact of including listed real estate as a part of the allocation to real estate stems more from the ability of such securities to provide liquidity to the portfolio than from the return and risk characteristics of real estate stocks. Figure 5 shows the correlation to direct real estate and the risk-adjusted performance of portfolios containing varying proportions of direct and securitised real estate investments in France, the Netherlands, Sweden and the U.K. Including listed real estate to a level of about 20 percent (with the remaining 80% invested in direct real estate) does not significantly hurt the performance of the real estate allocation as the return per unit of risk only drops from 1.3 to 1.1, and the correlation with direct real estate remains high at 0.9 indicating no major loss in the diversification benefits.

We maintain that as real estate will become more transparent and sophisticated, the difference in pricing between the private and public markets will receive increased interest. With the systematic deviation between the pricing of real estate assets traded on the direct market and the listed market becoming more evident, arbitrage opportunities between the two markets will be exploited by investors, thus forcing an increased integration between the public and the private sectors.

2.3 Real estate derivatives

Derivatives add a new dimension to the property asset class, as they offer an investor the ability to cheaply achieve a beta exposure to the market. For the issuer of a derivative, it is the most cost- and time-efficient way to reduce the exposure to the asset class. The derivative instruments being applied to the real estate market are usually structured on the basis of a well established index, thus ensuring that there are no moral hazards with the pricing of the underlying assets. Selecting a reliable and representative index for this endeavour is no easy task and this clearly has constituted an impediment to the faster development of property derivatives. In a recent paper, Lecomte and McIntosh (2006) argue that establishing futures and options based on the NCREIF Property Indices is conceptually feasible, but many issues are still unresolved.

The market for derivatives was first established in the U.K. in 1991, but failed shortly thereafter[4]. Given the timing of the launch, many investors were interested in hedging against price declines, but counterparts were more difficult to find. As a result, transactions were limited. In 1994, the property index certificates (PICs) were launched, with around £800 million of PICs having been issued over the life of the vehicle. Total return swaps were created more recently. These to date still constitute the bulk of property derivative transactions in the U.K. The U.K. market started to take off in 2005, with volumes estimated to have reached £800 million (see Baum, Lizieri and Marcato, 2006). Efforts to create derivatives are also being carried out in other countries. In Switzerland, for instance, the cantonal bank of Zurich has recently launched two types of derivative products on their

[4] For more details on the development of derivatives in the U.K., see Baum, Lizieri and Marcato (2006).

hedonic index of residential properties in Zurich. Outside Europe, countries where derivatives have been developed include the U.S. and Australia.

From an investor's perspective, the establishment of a derivatives market would significantly increase the scope of strategy options. The most evident benefits include:

- Ability to short risk. Real estate differs significantly from other asset classes as it has been impossible to go 'short' in the asset class. The benefits for investors are evident, in that an investor can actually exit an exposure to a market or sector through a derivative, without incurring the transaction costs associated with selling the underlying assets. It is evident that this is a useful tool for temporary down weightings to real estate in the context of the mixed-asset portfolio, but it also opens the door to a much more sophisticated ability to manage real estate risk on the portfolio basis;
- Attainment of a market (beta) exposure. Real estate is a non-homogeneous asset, with a significant specific risk affecting even large portfolios. Thus, even large investors are unable to obtain a market exposure to a market through direct investments. Derivatives are the only way in practice to achieve this;
- Arbitrage. Investors should be able to take advantage of any pricing differences across markets by engaging in derivatives. Without such derivatives, arbitrage benefits are limited given the high transaction costs on real estate markets. It is likely that such operations will enhance the efficiency of real estate markets;
- Liquidity. Investors will be able to adjust their real estate allocation to their desired allocation more easily with derivatives given the greater liquidity of such instruments.

3. Effects on the real estate market

These innovations on the legal/institutional side have, in conjunction with the increased transparency, attracted significant amounts of capital to the property investment market. This has caused concern within the property industry that the weight of capital will diminish the yields to the asset class due to the rise in property values. The rising interest for property is also manifested by the increased number of investors and funds searching for investment opportunities. According to data from DTZ Research, the professional European property investment market is estimated to include no more than about a third of the total property market (excluding residential properties). The remaining estimated two thirds of the stock are owned by government entities and other owner-occupiers, such as corporations. With the current fiscal situation of many European governments, in addition to much needed government investment in such things as infrastructure, there is a pressure to off load under-managed property assets to the investment market. Corporations are under similar pressure from shareholders to increase the efficiency in the use of capital, encouraging the selling of assets to the property investment market. If the U.S. is to be any guide to what might happen, the real estate inventory went from a two-third ownership by owner occupiers in the 1980s to being largely owned by the investor community. According to DTZ, the invested stock currently accounts for as much as 80 percent of the total commercial real estate stock in the U.S. If such a trend were to occur in Europe, it is likely that many of these real estate assets would be acquired by institutional investors. Hoesli and Lekander (2005), for instance, maintain that for the institutional real estate allocation to grow to the lower level suggested in the academic literature, i.e. to 15% of the total asset portfolio (Hoesli, Lekander and

Witkiewicz, 2004), a large but not impossible proportion (31%) of assets held by non-institutions would have to be acquired by institutional investors.

We maintain that the likely effect of the re-allocation of assets is an increased efficiency of real estate markets. The development of real estate derivatives would also contribute to the efficiency of the market as a result of arbitrageurs taking advantage of any pricing discrepancies across markets. Not the least, the increased capital flows on real estate markets should lead to increased transparency through the development of indices and benchmarking tools. It is likely, however, that the increased sophistication and globalization of real estate markets will lead to higher correlations, and hence less diversification benefits, across international markets. We believe however that these changes should not alter substantially the appeal of the asset class, as real estate markets are not likely to see the same level of integration as financial markets due to the local nature of the underlying individual assets.

The development of finite life funds could potentially constitute a risk in relation with the real estate cycle. Many of the funds were created in the bullish part of the cycle, thus further increasing the demand for real estate. If such funds were to mature in bearish real estate markets, an increase in supply (through the selling of assets by maturing funds) could exacerbate the cycle. We believe, however, that this risk should be contained given the small fraction of the universe of real estate assets held by funds.

4. Impacts on real estate strategy

The development of these new investment vehicles makes it easier to achieve an exposure to real estate. These developments also make it possible for institutions to tailor an exposure to the individual needs of the fund in terms of duration, gearing level, liquidity, and risk/return profile. Thus, investors can today implement strategies, for instance based on an MPT or ALM framework, that allow for arbitrage between markets (private versus public markets) and for liquidity (listed tax efficient structures, open-ended private funds and derivatives), while achieving substantial diversification using several specialized niches (through third party managers, JVs, fund of funds, or separate structures). The multi-quadrant approach to investment into property is increasingly becoming implemented throughout Europe.

Compared to the situation ten years ago, the ability to achieve a direct exposure to the real estate asset class is facilitated by the growth of international property asset management companies. This offers investors the ability to access the asset class from a pure investment perspective, as well as being able to expand the portfolio internationally without having to establish local presence.

The growth of the non-listed sector allows investors to access specialist managers, to gain exposure to markets which would be difficult to access through the direct route (e.g., international markets) and to handle the information asymmetry of investing in a foreign market. The non-listed property fund market also offers investors the ability to reduce the specific risk in the property exposure, as the same amount of capital is exposed to a larger portfolio than would be the case if the investment was done directly. This also implies that the economies of scale of a large investor can be accessed with less capital, offering smaller

institutional investors an entrance to the market. There are also new fund of fund structures that offer an even easier route to exposure. These advantages come at a cost, however, as fees are in most cases high in the non-listed sector. According to a study by the industry body INREV, core funds on average charge a management fee of 0.56 percent of the gross asset value. The corresponding fee for value added and opportunistic funds is 0.61 percent and 0.58 percent, respectively. Added to this are also transaction and performance fees. Many of the vehicles have been created in bullish real estate markets, and there is to date only very limited evidence on the *ex post* performance of such products in declining markets. Investors should bear in mind, for instance, that the actual IRR may substantially deviate from the target IRR.

Although new products also have costs and risks associated with them, the following two major strategic aims should be achieved by investors:

- Liquidity with retained diversification. An investor can today chose a mix of direct real estate in markets where he/she feels that the information asymmetries can be managed, add niche private fund investments as a satellite investment (either for markets or specialized sectors) and from this form a core portfolio of real estate exposure. To this the investor can add derivatives to go long and short for a specific market or market segment and/or use listed real estate as a liquidity reserve;

- Internationalisation of real estate holdings. With the institutional integration of the European economies, the local nature of real estate markets is decreasing somewhat. The diversification benefits of real estate market segmentation and the portfolio efficiency to gain from this will attract investor interest, and in the process diminish

these benefits. But only to a point in our view. The local nature of real estate returns, as described above, will continue to offer significant diversification benefits. By having the ability to invest through a third party, multinational managers of real estate, private real estate funds and through listed real estate, long term investors can continue to reap these benefits on a large scale.

5. Concluding remarks

This paper has focused on the tremendous changes that have been occurring on European real estate markets since the mid-1990s. For an extended period of time, the preferred approach to real estate investment was by means of direct holdings. Such strategy has significant advantages, such as the weak correlation of direct real estate with financial assets and hence the diversification benefits, but also substantial drawbacks such as lack of liquidity, the required management skills and information asymmetries. Until quite recently, the alternative ways of gaining exposure to real estate markets were limited investment opportunities in non-listed real estate funds or investments in listed property companies that were capturing many of the stock market effects and thus limiting the diversification benefits.

The array of investment products in real estate markets has expanded quite substantially. Besides direct real estate investments, investors can opt for different types of real estate funds such as finite life or infinite life funds. Several types of funds are available with varying levels of market risk (depending on the type of real estate assets held by the fund and on the country where such investments are undertaken) and of financial risk (depending on the gearing of the fund). Although benchmarks are difficult to introduce for such investments,

there is evidence to suggest that the performance of such investments is akin that of direct holdings. Listed real estate companies are also tax transparent in an increasing number of European countries, making it possible to invest part of a portfolio in such securities to increase the liquidity of the portfolio. Last but not least, derivatives are developing in a number of countries, although many issues are still unresolved. Such products would provide for more flexibility in real estate investing in that a portfolio could be balanced without the actual purchasing or selling of assets and market risk could to some extent be hedged away.

Such institutional and legal changes, together with the low interest rate environment and for a while with the aversion of investors for stock investments, have brought significant amounts of capital to real estate markets. This is not unproblematic as yields are under pressure. Also, profound changes of ownership of real estate have occurred and are likely to continue in the future. There is growing evidence that holdings have become increasingly indirect, for instance with companies selling off some of their assets and receiving in exchange shares of newly created indirect vehicles.

A strong emphasis has been placed in this paper on the impacts of such changes on the real estate strategy of European investors. We believe that these changes provide for significantly more flexible strategies. An investor can achieve liquidity with retained diversification, for instance. This is possible by combining direct holdings on markets where information asymmetries can be managed with niche private fund investments for specific markets or sectors. These investments can additionally be combined with derivatives. Also, international real estate strategies will become easier to implement. Although markets should become slightly more integrated in the process, we maintain that the segmented nature of real estate markets will prevail in the future. Investors should be aware, however, of the costs and

risks associated with their strategy. A major risk in our view is that several of these market changes, but also the development of new investment strategies, have occurred in bullish markets. Although a full understanding of how effective these strategies will be in declining markets is impossible, this issue should be considered carefully.

In sum, institutional and legal changes make it possible to adopt an investment strategy that truly meets investors' objectives. The bulk of such changes have taken place over the last ten years, but we expect changes to continue in the future adding both more depth to the markets where substantial change has already occurred but also increased investment opportunities in countries where change has so far been more limited. This is good news for real estate markets as transparency and professionalism will improve as a result of this trend.

References

Baum, A., Lizieri, C. and Marcato, G. (2006), *Pricing property derivatives: an initial review*, report prepared for the Investment Property Forum, August.

Chun, G. H., Ciochetti, B.A. and Shilling, J.D. (2000), "Pension-plan real estate investment in an asset-liability framework", *Real Estate Economics*, Vol. 28 No. 3, pp. 467-491.

Clayton, J. and MacKinnon, G. (2003), "The relative importance of stock, bond and real estate factors in explaining REIT returns", *Journal of Real Estate Finance and Economics*, Vol. 27 No. 1, pp. 39-60.

Craft, T.M. (2001), "The role of private and public real estate in pension plan portfolio allocation choices", *Journal of Real Estate Portfolio Management*, Vol. 7 No. 1, pp. 17-23.

Focke, C. (2006), "The development of German open-ended real estate funds", *Journal of Real Estate Literature*, Vol. 14 No. 1, pp. 39-55.

Ghosh, C., Miles, M. and Sirmans, C.F. (1996), "Are REITs stocks?", *Real Estate Finance*, Vol. 13 No. 3, pp. 46-53.

Gordon, J.N., Canter, T.A. and Webb, J.R. (1998), "The effect of international real estate securities on portfolio diversification", *Journal of Real Estate Portfolio Management*, Vol. 4 No. 2, pp. 83-92.

Gyourko, J. and Keim, D.B. (1992), "What does the stock market tell us about real estate returns?", *Journal of the American Real Estate and Urban Economics Association*, Vol. 20 No. 3, pp. 457-485.

Hoesli, M. and Lekander, J. (2005), "Suggested versus actual institutional allocations to real estate in Europe: a matter of size?", *Journal of Alternative Investments*, Vol. 8 No. 2, pp. 62-70.

Hoesli, M., Lekander, J. and Witkiewicz, W. (2004), "International evidence on real estate as a portfolio diversifier", *Journal of Real Estate Research*, Vol. 26 No. 2, pp. 161-206.

Hoesli, M., Lekander, J. and Witkiewicz, W. (2003), "Real estate in the institutional portfolio: A comparison of suggested and actual weights", *Journal of Alternative Investments*, Vol. 7 No. 3, pp. 53-59.

Hoesli, M. and MacGregor, B.D. (2000), *Property Investment: Principles and Practice of Portfolio Management*, Pearson, Harlow.

Hoesli, M. and Serrano, C. (2007), "Securitized real estate and its link with financial assets and real estate: An international analysis", *Journal of Real Estate Literature*, forthcoming.

Khoo, T., Hartzell, D. and Hoesli, M. (1993), "An investigation of the change in real estate investment trust betas", *Journal of the American Real Estate and Urban Economics Association*, Vol. 21 No. 2, pp. 107-130.

Lecomte, P. and McIntosh, W. (2006), "Designing property futures contracts and options based on NCREIF property indices", *Journal of Real Estate Portfolio Management*, Vol. 12 No. 2, pp. 119-153.

Liang, Y., Chasrath, A. and McIntosh, W. (1996), "Apartment REITs and apartment real estate", *Journal of Real Estate Research*, Vol. 11 No. 3, pp. 277-289.

Mei, J. and Lee, A. (1994), "Is there a real estate factor premium?", *Journal of Real Estate Finance and Economics*, Vol. 9 No. 2, pp. 113-126.

Miller, N.G. and Geltner, D.M. (2005), *Real Estate Principles for the New Economy*, Thomson South-Western, Mason (OH), USA.

Pagliari, J.L., Jr., Scherer, K.A. and Monopoli, R.T. (2005), "Public versus private real estate equities: a more refined, long term comparison", *Real Estate Economics*, Vol. 33 No. 1, pp. 147-187.

Sirmans, C.F. and Worzala, E. (2003), "International direct real estate investment: A review of the literature", *Urban Studies*, Vol. 40 No. 5/6, pp. 1081-1114.

Wilson P.J. and Zurbruegg, R. (2003), "International diversification of real estate assets – is it worth it? Evidence from the literature", *Journal of Real Estate Literature*, Vol. 11 No. 3, pp. 259-278.

Figure 1 The four-quadrant model of real estate investing

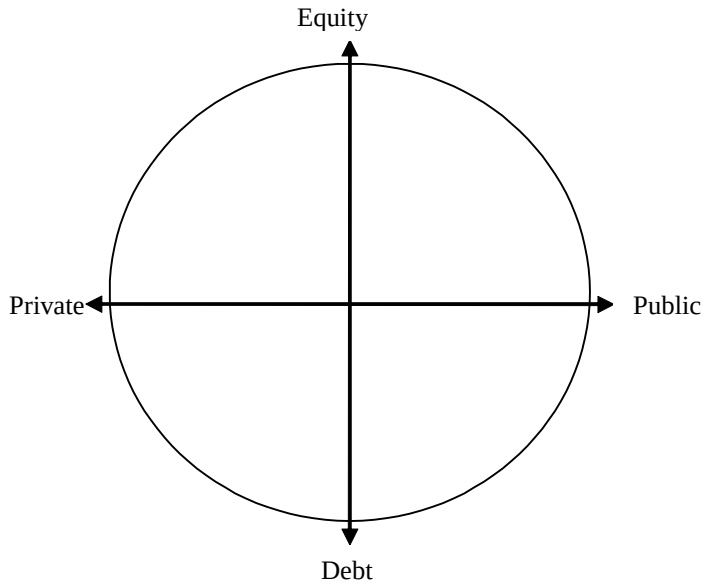
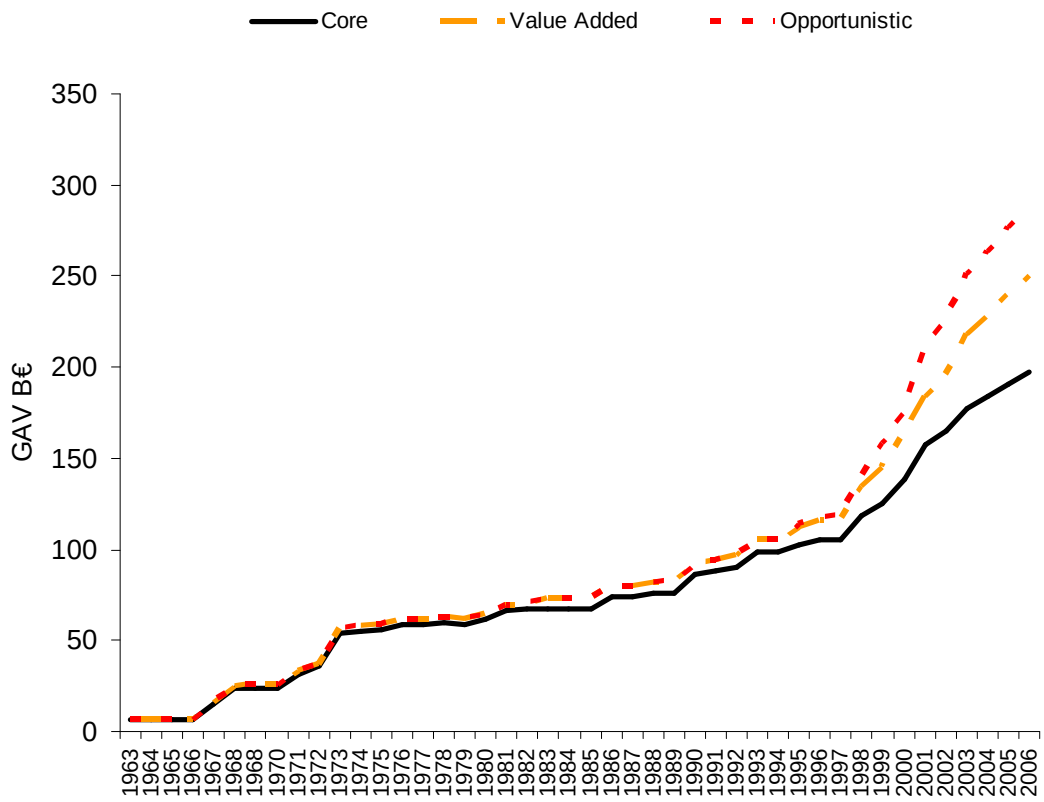
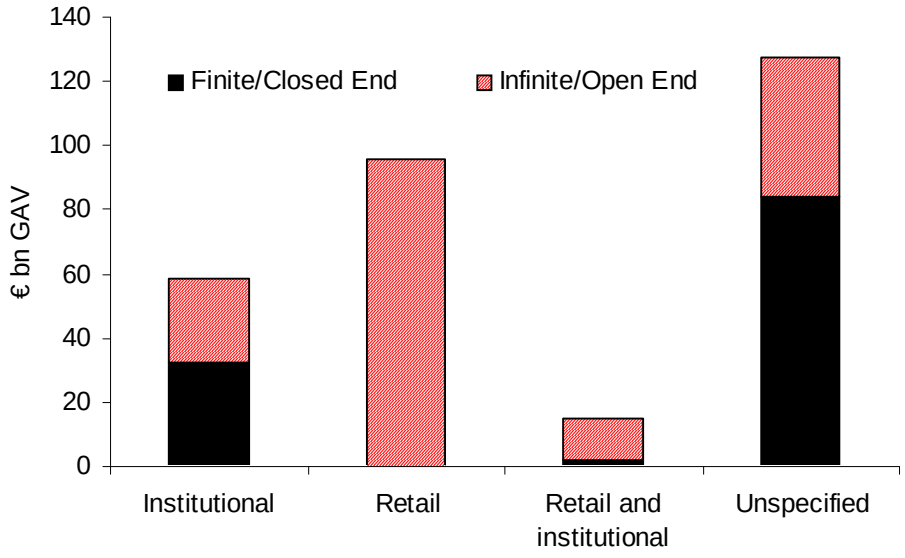


Figure 2 GAV of closed-ended real estate funds in Europe, 1963-2005



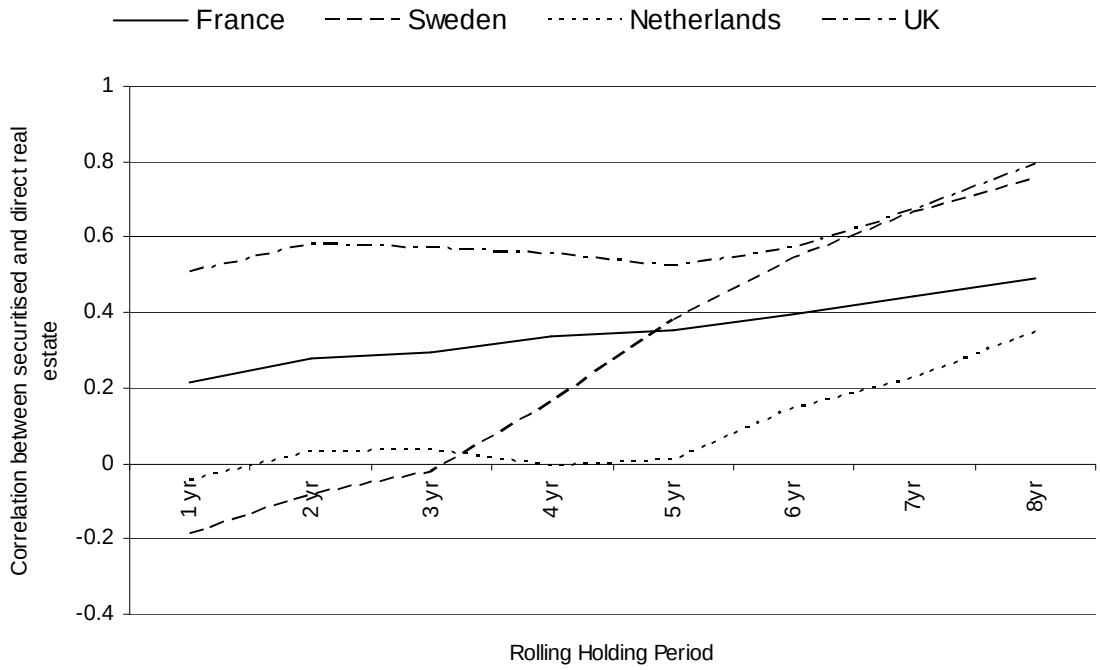
Source: INREV

Figure 3 Investment in finite and infinite real estate funds for various types of European real estate investors as of 2005



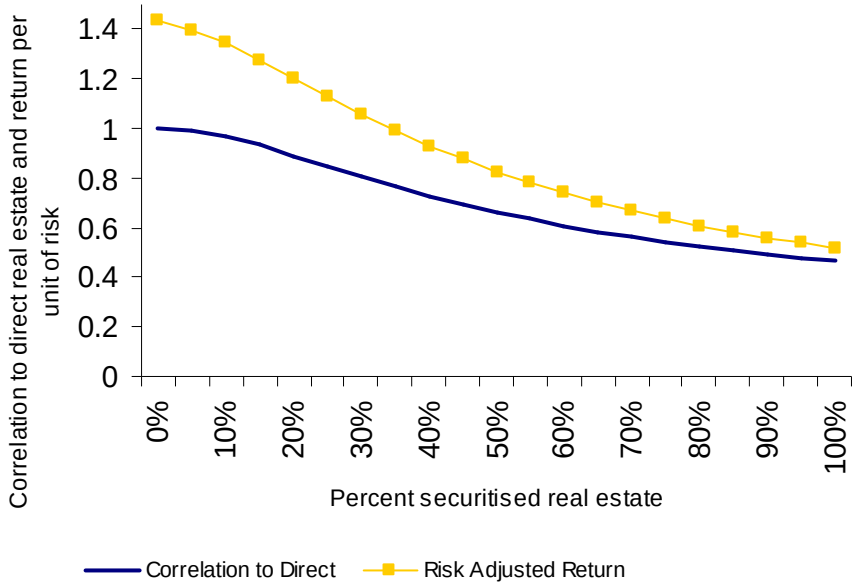
Source: INREV

Figure 4 Correlation between securitised and direct real estate for various time increments (one- to eight-year rolling periods) (1986-2005)



Source: IPD, GPR and authors' calculations

Figure 5 Correlation to direct real estate and risk-adjusted returns of portfolios containing varying proportions of direct and securitised real estate in France, the Netherlands, Sweden and the U.K. (1988-2005)



Source: IPD, GPR and authors' calculations

Table 1 Mean quarterly return and standard deviation of direct real estate and property funds in the U.K., 1990Q2-2006Q1

	Mean Return (%)	Stdev (%)	Risk / Return Ratio	Correlation to Direct Market
Direct Real Estate	2.38	2.06	1.16	1.00
Funds	2.32	2.38	0.97	0.96

Source: IPD

Table 2 Correlation between annual returns on securitised real estate and returns on direct real estate and common stocks in selected countries, 1986-2005 (Ireland 1988-2005)

	France	Ireland	Sweden	Netherlands	U.K.
Corr (Sec. RE, Direct RE)	0.21	-0.19	0.51	0.04	0.61
Corr (Sec. RE, Stocks)	0.51	0.19	0.44	0.45	0.33

Source: IPD, GPR and authors' calculations

Table 3 Mean annual return and risk on securitised real estate, direct real estate and stocks in selected countries, 1986-2005 (Ireland 1988-2005)

		Sec. RE	Direct RE	Stocks
France	Return (%)	11.0	8.0	14.6
	Risk (%)	18.4	7.8	26.9
Ireland	Return (%)	24.4	15.7	14.0
	Risk (%)	47.8	11.5	25.3
Sweden	Return (%)	11.9	10.7	20.9
	Risk (%)	29.9	14.9	32.8
Netherlands	Return (%)	8.4	10.0	13.4
	Risk (%)	16.3	3.4	21.4
U.K.	Return (%)	14.7	11.7	11.8
	Risk (%)	26.4	9.3	15.4

Source: IPD, GPR and authors' calculations