UNLISTED PROPERTY FUNDS: SUPPLYING CAPITAL TO DEVELOPING PROPERTY MARKETS?

Andrew Baum, PhD

Chairman, Property Funds Research,
6 St Giles Court, Southampton Street,
Reading, United Kingdom

Professor of Land Management,
Department of Real Estate and Planning,
University of Reading Business School,
Whiteknights, Reading RG6 6AW, United Kingdom

e-mail: a.e.baum@rdg.ac.uk

Keywords: unlisted property funds, developing and emerging markets

Note: This is a draft working paper prepared as background to a keynote speech at the International Real Estate Research Symposium in Kuala Lumpur, April 2008. It describes ongoing research work which will be updated in future publications. In this draft working paper the author uses the term 'we' to denote the research team at Property Funds Research, whose significant contribution to this work is hereby acknowledged. The input of Maurizio Grilli at Grosvenor and Professor George Matysiak of the University of Reading has also been helpful.

1. Introduction

1.1 Context

High quality real estate is a fundamental necessity for a developed economy. It provides life-enhancing residential security and with it the potential for domestic saving through owner occupation of capital-preserving assets; it produces industrial and office space for the production and processing of output; and it delivers shopping and leisure facilities for the promotion of domestic consumption and tourism. While conformity of high quality design and construction may damage valued cultural differentiation, it also breaks down barriers between different lifestyles and introduces the possibility of cross-border trade, bringing with it expertise, skills and economic growth.

The production of high quality real estate needs to be financed through large scale equity and debt capital. This requires the presence of an international banking system, but also the entrepreneurship represented by equity capital or foreign direct investment (FDI).

For example, Lapoza (2006) traces the essential role real estate development plays in the development of emerging economies. He finds that foreign real estate capital was a major source of financing domestic property market office

construction in Central Europe after the fall of the Berlin Wall in 1989. By analyzing the correlation of FDI flows to annual construction rates of office buildings, he seeks to explain the location of new or refurbished office buildings in the central business district (CBD) or in non-CBD locations and to test whether there is a positive correlation relationship of FDI flows and new office construction or refurbishment. The results point to the important link between incoming FDI and office construction in domestic city centres.

FDI is greatly supported by a global boom in international institutional investing. An increased investor appetite for global investment in equities and bonds, and later property, has generated a structural market shift in cross-border investing observable since the mid 1990s. In the context of this paper, the change has had two main impacts: first, international property investment has boomed; second, indirect property investment (investing through securities and funds) has become commonplace. Recently both trends have been observable in most European countries with established pension funds.

The recent boom in cross border property investing has been significant. According to major brokerage houses, cross-border property investment has been growing much more quickly than domestic investment in the last five years. Running in parallel with this development has been a boom in listed real estate markets, especially in the Real Estate Investment Trust (REIT) format, and in the number and value of unlisted property funds. The growth of the listed REIT market is largely a matter of public record, but while investing in unlisted real estate vehicles has become an increasingly standard route to attaining international real estate exposure there is little available data describing this trend.

The unlisted sector holds particular interest for this symposium. Rather than REITs or other forms of listed securities, which tend to focus on and be based in developed markets, the unlisted fund has acted as an engine delivering capital from the developed world to developing and emerging property markets.

1.2 Objective

This paper sets out to describe the changing nature of global property investment, to provide background information regarding the nature of unlisted property funds and their managers and investors, and especially the role played by unlisted property funds in facilitating cross-border investing. In particular, it focuses on the development of unlisted funds as intermediary structures carrying institutional capital from developed to developing markets. It presents the results of new research by UK research firm Property Funds Research (PFR) and the University of Reading which explores the extent to which this new vehicle has been effective in deliveringcapital to emerging markets.

The research relates the number of funds targetting particular countries and to population and GDP per capita. It finds that there is a very strong relationship between the popularity of a country for investment through this vehicle format and these independent variables. More interesting, perhaps, is the identification of outlier countries where the amount of investment is significantly less - or greater - than that predicted by population and GDP per capita.

In this research, we define the emerging markets as the regions outside Europe, Australasia and North America, and focus on the largest 55 countries in these regions by population. This produces a country cut-off of a minimum of roughly 20 million population and includes Asia, Latin America, Africa and the Middle East.

1.3 Limitations

The paper has several limitations.

We acknowledge the inadequacy of our definition of an emerging or developing market. For completeness and for the purposes of comparison, we have included all larger Asian markets, not including Australasia, despite the fact that Asia includes such highly mature markets as Japan, Hong Kong and Singapore.

We have not reported the exposure of listed structures such as REITs to the emerging markets. Data regarding this will be added in future work. Nonetheless, it must be said that the unlisted fund market is less constrained than the REIT market, as tax efficient unlisted fund structures can be established for investment in most markets, but a REIT market cannot exist – and capital cannot efficiently be invested – unless local REIT legislation has been passed. In early 2008, REIT markets in Asia and the emerging regions were limited to Mexico, Singapore, Malaysia, Hong Kong, Taiwan and Korea, although other markets were in the early stages of developing such structures.

The data we use is confined to unlisted funds focussed on a single region. This is by far the most common fund type, but this focus means we have not estimated the target exposures of global funds and those allocating capital to more than one global region. This is not likely to be a highly significant issue, but again will be corrected in future work.

We also report the target exposure of an unlisted fund to a country unweighted by capital raised, so that a big fund with a very great allocation to a selected country will carry no more weight than a small fund with a small target exposure. This will require considerably more maturity in the PFR emerging market funds before more quantitative data can be reported.

Finally, we have not completed a full survey of the limits placed on external or foreign investment in developing economies, nor of the exchange controls which may inhibit cross-border investment into those countries. It is possible that these factors fully explain the outlier countries. This will be added in further work. In this paper we use US dollars as the standard currency for cross-bordercomparison, with the exception of PFR's market growth graphs (Figures 1, 2 and 3)presented in Euros.

2. Background: the global market

2.1 The value of investable real estate

The value of commercial property owned by institutional investors around the world has been estimated (by DTZ and RREEF, among others) to be around $16 trillion at the end of 2006. This is the investable stock, meaning stock that is of sufficient quality to become institutional investment product, and which therefore represents the potential for market growth if owner-occupation rates were to tend to zero.

The value of commercial property owned by institutional investors around the world was estimated by Investment Property Databank (IPD) to be around $4 trillion at the end of 2006. This excludes owner-occupied property, suggesting that the IPD sample represents 25% of the investable stock and that the remaining 75% of that stock is owner-occupied. This is highly unlikely, as we suggest below.

The IPD measure suggests that some relatively small countries offer sizeable commercial property markets. Australia, Switzerland and Sweden have much more established property markets than would be suggested by the proportion of global GDP that they represent. On the other hand, the size of the Italian and Spanish property markets is significantly lower than would be suggested by the share of GDP.

This very substantial under-representation of property within the latter countries reflects the relative lack of transparency of these markets, and the generally low levels of information available by comparison to more mature examples, including the lack of penetration by firms such as IPD. In Asia and the emerging markets of the world, the data inconsistencies are even more stark. For example, we do not know much about the size of the investable property markets in China, India and Pakistan, despite their huge populations and increasingly significant GDP.

Implied owner-occupation ratios are defined as the total non-invested stock as a share of total

stock. As a result, more developed markets with a higher degree of investor activity should show lower owner-occupation ratios than less developed markets. Implied owner-occupation is highest in Asia-Pacific countries, at around 76%, reflecting both the lack of professional investor markets and of a developed services sector, while the ratio is lowest in the USA at 53%. The implied owner occupation in Europe is at around 62%. Again, we suggest that this is much too high an estimate.

The $16 trillion investable stock of property can be broken down to the regional level and further disaggregated by ownership structure (see Table 1). PFR has made estimates of the gross asset values (GAVs) of stock held in both listed REITs and property companies and unlisted funds.

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. Unlisted fund GAVs have been estimated by PFR using a combination of primary research at the individual fund level using the $1.4 trillion PFR fund universe (see Table 2) and extrapolation. The US and hence North American data is a minimum estimate, as PFR data is still being assembled for this region.

According to PFR estimates, the $16 trillion investable market splits as follows. $4.16 trillion or 26% of the total stock is held by listed and unlisted property vehicles, with 16% held in listed vehicles and 10% in unlisted funds. This is more than the IPD estimate of the entire value of commercial property owned by institutional investors around the world, and questions the IPD estimate, which probably excludes many fund-held properties. The remaining $11.84 trillion or 74% splits into directly held investment stock and owner-occupied property – which could therefore be much less than the 70-75% level implied in previous measures.

The global market is split by GAV into 40% Europe, 38% North America, 17% Asia and 5% emerging markets (defined for this purpose to exclude China and include India). An estimated minimum global $1.65 trillion is invested in unlisted funds. Within this split, Europe is relatively fully supplied with unlisted product while Asia is under-supplied. Asia, on the other hand, has been well served by the listed sector.

Table 1: the global property investment universe ($m)

	Europe	Asia	Emerging	North America	Total
Size of market	6,353,676	3,440,101	485,212	5,872,705	16,151,694
Listed sector market cap	408,983	695,895	113,359	597,517	1,815,755
Estimated gearing listed	61%	30%	75%	25%	
Listed market size	658,463	904,665	198,379	746,896	2,508,402
Unlisted market size	732,298	262,539	180,433	475,905	1,651,175
Direct market size (residual)	4,710,915	2,272,897	106,400	4,649,903	11,740,114

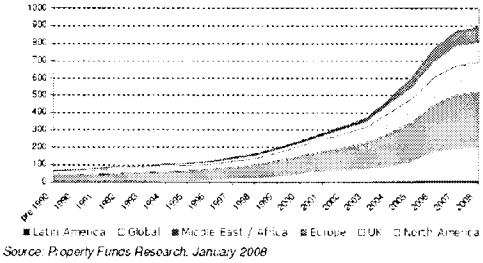
Source: Property Funds Research, RREEF, AME Capital, December 2006

2.2 The global unlisted property market universe

PFR's estimate of the size of this market is around $1.65 trillion, of which data is held on over $1.36 trillion or €900bn (see Figure 1 and Table 2).

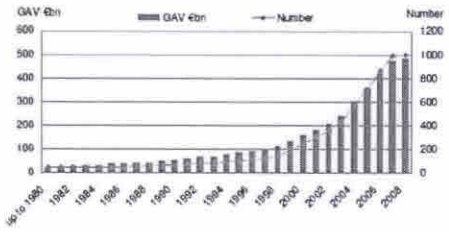
The universe of unlisted property vehicles has grown dramatically over the last ten years with the most dramatic activity being in the last five. In Europe, the number of funds in the PFR Universe has grown on average by over 20% per annum over the past ten years. Over the same period GAV has grown by 10% annually. This explosive growth is demonstrated in Figure 2.

Figure 1: growth in the PR database of unlisted indirect vehicles by GAV (€bn)



Source: Property Funds Research, January 2008

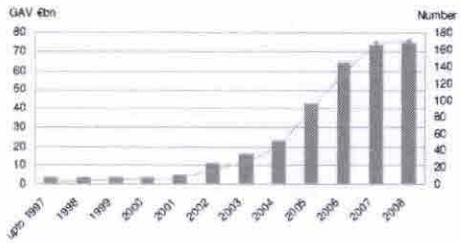
Figure 2: growth of the European (inc. UK) unlisted indirect market



Source: Property Funds Research, January 2008

The largest markets in PFR's vehicle universe are those of Europe, the UK and North America (currently under-estimated, as suggested above). However, increasingly the focus has been turning to the emerging markets of Asia, the Middle East, Africa and Latin America. Recently, Asia in particular has begun to experience a similar boom, as shown in Figure 3.

Figure 3: growth of the Asian unlisted indirect market



Source: Property Funds Research, January 2008

Table 2 shows how the currently held PFR fund data is distributed by region.

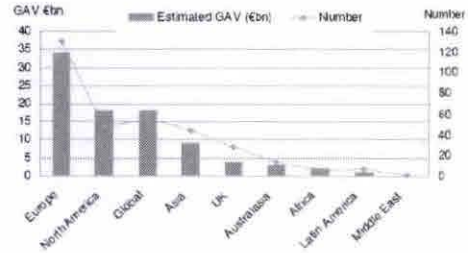
Table 2: PFR's current vehicle universe

Regional focus	Estimated GAV (€m)	Number
Europe (Ex - UK)	473,229	756
Global (pan-region)	298,579	231
UK	238,573	278
North America	190,205	220
Asia	110,036	197
Australasia	33,687	64
Latin America	13,279	63
Africa	5,016	13
Middle East	953	8
TOTAL	1,363,561	1,930

Source: Property Funds Research, January 2008

Figure 4 shows that Europe was the most popular target location for funds launched in 2007 by both estimated GAV and number. North American funds were second most popular in terms of estimated GAV, while global funds surpassed North American funds by number. Asian funds are becoming increasingly popular with 44 being launched in that year.

Figure 4: total number of vehicles launched in 2007 by location and value

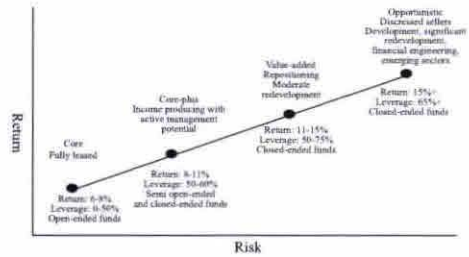


Source: Property Funds Research, January 2008

2.3 Fund styles

Funds are differentiated by risk types. These are often described as shown in Figure 5 below.

Figure 5: unlisted fund risk styles



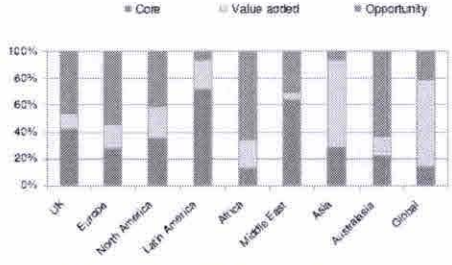
Source: CBRE Investors, January 2008

The vehicles included in PFR's universe are classified as being one of three styles; core, value-added and opportunity. Core funds are low risk funds with no or low gearing, while opportunity funds are higher risk, higher target return funds with high levels of gearing.

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 2003 but value-added funds then emerged as the style of choice. The majority of funds launched since 2005 have been value-added.

Figure 6 shows that core funds tend to be the style of choice for the more developed markets of Europe, North America, Australasia, while opportunistic funds are a significant fund type in most developing markets (with Africa currently dominated by the developed South African market).

Figure 6: vehicle style by regional focus

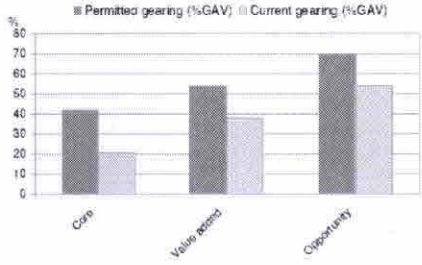


Source: Property Funds Research, January 2008

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 illustrates that all vehicle styles carry a lower level of debt than is permitted. Actual gearing levels average 25% for core funds, just below 40% for value-added funds, and just below 55% for opportunity funds. Permitted gearing levels are around 40%, 55% and 70% respectively.

Vehicles in PFR'suniverse 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 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.

Figure 7: current and permitted gearing by fund style



Source: Property Funds Research, January 2008

2.4 International property investors

As suggested in Section 1, the world's top investors are going global. Of the top ten global investors known to PFR, all except two (the Japanese Government Pension Investment Fund and the Federal Retirement Thrift Investment Board) have global investment portfolios with significant use of unlisted funds, or have recently announced plans to invest in global real estate for the first time using unlisted funds (see Table 3).

The listed market has also grown, trebling in size between 2001 and 2006 as the REIT format is applied to more and more countries. But PFR and INREV (the European Association for Investors in Non-listed Real Estate) surveys suggest that there is a lot of potential for further growth. More listed and unlisted property funds will inevitably follow to convert the huge pool of government and owner-occupier held property into an investible form. It is largely expected that growth in the creation of funds will continue, supported by booming fund of funds and multi-manager solutions (a form of indirect investment in which a manager

is appointed to select funds on behalf of an investor). Investors are taking more risk in search of maintaining attractive return levels, resulting in an increased appetite for what are called 'value added' (higher risk) funds. There is also growing interest in emerging markets on the fringes of Europe, the Middle East and North Africa, Sub-Saharan Africa, South America and Russia.

The recent pace of change in investor attitudes has been rapid. Taking UK pension funds as an example, in 2000-2005 balanced, unlisted property funds dominated the UK and European markets and domestic multi-manager mandates were common. In 2005-2006, pan-European pension fund mandates became typical. Global multimanager mandates started to appear in 2006-2007, and in 2007 the first global listed/ unlisted mandates are being agreed. Meanwhile, increasingly established derivative markets were, by 2007, allowing property hedge funds (such as Reech AiM's Iceberg fund) to create 'market neutral' absolute return funds. Given time, the standard pension fund mandate will almost certainly become global, and may also develop into a requirement for global listed and unlisted funds as well as permitting long/short solutions to achieve absolute returns.

Table 3: the largest global investors

Capital Source	Capital type	Domicile	Total value of fund (€m)	Fund Invests in property
Japanese Government Pension Investment Fund	Pension Fund	Japan	1,032,000	No
Abu Dhabi Investment Authority	Government Fund	United Arab Emirates	665,407	Yes (global)
TIAA-CREF	Pension Fund	US	306,301	Yes (global)
Norwegian Government Pension Fund	Pension Fund	Norway	239,431	Considering global
Algemeen Burgerlijk Stichting Pensioenfonds	Pension Fund	Netherlands	218,300	Yes (global)
California Public Employees Retirement System	Pension Fund	US	195,307	Yes (global)
Kuwait Investment Authority	Government Fund	Kuwait	172,598	Yes
Korean National Pension Scheme	Pension Fund	Korea	168,224	Yes (global)
Federal Retirement Thrift Investment Board	Pension Fund	US	142,825	No
China Investment Corporation	Government Fund	China	138,554	Yes

Source: Property Funds Research, January 2008

2.5 Global fund managers

Table 4 shows the top 25 global managers of unlisted property funds and the value of the assets held in those funds in Europe, North America (NA), Latin America (LA), Australasia and Asia. The top two are European in origin; the next two are originally US-based; and in total there are 13 Europeans, 10 North Americans and 2 Australians. Significantly, there are no large Asian-based managers.

Most of these are institutional fund managers owned by bank or insurance businesses, but many of the risk takers are property companies. In Asia, this is likely to be where the next phase of growth will come from.

Several global exemplars and models exist of property companies moving into fund management. Popular motivations may be to add high quality earnings to volatile development profits to create value through diversifying a mix of risk styles; to maintain employment for a large asset management team when the core business is challenged by low share prices; to add some new expertise motivated by a more direct interest in new business; or to disinvest from large assets while maintaining an interest in ownership, fee flow and a form of control. Hines is an excellent case study of a pioneer in this field (see Appendix).

Table 4: the PFR global manager survey, 2008 – top 25 managers, unlisted funds

Fund Manager	Total value of global real estate equity AUM (€ m): Total	Europe	NA	LA	Australia	Asia
[illegible]	[illegible]	67,702	36,201		[illegible]	[illegible]
RREEF	61,615	22,750	29,962	5	7,796	[illegible]
Morgan Stanley Real Estate	42,211	13,150	25,585		23	[illegible]
Prudential Financial Inc.	42,204	2,945	35,903	553	27	2,221
AXA Real Estate Investment Managers (AXA REIM)	41,450	41,300				150
[illegible]	[illegible]	[illegible]				647
[illegible]	33,650					
LaSalle Investment Management	32,367	10,251	13,522	311		[illegible]
UBS Global Asset Management	[illegible]	14,932	11,074			[illegible]
AEW Capital Management / AEW Europe	29,675	15,000	14,200			475
[illegible]	26,473	[illegible]	[illegible]	1,221		[illegible]
Tishman Speyer	25,971	4,590	20,922	305		[illegible]
[illegible]	25,460	22,844	1,950		676	[illegible]
Principal Real Estate Investors	24,929		[illegible]		48	
[illegible]	23,522	21,482	474	33	550	[illegible]
[illegible]	[illegible]	12,767	[illegible]			[illegible]
[illegible]	21,490	7,705	[illegible]			
[illegible]	[illegible]	3,953	[illegible]		[illegible]	
[illegible]	[illegible]	16,770	[illegible]	[illegible]	84	[illegible]
[illegible]	[illegible]	11,797			[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]			
Legal & General Property	[illegible]	[illegible]				
Aberdeen Property Investors	14,530	14,200				[illegible]
[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]				[illegible]	
TOTAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Source: Property Funds Research, March 2008 (using December 2007 financial data)

3. The emerging and developing markets – are unlisted funds investing?

3.1 Introduction

In this research, we define the emerging markets as the regions outside Europe, Australasia and North America, and focus on the largest 55 countries in these regions by population. The regions of interest are therefore Asia, Africa, the Middle East and Latin America. The relevant countries are shown in Table 5.

3.2 The data and research method

41 of the world's largest 55 countries by population are located outside Europe, Australasia and North America. Asia includes China and India, which are the world's largest countries by population size. Africa splits into two broad zones. Activity in North Africa, connected with the Middle East through religion and proximity, is often driven by the emerging financial centres of Dubai and Abu Dhabi. Sub-Saharan Africa, on the other hand, is led by the mature financial markets of South Africa. Latin America includes the powerful BRIC (Brazil, Russia, India, China) economy of Brazil as its core market.

It is to be expected that there is some link between the size of a country and its attraction to an investor or investment manager. Interest in China and India, the world's largest countries, is huge. However, in terms of GDP per capita they remain well behind the developed countries (the USA, the world's third largest country by population, has a GDP per capita of $45,793, 19 times that of China and 47 times that of India: see Table 5) so that in terms of total economic output they are not yet the world's largest economies. (There is nonetheless little doubt that within 25 years they will be).

It is a combination of population and GDP per capita that will define the gross demand for property and the ability to pay rent to occupy it; and there should therefore be a strong link between the interest in a country defined by the number of funds targeting investment in that market, the population of the country and the GDP per capita.

We set out in this paper to explore that link further by relating the dependent variable – the number of funds targetting a country – and the independent variables of population size and GDP per capita.

Table 5 shows the value for each country of these two independent variables. Tables 6, 7, 8, and 9 show the dependent variable, countries currently targeted by unlisted funds still in their investment phase.

These tables examine each region separately: Asia (including the developed Asian markets), Sub-Saharan Africa, Latin America and Middle East and North Africa (MENA). Funds targetting simply means the number of unlisted property funds whose data is held by PFR which have stated an aim to invest in these countries.

Table 5: emerging market and Asian countries by population and GDP percapita ($)

Country	Population	Rank by population	GDP per capita	Rank by GDP per capita
China	1,315,844,000	1	2,458	105
India	1,103,371,000	2	965	134
Indonesia	222,781,000	4	1,748	114
Brazil	186,405,000	5	6,679	61
Pakistan	157,935,000	6	845	149
Bangladesh	141,822,000	8	469	159
Nigeria	131,530,000	9	988	134
Japan	128,085,000	10	34,104	23
Mexico	107,029,000	11	8,184	56
Vietnam	84,238,000	12	779	140
Philippines	82,584,000	13	1,592	117
Ethiopia	77,431,000	15	221	180
Egypt	74,032,000	16	1,592	116
Iran	69,515,000	18	4,252	80
Thailand	64,233,000	19	3,470	90
Congo	57,549,000	23	1,002	115
Myanmar	50,519,000	24	289	172
South Korea	47,817,000	25	20,020	34
South Africa	47,432,000	26	6,238	65
Colombia	46,600,000	29	3,860	83
Argentina	38,747,000	30	6,094	69
Tanzania	38,329,000	32	356	167
Sudan	36,233,000	33	1,262	126
Kenya	34,256,000	34	799	139
Algeria	32,854,000	35	3,777	86
Morocco	31,478,000	37	2,155	107
Afghanistan	29,863,000	38	311	170
Uganda	28,816,000	39	368	156
Iraq	28,807,000	40	2,016	109
Peru	27,968,000	41	3,540	89
Nepal	27,133,000	42	393	158
Venezuela	26,749,000	43	6,719	55
Uzbekistan	26,593,000	44	726	143
Malaysia	25,347,000	45	6,648	62
Saudi Arabia	24,573,000	46	13,568	42
Taiwan	22,894,384	47	16,491	37
Ghana	22,112,000	49	649	148
Yemen	20,975,000	51	1,033	131
Sri Lanka	20,743,000	52	1,232	127
Mozambique	19,792,000	54	380	163
Syria	19,042,000	55	1,846	119

Source: Wikipedia, Property Funds Research, March 2008

Table 6: countries targeted by live unlisted funds, 2008 – Asia

Country	Funds targeting
Japan	56
India	54
China	48
Korea	25
Malaysia	17
Vietnam	3
Philippines	3
Singapore	3
Taiwan	2
Indonesia	1
Thailand	1

Source: Property Funds Research, March 2008

Table 7: countries targeted by live unlisted funds, 2008 – Sub-Saharan Africa

Country	Funds targeting
South Africa	8
Namibia	1
Cape Verde	1
Sudan	1

Source: Property Funds Research, March 2008

Table 8: countries targeted by live unlisted funds, 2008 – MENA

Country	Funds targeting
UAE	7
Saudi Arabia	3
Kuwait	3
Bahrain	3
Qatar	2
Egypt	1
Oman	1

Source: Property Funds Research, March 2008

Table 9: countries targeted by live unlisted funds, 2008 - Latin America

Country	Funds targeting
Brazil	30
Mexico	15
Chile	15
Argentina	10
Costa Rica	10
Bolivia	1

Source: Property Funds Research, March 2008

Table 10 shows the most and least popular countries defined by the number of funds targetting investment. The investors in these funds are broadly distributed but are concentrated in the non-developing and non-Asian markets. The most common domiciles include the USA, Australia, Canada, the UK, the Netherlands, South Africa, Germany, Switzerland, Ireland, Finland, Denmark but also China, Qatar, Singapore and the United Arab Emirates.

Table 10: emerging market and Asian countries by funds targeting investment

Country	Funds targeting
Japan	56
India	54
China	48
Brazil	30
South Korea	25
Mexico	18
Malaysia	17
Argentina	10
South Africa	8
Vietnam	3
Philippines	3
Saudi Arabia	3
Taiwan	2
Indonesia	1
Egypt	1
Thailand	1
Sudan	1
Pakistan	0
Bangladesh	0
Nigeria	0
Ethiopia	0
Iran	0
Congo	0
Myanmar	0
Colombia	0
Tanzania	0
Kenya	0
Algeria	0
Morocco	0
Afghanistan	0
Uganda	0
Iraq	0
Peru	0
Nepal	0
Venezuela	0
Uzbekistan	0
Ghana	0
Yemen	0
Sri Lanka	0
Mozambique	0
Syria	0

Source: Property Funds Research, March 2008

Tables 11-13 rank the markets by each of population, GDP per capital and funds targeting.

Table 11: emerging market and Asian countries by population and GDP percapita rank and funds targeting investment (ranked by population)

Country	Rank by population	Rank by GDP per capita	Funds targeting
China	1	105	48
India	2	134	54
Indonesia	4	114	1
Brazil	5	61	30
Pakistan	6	149	0
Bangladesh	8	159	0
Nigeria	9	136	0
Japan	10	23	56
Mexico	11	56	18
Vietnam	12	140	3
Philippines	13	117	3
Ethiopia	15	160	0
Egypt	16	116	1
Iran	14	60	0
Thailand	19	90	1
Congo	23	113	0
Myanmar	24	172	0
South Korea	25	34	25
South Africa	26	65	9
Colombia	29	83	0
Argentina	30	59	10
Tanzania	32	167	0
Sudan	33	126	1
Kenya	34	139	0
Algeria	35	86	0
Morocco	37	107	0
Afghanistan	38	170	0
Uganda	39	156	0
Iraq	40	109	0
Peru	41	89	0
Nepal	42	166	0
Venezuela	43	55	0
Uzbekistan	44	143	0
Malaysia	45	62	17
Saudi Arabia	46	42	3
Taiwan	47	37	2
Ghana	49	148	0
Yemen	51	131	0
Sri Lanka	52	127	0
Mozambique	54	163	0
Syria	55	119	0

Source: Wikipedia, Property Funds Research, March 2008

Table 12: emerging market and Asian countries by population and GDP percapita rank and funds targeting investment (ranked by GDP per capita)

Country	Rank by population	Rank by GDP per capita	Funds targetting
Japan	10	23	56
South Korea	26	34	25
Taiwan	47	37	2
Saudi Arabia	46	42	3
Venezuela	43	55	0
Mexico	11	56	18
Brazil	5	61	30
Malaysia	45	62	17
South Africa	26	65	9
Argentina	30	69	10
Iran	18	80	0
Colombia	29	83	0
Algeria	35	86	0
Peru	41	89	0
Thailand	19	90	1
China	1	105	48
Morocco	37	107	0
Iraq	40	109	0
Congo	23	113	0
Indonesia	4	114	1
Egypt	16	116	1
Philippines	13	117	3
Syria	58	119	0
Sudan	33	126	1
Sri Lanka	52	127	0
Yemen	51	131	0
India	2	134	54
Nigeria	9	136	0
Kenya	34	139	0
Vietnam	12	140	3
Uzbekistan	44	143	0
Ghana	49	146	0
Pakistan	6	149	0
Uganda	39	156	0
Bangladesh	8	159	0
Mozambique	54	163	0
Tanzania	32	167	0
Nepal	42	168	0
Afghanistan	38	170	0
Myanmar	24	172	0
Ethiopia	15	180	0

Source: Wikipedia, Property Funds Research, March 2008

Table 13: emerging market and Asian countries by population and GDP percapita rank and funds targeting investment (ranked by funds targeting)

Country	Rank by population	Rank by GDP per capita	Funds targetting
Japan	10	23	56
India	2	134	54
China	1	105	48
Brazil	5	61	30
South Korea	26	34	25
Mexico	11	56	18
Malaysia	45	62	17
Argentina	30	69	10
South Africa	26	65	9
Vietnam	12	140	3
Philippines	13	117	3
Saudi Arabia	46	42	3
Taiwan	47	37	2
Indonesia	4	114	1
Egypt	16	116	1
Thailand	19	90	1
Sudan	33	126	1
Pakistan	6	149	0
Bangladesh	8	159	0
Nigeria	9	136	0
Ethiopia	15	180	0
Iran	18	80	0
Congo	23	113	0
Myanmar	24	172	0
Colombia	29	83	0
Tanzania	32	167	0
Kenya	34	139	0
Algeria	35	86	0
Morocco	37	107	0
Afghanistan	38	170	0
Uganda	39	156	0
Iraq	40	109	0
Peru	41	89	0
Nepal	42	168	0
Venezuela	43	55	0
Uzbekistan	44	143	0
Ghana	49	146	0
Yemen	51	131	0
Sri Lanka	52	127	0
Mozambique	54	163	0
Syria	58	119	0

Source: Wikipedia, Property Funds Research, March 2008

3.3 Results

GDP per capita and population have been used as independent variables to explain the number of funds targetting an emerging country. Both appear to be correlated with our measure of investment.

Tables 14 and 15 show that GDP per capita is a reasonably good explanatory variable, with a correlation coefficient of 53%, an adjusted R-squared of 26% and a tratio of around 4, indicating significance at greater than the 95% level.

Table 14: regression results by GDP per capita (1)

Multiple R	0.532157
R Square	0.283191
Adjusted R Square	0.264811
Standard Error	12.69635
Observations	41

Table 15: regression results by GDP per capita (2)

	Coefficients	Standard Error	t Stat
Intercept	1.819992	2.364816	0.769443
X Variable 1	0.001204	0.000307	3.925279

Tables 16 and 17 show that population is a better explanatory variable, with a correlation coefficient of 71%, an adjusted R-squared of 49% and a t-ratio of over 6, again indicating significance at greater than the 95% level.

Table 16: regression results by population (1)

Multiple R	0.711222
R Square	0.505827
Adjusted R Square	0.493186
Standard Error	10.54174
Observations	41

Table 17: regression results by population (2)

	Coefficients	Standard Error	t Stat
Intercept	2.008327	1.912455	1.050078
X Variable 1	4.11E-08	6.5E-09	6.318336

It is of course possible to combine these variables in one equation by running a multiple regression equation. Details of the equation are shown in Table 18. The number of funds targetting a country is predicted to be equal to (-3.67) plus (0.0000000432)*population plus 0.001312*GDP per capita plus or minus a standard error of 6.06. This equation explains 84% of the variation in the number of funds targetting any country. The two independent variables are highly significant.

Table 18: multiple regression results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.670517	1.225576	-2.994903	0.0048
GDP	0.001312	0.000147	8.939075	0.0000
POPULATION	4.32E-08	3.75E-09	11.53275	0.0000
R-squared	0.840713	Mean dependent var		6.676049
Adjusted R-squared	0.832330	S.D. dependent var		14.80747
S.E. of regression	6.063278	Akaike info criterion		6.513734
Sum squared residuals	1097.007	Schwarz criterion		6.653511
Log likelihood	-130.5110	F-statistic		100.2817
Durbin-Watson stat	2.264342	Prob(F-statistic)		0.000000

The predicted number of funds targetting the country can be compared with the observed number. The results are shown in Table 19 (those with fewer observed than predicted) and Table 20 (those with more observed than predicted). These are termed the outlier countries.

Table 19: countries with fewer funds targetting than predicted

Country	Funds	Predicted	Error
Taiwan	2	19	17
Saudi Arabia	3	15	12
Venezuela	0	9	9
China	48	56	8
Indonesia	1	8	7
Iran	0	5	5
Pakistan	0	4	4
Colombia	0	3	3
Nigeria	0	3	3
Bangladesh	0	3	3
Algeria	0	3	3
Thailand	1	4	3
Peru	0	2	2
Congo	0	1	1
Egypt	1	2	1
Morocco	0	1	1

Table 20: countries with more funds targetting than predicted

Country	Funds	Predicted	Error
Brazil	30	13	17
Malaysia	17	6	11
Japan	56	47	9
India	54	45	9
Mexico	18	12	6
Argentina	10	6	4
South Africa	9	7	2
Vietnam	3	1	2
Philippines	3	2	1

South Korea has an observed 25 funds targetting and similarly a predicted 25 funds targetting.

3.4 Outliers

The outliers, meaning countries whose observed investment does not fit well with predicted investment using population and GDP per capita as drivers, are shown in Tables 19 and 20 .

The countries receiving significantly less investment than that predicted by the equation are Taiwan, Saudi Arabia, Venezuela, Indonesia, Iran, Pakistan, Columbia, Nigeria, Bangladesh, Algeria, Thailand and Peru.

We can also observe that the countries with high population and low investment include Indonesia, Pakistan, Bangladesh, Nigeria, Ethiopia, Egypt, Iran, Congo, Myanmar and Colombia. We have not completed a full survey of the limits placed on external or foreign investment in these economies, nor of the exchange controls which may inhibit cross-border investment into those countries. We may also hypothesise about political risk, currency risk and other related issues, but low GDP per capita appears to explain all cases, as all countries are ranked below 115 (from 183) except Iran.

There is no example of a country with both a high population and high GDP per capital lacking investment, with the possible exceptions of Peru and Iran. Countries with smaller populations, high GDP per capita and low investment include Taiwan, Saudi Arabia and Venezuela. On balance, the unlisted fund market appears to be reasonably efficient in this respect.

The countries receiving significantly more investment than that predicted by the equation are Brazil, Malaysia, Mexico, Argentina and Vietnam. Three of these are located close to the USA, the main supplier of capital in this survey.

Countries with a low population but with high investment include Argentina and South Africa. Countries with low GDP per capita but with high investment include Vietnam, India, Philippines and China. Expected GDP per capita growth almost certainly explains the focus of western investors on India and China. This foreign investment is likely to contribute to the very economic growth which the investment is banking upon.

4. Conclusions

An increased investor appetite for global investment has generated a structural market shift observable since the mid 1990s. International or cross-border property investment has boomed, and indirect property investment (investing through securities and funds) has become commonplace.

The boom in the number and value of listed property funds is largely a matter of public record, but for unlisted real estate vehicles, an increasingly standard route to attaining international real estate exposure, there is little available data. In addition, the unlisted sector holds particular interest as it has been the main engine delivering capital to developing and emerging property markets

This paper set out to describe the changing nature of global property investment, and in particular the role played by unlisted property funds in facilitating cross-border investing. It focussed on the development of unlisted funds in general, and in particular their role as intermediary structures carrying capital from developed to developing markets. We defined the developing or emerging markets as the regions outside Europe, Australasia and North America, and focussed on the largest 55 countries in these regions by population.

The investors in the funds we identified as targeting emerging markets are concentrated in the non-developing and non-Asian markets. The most common domiciles include the USA, Australia, Canada, the UK, the Netherlands, South Africa, Germany and Switzerland.

We found that both GDP per capita and population explain the number of unlisted funds targetting emerging markets. Population is a stronger driver.

There are several interesting outliers, meaning countries whose observed investment does not fit well with predicted investment. Countries with high population and low investment include Indonesia, Pakistan, Bangladesh, Nigeria, Ethiopia, Egypt, Iran, Congo, Myanmar and Colombia. This list includes 7 of the world's 20 most populous countries.

The dominance of an active REIT market would explain a shortage of unlisted fund investment in these markets, but there is no REIT market in any of these states. It is suggested, therefore, that these markets suffer from a clear lack of Western capital as well as a low GDP per capita – and these facts may be connected. It may be that political risk explains this shortage of investment, but it may also be that Western investors are missing out on the possibility of high returns. It can also be suggested - as a value judgement - that the avoidance by international property investors of large parts of the globe is not healthy in promoting economic development and a global mutuality of interest.

Countries with high GDP per capita and low investment include Taiwan, Saudi Arabia and Venezuela. Several explanatory hypotheses are possible, but these are reserved until further analysis has been completed.

Countries with a low population but with high investment include Argentina and South Africa. Countries with low GDP per capita but with high investment include Vietnam, India, Philippines and China.

Expected GDP per capita growth almost certainly explains the focus of western investors on India and China, which is likely to contribute to the very economic growth which the investment is banking upon.

High quality real estate is a fundamental necessity for a developed economy. Whether the under-invested markets can command their share of capital in future is unclear and depends on a variety of factors outside the scope of this paper. Nonetheless, the promotion of a mutuality of economic interest is in the best interests of everyone, and it is our view that unlisted property funds have the potential to play a significant part in this process. Continued research will be essential in the drive towards the transparency necessary to attract both entrepreneurial and risk-averse institutional investment.

Appendix: Hines - a case study

Founded by Gerald D. Hines in 1957, Hines is a real estate investment and operating company that develops, acquires and manages properties worldwide. With 3,350 employees worldwide, Hines USA is the original and largest business with 2,200 staff, and 1,150 employed by Hines

REFERENCES

Baum, A (2006): "Real estate investment through indirect vehicles: an initial view of risk and return characteristics", in Bone Winkel et al, Stand und Entwicklungs – tendenzen der Immobilienokonomire, Germany, Rudolf Muller

Baum, A and Struempell, P (2006): "Managing specific risk in property portfolios", Pacific Rim Real Estate Society Conference, Auckland, January

CBRE Investors (2008): "The Case for a Global Unconstrained Property Strategy"

INREV (2004-8): various (www.inrev.org)

Laposa, S and Lizieri, C (2005): "Real Estate Capital Flows and Transitional Economies", paper presented to the American Real Estate Society Conference, Santa Fe, NM

Laposa, Steven P. (2007): "The foreign direct investment property model: explaining foreign property demand and foreign property capital flows in transitional economies", PhD thesis, University of Reading, UK (R10036)

Pension Consulting Alliance (2001): "Real Estate Opportunity Funds, the Numbers Behind the Story", April

Pension Consulting Alliance (2003): "Real Estate Opportunity Funds, Deja Vu All Over Again", May

Property Funds Research (2006-8): various (www.propertyfundsresearch.com)

RREEF (2007): "Global Real Estate Insights"