DIRECT INVESTMENT IN COMMERCIAL REAL ESTATE

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ABSTRACT

This paper formed the basis of the keynote address to the Pacific Rim Real Estate Society conference in Melbourne in January 2005. In the asset allocation process, direct real estate investment suffers from some perceived disadvantages and this paper summarises recent research, funded by practice, into three of these perceived disadvantages; depreciation in value, liquidity (or lack of it) and the accuracy of valuations. It also discusses the tensions when undertaking industry funded research concerning the industry need for useable results and the academic need for a sound theoretical framework and research method.

Keywords: Real estate investment, depreciation, liquidity, valuation accuracy.

INTRODUCTION

Despite the differences in institutional frameworks of different countries, there is scope for an international research agenda in direct real estate investment. That agenda could address the fundamental problems that real estate has when competing for asset allocation with other investments, i.e. equities, bonds and indirect property vehicles.

This problem is arguably the real estate industries' number one area for research if evidence of a recent study of industry representatives in Australia, the US and the UK by McAllister, Newell and Worzala (2004) is correct. They surveyed practitioners and found that in all three countries, the role of property in mixed-asset portfolios and performance measures are high on their research agendas.

Table 1 : Ranking of issues requiring research according to practitioners

	UK	Australia	US
Role of property in mixed asset portfolio	1	1	3
Macroeconomic factors	2	5	2
Portfolio risk management	3	2	
Indirect vehicles	4		
Diversification within RE portfolios	5=	4	5
Performance measures	5=	3	1
Demographic changes			4

Property asset managers have two alternatives in trying to convince asset allocation committees that direct property should form an important part of any portfolio. They can compete in the asset allocation process with one arm tied behind their backs by ignoring any perceived disadvantages of direct investment in real estate or they can enter the fray with information on their impact. There are a number of disadvantages of real estate commonly identified in the global literature on property investment; see for example, Geltner and Miller (2001) in the US and Ball et al (1998) and Hoesli and MacGregor (2000) in the UK. These include, among others, uncertainty surrounding future estimates of cash flow, unit size, management, depreciation and obsolescence, liquidity or lack of it, holding period, Government intervention, borrowing and the use of appraisals.

This paper identifies three of these issues; illiquidity, depreciation and the use of appraisals/valuations to determine performance. Whatever the differences in institutional frameworks, it is difficult to envisage any individual country where property can be traded as quickly as equities and bonds, that has property assets which do not deteriorate through time and has sufficient turnover of similar or identical property assets to identify price at the appropriate performance monitoring period from that information. These three issues appear universal/global.

The reason that this paper addresses these three issues is that they have all been the subject of recent research in the UK, funded by the UK real estate investment industry; two by the Investment Property Forum and one by the Royal Institution of Chartered Surveyors (RICS). The projects have in all three cases included collaborations between either a number of universities or a university and industry and with industry steering groups.

There can sometimes be a tension between the adoption of a rigorous academic approach to research and collaboration with industry and/or industry funding; with industry focusing on the results and academia on the theoretical framework and the research method adopted. However, over the last 10-15 years in the UK, there has been a regular and increasing cross-fertilisation between academia and practice in terms of both

personnel and projects. The major professional institutions such as the RICS and IPF have increasingly put research up their agenda and the emergence of the Investment Property Databank (IPD) has also enabled research to focus on analysis rather than collection of data, although availability of data still remains a constraint in the UK.

This has resulted in a number of improvements. Practitioners, especially those employed in research departments, do not now expect to obtain biased "marketing" results and accept the danger that research may identify the disadvantages as well as the advantages of real estate. Knowledge is the important factor, not marketing information. The need for a rigorous approach is also accepted by practitioners, so now it is possible to undertake industry funded research rigorously and objectively. However, useable results by industry are important so the research usually has to be applied and grounded in reality, unless the project has been specified to be less applied and more theoretical. The advantage to academe is that there is an increased understanding by practitioners that what is required by academics is quality research output suitable for peer review and publication. This understanding enables any tension between the needs of academe and practice to be more easily negotiated.

The UK property investment research agenda is therefore now a combination of Government policy initiatives, industry requirements and academic aspirations. The two main Government policy initiatives are currently lease reform and the introduction of a UK-style REIT. There have been a number of research projects sponsored by UK industry addressing these two issues enabling industry to respond to Government, but the rest of the industry agenda mirrors the findings of the McAllister et al (2004) study and is focused on the role of real estate in the asset allocation process. This paper concentrates on the industry part of the research agenda and outlines the findings of three of the major studies sponsored by industry in an attempt to increase the knowledge of, and therefore manage the risk of, some of the disadvantages of investing directly in real estate.

DEPRECIATION

A depreciation project is currently being undertaken by a team from the University of Reading and the Investment Property Databank in the UK, fully funded by the Investment Property Forum. The project (Baum et al, 2005) aims to:

- Undertake a preliminary study to provide an appropriate framework for the measurement of depreciation
- Clarify how depreciation affects market indices and benchmarks, and identify the model benchmark
- Measure rates of depreciation for different segments of the UK commercial property market, examining both rental and capital values and capital expenditure.

The importance of understanding depreciation in the investment rather than the accounting context is important to real estate investment practitioners because it is a vital component in the asset allocation debate. The basic model of initial income (i) plus growth (g) = total return (TR) can be adjusted to TR = i + g – d where d = depreciation in value. This assumes that growth refers to the location in which the property is situated rather than the growth in the actual property, which is then reduced on account of any depreciation.

Understanding depreciation also informs the use of "investment value"[1] appraisal models which generally use forecasts of rental growth and exit yield change. These forecasts are usually based on econometric modelling using past indices of value change. This begs questions regarding the basis of these indices. Are they based on actual buildings or hypothetical prime buildings? The question is: is it growth in the location or in actual buildings through time which is being found and then inserted into appraisals. There is anecdotal evidence that many users of forecasts are not perfectly aware of the basis of those forecasts and are therefore not aware of whether they can assume actual properties grow at different rates to the forecasts of growth being produced.

Appraisal models are also for modelling future refurbishment / redevelopment dates at, for example, lease renewal. This is particularly important in the UK context of long leases, single occupancy or buildings let to few tenants, and that the occupying tenants usually have the right to renew the lease. Other important issues relate to the impact of capital expenditure on depreciation rates and the increasing requirement from lenders to ask appraisers to make assumptions regarding the value life cycle of buildings within bank lending valuations and reports. A number of lenders in the UK are asking for current market values, but assuming the building state at the end of the loan period, not the beginning, and that the building is empty having "lost" the tenant.

The working definition of depreciation for the project is "The decline in the value of a property relative to a new building in the same location". This assumes that depreciation in value is a relative concept; buildings can still appreciate in nominal value while depreciating relative to a new building in the same location. It introduces a set of questions concerning the measurement of depreciation and the benchmark of a new property (see Law (2004); Hoesli and MacGregor (2000) for discussions on definitions and measurement).

There are other studies. In the UK and mainland Europe, a number of studies have taken place and Table 2 sets out the results for office studies.

[1] As defined by the International Valuation Standards Committee

Table 2 : Results of office rental depreciation studies in the UK and mainland Europe

Author	Measurement	Year/s	Depreciation Rate (% pa)
CALUS (1986)	Cross Sectional	1985	3.30%
JLW (1987)	Cross Sectional	1986	2.70%
Baum (1991)	Cross Sectional	1986	0.92%
Baum (1991)	Longitudinal	1980-1986	0.78%
Barras & Clark (1996)	Cross Sectional	1981, 1985, 1993	1.00%
Barras & Clark (1996)	Longitudinal	1981-1993	1.20%
Baum (1997)	Cross Sectional	1996	2.20%
Baum (1997)	Longitudinal	1986-1996	2.00%
CEM (1999)	Longitudinal	1984-1995	3.02%
Turner (2001)	Cross Sectional	1999	2.45%

Source :Law (2004)

A range of answers is to be expected as they used different time periods and different property markets were examined; for example, City of London, UK offices or European offices. But they are also different because they used different maths of measurement, different benchmarks and different age cut-off points for the assumption that after a certain age, increasing age becomes largely irrelevant. However, Law (2004) replicated the methods of the various studies using a standard set of data over a standard time period of 1985-95 and found the longitudinal studies produced a range of rates from –1% (appreciation) to 3% depreciation.

Appreciation rates could occur for a number of reasons. Changes in the technology of buildings occur are incorporated into new buildings and therefore older buildings could depreciate on account of not possessing these attributes. However, changes in technology could be incorporated into older buildings to make them appreciate against new buildings. An example in the UK is office buildings constructed in the 1960s and 1970s. They were originally built with a floor to floor height of around 9 feet (under 3 metres). In the 1980s and 1990s, cabling for IT and plant for air conditioning were housed in half-metre suspended ceilings and raised floors; rendering the original heights too low to provide these services and enough clear height for occupiers. They were virtually obsolete and many were redeveloped. However, more recently, the use of new technology has reduced the requirement for raised floors and suspended ceilings, so increasing the clear headroom and improving the quality of these buildings relative to the new building. They would have appreciated relative to new buildings in that time.

There is, however, a possibility that the appreciation may be found erroneously or depreciation rates distorted by an error in the methodology of the studies. That error relates to benchmarking the performance of actual properties. The definition requires data to be found on the rental value of a new building in the actual location of the aging building and that is not possible. The study therefore requires a benchmark that is as close to the definition as possible and chose to adopt a prime location benchmark developed by CBRE, which provides a long term series of 100% location rent point valuations in many locations in the UK across a number of different segments. However, as the 100% location changes within a centre or the technology of buildings improves, the rent point adjusts to these changes. Not only can the hypothetical property be continually renewed, it can also be wheeled to a better location. The actual properties cannot be moved so there is an element of locational change relative to the benchmark included in the depreciation rates. This can reduce as well as increase depreciation rates.

The research has therefore had to address two major issues; measurement methods and benchmarking. The report (Baum et al, 2005) sets out the suggested solutions to both major issues as well as some other minor details concerning the basis of undertaking depreciation studies.

In summary, it was decided that the approach to the study was that:

- Depreciation is more time than age related so a longitudinal rather than cross sectional study was undertaken
- The longer the time frame the better; 19 years was the longest possible time with the available data, but also a shorter term of the last 10 years was used to include more shopping centres and retail warehouses
- A value weighted by rent aggregation of data was used within a value decline measurement formula. The disaggregation of individual properties was undertaken at the three main property sector level of retail, office and industrial and also further disaggregated into standard shops in the South East of England, standard shops in the rest of the UK, retail warehouses, shopping centres, City of London offices, West End of London offices, offices in the South East of England, offices in the rest of the UK, industrials in the South East of England and industrials in the rest of the UK.

The findings relating to the rate of rental depreciation and capital expenditure are set out in Table 3 for the 19 year sample and Table 4 for the 10 year sample. The rental depreciation rates are as expected at the main sector level, with retail having little depreciation in rental value but having a significant capital expenditure input within shopping malls. Offices show the most depreciation and also have significant capital expenditure requirements despite the high rental depreciation rates. The more detailed segment results are less easy to explain, with City of London offices having virtually no rental depreciation since 1993 extremely hard to believe. 1993 is a difficult start date as it was in the depths of the post-1990 crash which lasted until the mid-1990s. Few rental

transactions were recorded in this period and all of those were complicated by extensive incentives packages. The results may be a product of problems with the estimates of rental value at that time rather than a product of no depreciation in rental value. However, there is a substantial capital expenditure element and this may also be part of the explanation.

Retail warehouses have the highest growth rate of any sector but also have a relatively high rental depreciation rate; this may be a product of the rapidly changing requirements of tenants which make the earlier generation of an "emerging" property sector less attractive than newer properties. For example, building design and space requirements could change more rapidly than for more established property market segments causing higher depreciation rates.

Table 3 : Rental depreciation rates and capital expenditure – UK: 1984 to 2003

	Number of Properties	Rate of Rental Depreciation	Capital Expenditure (% p.a. based on capital value)
Standard Shop	330	0.1%	0.6%
Office	158	1.0%	1.0%
Industrial	118	0.6%	0.8%
Std Shop – S. Eastern	176	0.4%	0.5%
Std Shop - Rest of UK	154	-0.3%	0.6%
Shopping Centres (Malls)	35	-0.1%	2.2%
Retail warehouses	-	-	-
Office – City	16	1.0%	0.9%
Office - West End	74	0.9%	1.3%
Office - South Eastern	38	1.2%	0.7%
Office - Rest of UK	30	1.7%	0.8%
Industrial – S. Eastern	74	0.6%	0.7%
Industrial - Rest UK	44	0.7%	0.9%

Table 4 : Rental depreciation rates and capital expenditure – UK: 1993 to 2003

	Number of Properties	Rate of Rental Depreciation	Capital Expenditure on 10 year sample (% p.a.)
Standard Shop	807	0.3%	0.5%
Office	505	0.8%	0.9%
Industrial	314	0.5%	0.4%
Std Shop - S. Eastern	402	0.2%	0.4%
Std Shop - Rest of UK	405	0.5%	0.5%
Shopping Centres	73	0.1%	2.4%
Retail Warehouses	43	1.2%	0.8%
Office – City	65	0.1%	1.1%
Office - West End	147	1.1%	1.1%
Office - South Eastern	191	0.7%	0.7%
Office - Rest of UK	102	1.5%	0.7%
Industrial - S. Eastern	197	0.3%	0.4%
Industrial - Rest UK	117	1.1%	0.3%

Asset allocation needs to take depreciation into account when projecting total returns to real estate versus equities and bonds. If growth forecasts are location-based, appraisal models need to take two possible growth rates, both in the location and in the specific property, and depreciation rates are the difference between these two rates. Appraisal models also need to take into account exit capitalization (cap) rate depreciation effects, although the cap rate is often called the all risks yield in the UK because it hides all the perceived risks within the single cap rate. Isolating depreciation from other influences is therefore difficult; in the UK, this includes shortening lease terms to expiry.

The average rate of rental depreciation on the UK portfolio over the past 10 years has been around 0.7% per year. Capital expenditure has averaged a further 0.7% of capital value each year. As expected, retail is least affected by depreciation. But City offices and shopping centres (malls) appear to suffer the lowest rates of rental depreciation but higher rates of capital expenditure.

Issues for further research include amongst others:

- The pattern or shape of depreciation. Depreciation is unlikely to be constant rate and may well be affected by the property cycle

- International comparisons. Does the data exist elsewhere to replicate the studies? What are institutional/physical differences between international differences and do they cause depreciation to be structurally different?

The UK office market is predominantly low rise with a significant number of single tenanted properties; or with a handful of tenants only. Australia, especially the element measured by the Property Council of Australia, is often high rise and the average size and value of assets is significantly higher than those within the Investment Property Databank in the UK. International lease structures are also very different so while the effect on cap rates through time of changing lease structures is high in the UK (average lease lengths have fallen by about 10 years since early 1990s, but they are still around 15 yrs for retail and 10 yrs for offices/industrial), their significance in other international markets may be less pronounced, making the effect of depreciation on cap rates easier to model.

LIQUIDITY

The liquidity project is a joint venture between three of the leading real estate departments in the UK; the Department of Real Estate and Planning at the University of Reading, the CASS Business School at City University and the Department of Land Economy at the University of Cambridge. It was also funded by the Investment Property Forum and the report was published by them last year (Bond et al, 2004).

Illiquidity is perceived as another major constraint to direct real estate investment. Lizieri and Bond (2004) identify a number of dimensions of liquidity, including:

- the rate of turnover and the time taken to transact;
- the costs associated with transacting (both formal costs - buy or sell fees - and information costs)
- the impact of the decision to transact on the price of the asset and the prices of similar assets; and
- uncertainty as to level and timing of achieved price or return at the time of the decision to transact.

Two aspects of the project were to identify transactions rates and the time to transact in order to provide some empirical foundation for the discussion of the implications of illiquidity for asset allocation. It proved very difficult to identify the level of transactions in the UK but the research concluded:

- In 2001 and 2002, transactions were in the region of £25 – £30 billion a year (Aus $75 billion approximately). DTZ Research (2005) have since reported that in 2004 the transactions rate was significantly higher at around £48 billion, an increase of 68% over 2003
- Transactions rate in 2002 was around 14% - 15% pa

- There is an upward trend, increasing by 1.5 times between the mid-1980s and 2001/2 and this increased significantly again in 2004

- There was a significant fall in transactions activity in the early 1990s crash; by 50-60%

- The 2001 and 2002 data suggests a mean holding period of only around 5-6 years

- Small funds trade more frequently than large funds, and small properties are traded more then larger lot sizes.

Regarding the time to transact, there is very little UK evidence over and above non-transaction specific survey work by McNamara (1997) and there is little systematic recording of this kind of data. The project therefore adopted a case study approach of three major landlords and confined itself to identifying the time taken to sell only. The three case studies were of a large financial institution, one of the largest property companies in the UK and a large asset management company. The properties chosen were all those completed in the years 1995, 2000 and 2002 (three different market states in the UK) and this dataset ran to 187 properties. 10% of these were sold at auction, the rest mainly by private treaty using a "best bids" approach.

The transaction process was modelled as comprising four major phases, with Phase One comprising three different stages.

Phase 1 was the pre-marketing period and consisted of:

- Stage 1 – the general portfolio decision to sell part of the property portfolio and this was followed by a strategic sub-sector decision (i.e. to sell small standard unit retail outside of the South East region).
- Stage 2 decision was which particular asset to sell.
- Stage 3 filtering individual property selection and getting it ready for sale with agents and solicitors now instructed.

Basically, the decision making process is based upon a series of questions; should real estate be sold, if yes, which type of real estate should be sold, and once type is decided, which actual assets should be sold? But the data did not allow this part of the process to be observed, as the sale files were first generated for the particular property by the decision to sell a particular asset. The timing of this process remains hidden.

Phases 2, 3 and 4 are the main parts of the transaction process; marketing, due diligence and completion. The overall transaction time as set out in Table 5 is therefore the time from the first record of the proposed sale, the date the sale file was started, which often

coincide with the date the agent was instructed. The average transaction time for the 184 transactions where this information was recorded is 298 days, over 9 months. However, this average is skewed by a small number of very long transactions: the median transaction time is 190 days, or just over 6 months.

The longest period is for negotiation. The average time is 178 days but again this is heavily skewed and the median is 88 days, nearly 3 months. The due diligence process between sale agreed and contract averages 83 days and, although less heavily skewed, the median is lower at 62 days or 2 months. The contract to completion period averages 19 days or nearly 3 weeks.

Table 5 : Overall transaction times

	Overall Transaction Time	Exchange to completion	Price to exchange	1st record to price
Average	298	19	83	178
Median	190	19	62	88
Standard Dev	381	19	82	325
Skewness+	4.07	1.43	2.25	5.39
Number	184	185	178	179

+ Normalised to zero: large positive numbers indicate positive, upside skewness.

In 1996, the property industry in the UK introduced a campaign to promote "readiness for sale", a scheme whereby the properties would be held in a state where many of the preliminary work/information for a sale was continually monitored and updated (IPF, 1996). Unfortunately, the evidence from the different time periods did not indicate that this initiative had either been adopted or had an influence on the speed of transactions. The exception is that the average time from contracts to completion had reduced through time; but this is the shortest period in the sales process and the reduction did not have a huge impact on overall transaction time.

Other conclusions included the fact that there was no pattern to the transaction time taken as, for example, a long marketing period did not lead to longer or shorter due diligence periods. Transaction time can vary significantly between assets. Retail does appear to take longer than the other property sectors, but that may reflect that a significant number of transactions are the clearing out from the portfolio of small, relatively low value standard shop units and they may be difficult to shift into the secondary market.

Further work identified in Bond et al (2004) includes more work on the timing of Phase 1 of the transaction process, addressing some of the sample bias introduced by only looking at properties that actually sold, more work on the make-up of the sale sample and whether properties with certain attributes sell more quickly. Further work could also investigate why certain properties are sold rather than other ones and what their characteristics are.

As with depreciation, there is an international dimension. The huge differences in the institutional background to property markets in different countries may impact heavily on the sale process. Different legal regimes, market processes and regulation on asset managers and purchaser/vendors may have significant impacts on both timing and the sample of assets offered for sale. For example, sales out of funds in Germany are restricted by not being able to sell at less than the valuation of the property for accounting purposes. There is anecdotal evidence that informal constraints are put on some UK funds whose trustees will also resist sales from funds at less than the last valuation. These restrict liquidity and the restrictions can be both by regulation or be more informal. Comparisons between countries would illuminate the institutional differences, inform studies looking at the construction of international property portfolios and identify improvements to process which might deliver speedier transactions.

VALUATION ACCURACY

Illiquidity risks include difficulties in determining when a property will be sold and also at what price. Valuations play a significant role in identifying properties for sale and accurate valuations would reduce some of the risk of price changes over the period between identification for sale and contract. They are also fundamental to performance measurement in thinly traded markets. There is significant body of work on how valuations lag behind market movements and smooth the peaks and troughs of cyclical changes in price (see, for example, Geltner et al (2003); Geltner and Miller (2001); Brown and Matysiak (2000)). There is also a significant body of work mainly in the UK, US and Australia concerning valuation accuracy and variation[2] (see for example, Cole et al (1986); Hutchison et al (1996); Crosby et al (1998); Fisher et al (1999); Matysiak and Wang (1996); IPD/DJ (2003); Mokrane (2002); Webb (1994); Newell and Kishore (1998); Parker (1998)).

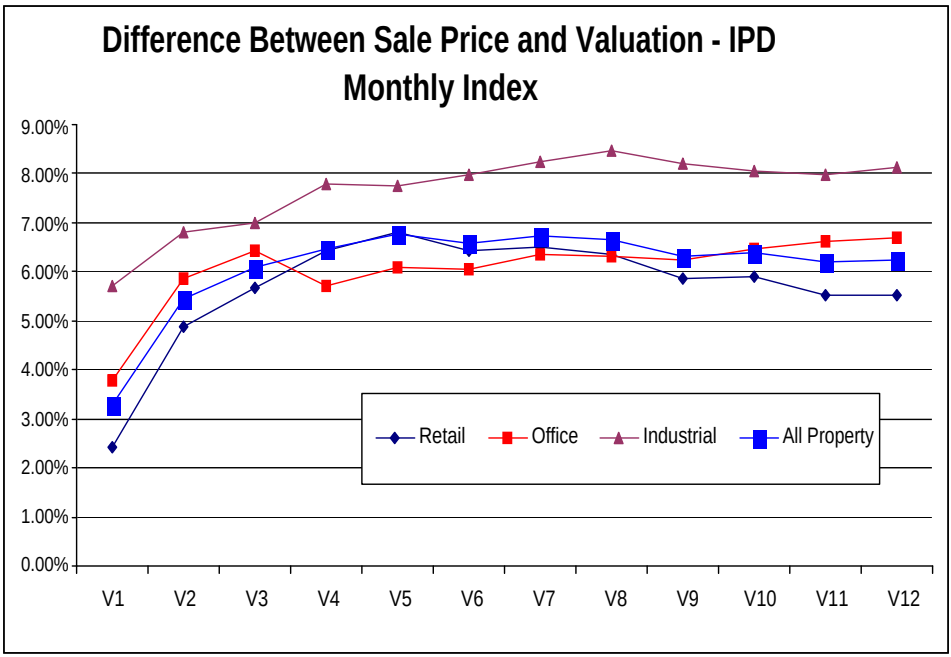
The RICS in London has recently sponsored two valuation accuracy studies; one published in 2004 (RICS/IPD, 2004) and the latest one to be published later in 2005 (RICS, 2005)[3]. The studies used Investment Property Databank records of sale prices and prior valuations in every year from 1983 to 2003. It asked two questions; how accurate are valuations and is the level of accuracy improving through time. It also looked at the

[2] Accuracy is usually defined as differences between valuation and subsequent selling price, variation is the difference between two or more valuations of the same asset)
[3] Subsequently published in March 2005.

outliers (any valuation which is different from the price by more than +/- 15%) and identified the characteristics of the properties and asked sellers to explain why they thought the valuations and prices were so far apart.

In 2003, the study identified 1216 transactions. The average number of transactions each year over the last 10 years is over 1300. The study does not use any valuation within two months of the sale date and updates all valuations to two months before the sale date. This is to eliminate properties being valued after the sale price was agreed and known about. This is a result of analysis of properties sold out of the IPD monthly index where it appears that valuers do not get informed of any sale price agreement until very close to completion of the sale; valuations only appear to converge towards sale prices in the last monthly valuation before completion which suggests that valuers often do not get informed until the sale contract is signed (Figure 1).

Figure 1 : Difference between sale price and monthly valuation

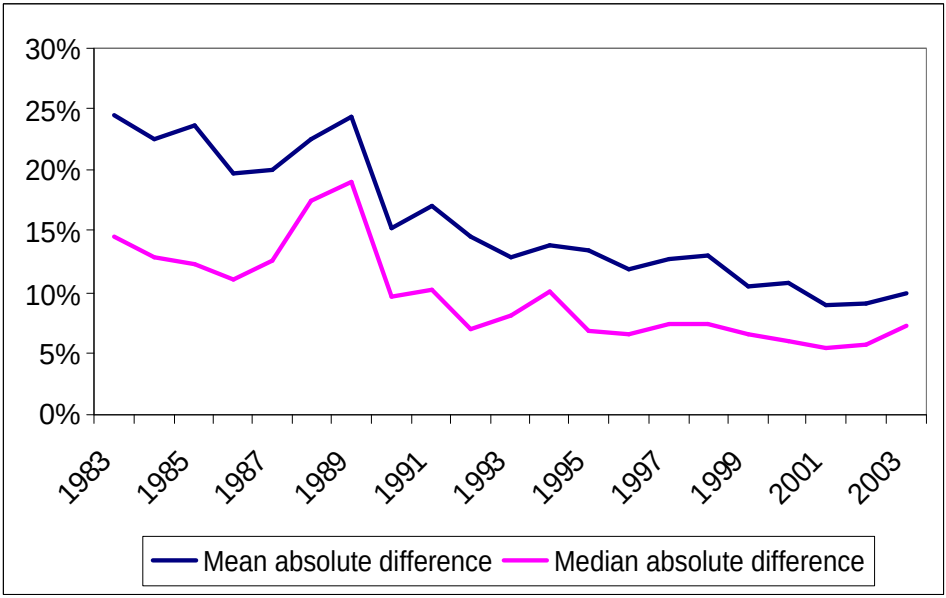


Note : (V1 = last valuation before sale, V2 next to last valuation before sale, etc)

The updating of the valuations is undertaken by the use of the IPD segment capital growth index. The results of the accuracy study are illustrated in Figure 2. The mean absolute difference has steadily declined since the 1980s, suggesting that valuation accuracy has

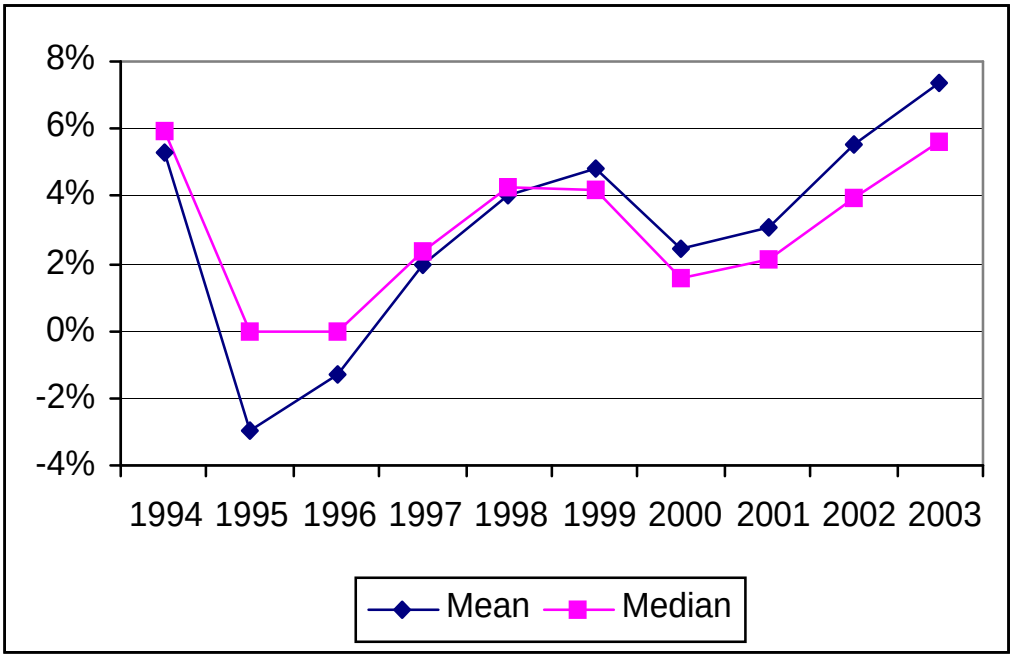
improved. In 2001, the absolute difference (ignoring whether valuation higher or lower than price) was 8.9%, but has risen slightly in 2002 and 2003.

Figure 2 : Absolute differences : sales and valuations: 1983 to 2003



Taking into account the sign changes indicates whether there is any bias towards valuations being higher or lower than prices. Valuations have consistently been lower than prices for every year of the study bar two (the last 10 years are illustrated in Figure 3). These years were 1995 and 1996 which were in fact the first two years of the commercial property market recovery following the recession in the market which commenced at the end of 1989/beginning of 1990 and lasted until the middle of the 1990s. It suggests that valuations are below prices but this gap reduces in recessions and, if they are long enough, reverses.

Figure 3 : Actual differences : sales and valuations: 1994 to 2003



To summarise the RICS research results:

- Overall, the absolute average difference in 2003 was 9.9%. 78% of valuations were within +/- 15% of sale prices
- Price-valuation differences have levelled off after a trend of improvement through the 1990s
- The study also examined 262 properties where valuations were more than 15% different from the sale price. These tended to be smaller properties than other sales
- Larger differences also tended to be associated with auction sales and sales to private investors.

There are many questions about whether this kind of study actually does measure valuation accuracy and what they really do is raise a number of questions concerning the sales and acquisition process; for example, the impact that appraisals have on which properties are bought to sale. However, in a previous paper to this conference in 1998, I illustrated that similar studies in the US and Australia had revealed results that suggested that US and Australian appraisers were already more "accurate" than their UK counterparts. Is this really so, is it still the case and, if so, why is it the case. The process

of bringing properties to sale set out in the previous section on liquidity may have a bearing on the answers.

CONCLUSIONS

This address was based on a number of themes. The first was that direct real estate investment does suffer in the asset allocation process from perceived disadvantages compared to equities, bonds and indirect real estate. Does research into the minute detail of these so-called disadvantages reveal those disadvantages more widely or help to counter the arguments? If they are known about, attempts can be made to price them.

The second was the UK practice research agenda in direct real estate investment and the relationship between some UK academics and practice. In the UK, current practice issues happen to be flexible leasing, depreciation, liquidity and (always) valuation. Do these have any resonance in the Pacific Rim region and if so is there scope for persuading Pacific Rim practice to fund a similar agenda? Research like this is practice agenda driven and funded and this creates a tension. Practice wants usable results, academia wants high level academic output which can find its way into respectable international refereed journals. Can the academics prove that they are useful to industry by producing robust, useable results while also publishing the academic version in the appropriate journals?

The three studies generated by practice-based funding have all produced, or are about to produce, output for industry use and two have been presented at the major UK real estate investment practitioners conference in the UK. In addition, all three projects are expected to produce academic output for inclusion in leading academic journals. They should prove to have met the objectives of both parties.

Working with industry funding always brings into play questions of independence and objectivity. There are two strands to this; the ability of the funding body to influence or control the results and the availability of data. Research like this does depend on industry funding and is highly data driven. In the UK, generally funding bodies do not have the ability to control the output, although the British counterpart to the Property Council of Australia is the one body who commissions reports, but then selectively uses the information for policy debates. No self-respecting academic will work under those conditions. The usual contract is that the funding body does not have the right to influence the output or bury it; but they do have the right to distance themselves from the results by asking that all references to the source of funding and support be removed from any output.

Commercial property investment transactions and performance data held in the UK is in private but independent hands (IPD) as there is no freedom of transaction information in the UK. The real estate investment community has therefore bought into the cost of

providing high quality performance and lease data at the individual property level and this now underpins substantial academic output; but at a cost, which is where research funding becomes essential. But because the data is in independent hands, research which uses the data to find uncomfortable results for the industry cannot be stopped as long as the data can be afforded. Normally, the analysis of this data is good for the direct real estate investment industry, as perception is often worse than reality. But occasionally perception is not as bad as reality, but industry in the UK has now started paying its money and taking its chances.

REFERENCES

Ball, M., Lizieri, C. and MacGregor, B. (1998). *The Economics of Commercial Property Markets.* London. Routledge.

Baum, A., Callender, M., Crosby, N., Devaney, S. Law, V. and Westlake, C. (2005). *Depreciation in Commercial Property Markets*. Investment Property Forum. Forthcoming

Bond, S., Callender, M., Crosby, N., Hwang, S., Key, T., Lizieri, C., McAllister, P., Matysiak, G., and Ward, C. (2004). *Liquidity in Commercial Property Markets*. London: Investment Property Forum.

Brown, G. and Matysiak, G. (2000) *Real Estate Investment*. Harlow. Financial Times Prentice Hall.

Cole, R. Guilkey, D. and Miles, M. (1986). Towards an Assessment of the Reliability of Commercial Appraisals. *The Appraisal Journal*, 54(3), 422-432.

Crosby, N., Lavers, A. and Murdoch, J. (1998). Property Valuation Variation and the "Margin of Error" in the UK. *Journal of Property Research*, 15(4), 305-330.

DTZ Research (2005) *Money into Property*. London: DTZ.

Fisher, J., M. Miles and B. Webb (1999). How Reliable are Commercial Appraisals? Another Look. *Real Estate Finance*, 16 (3), 16-26.

Geltner, D. and Miller, N.G. (2001). *Commercial Real Estate Analysis and Investments.* New Jersey: Prentice Hall.

Geltner, D., MacGregor, B. and Schwann, G. (2003). Appraisal Smoothing and Price Discovery in Real Estate Markets. *Urban Studies*, 40(5/6), 1047-64.

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

Hutchison, N., MacGregor, B., Nanthakumaran, N., Adair, A. and McGreal, S. (1996). *Variations in the Capital Valuations of UK Commercial Property*. Research Report. London. The Royal Institution of Chartered Surveyors.

IPD/DJ. (2003). *Variance in Valuations (7e).* London. Investment Property Databank/Drivers Jonas.

IPF (1996) *"Readiness for Sale" – The Code of Practice for Streamlining Commercial Property Transactions*. London. Investment Property Forum.

Law, V. (2004). *The Definition and Measurement of Rental Depreciation in Investment Property.* PhD Thesis. The University of Reading.

Matysiak, G. and Wang, P. (1995). Commercial Property Market Prices and Valuations: Analysing the Correspondence. *Journal of Property Research,* 12,181-202.

McAllister, P., Newell, G. and Worzala, E. (2004). *Property Research Priorities in the UK*. London: Investment Property Forum.
http://www.ipf.org.uk/resources/pdf/PrioritiesinUKResearchReport.pdf

McNamara, P. (1998) *Exploring Liquidity: Recent Survey Findings.* Paper to 7th IPD Conference, Brighton, November.

Mokrane, M. (2002). *Valuations – standards, accuracy, consistency*. Paper to IPD European Strategies Conference. Wiesbaden, May.

Newell, G and Kishore, R. (1998). *The Accuracy of Commercial Property Valuations*. Paper to 4th Pacific Rim Real Estate Society Conference, Perth, January.

Parker, D. (1998). *Valuation Accuracy – An Australian Perspective*. Paper to 4th Pacific Rim Real Estate Society Conference, Perth, January.

RICS/IPD (2004). *Valuation and Sale Price Variance Report 2003.* London: RICS/IPD.

RICS/IPD (2005). *Valuation and Sale Price 2004 Report.* London: RICS/IPD.

Webb, B. (1994). On the Reliability of Commercial Appraisals : An Analysis of Properties sold from the Russell-NCREIF Index. *Real Estate Finance,* 11(1), 62-65.