IPF Investment Property Forum

Investment Property Forum Educational Trust

The Size and Structure of the UK Property Market

Research Findings

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The IPF Educational Trust and IPF Joint Research Programme

This research was commissioned and funded under the auspices of the IPF Educational Trust and IPF Joint Research Programme.

The three-year programme supports the IPF's wider goals of enhancing the knowledge, understanding and efficiency of property as an investment class. The initiative provides the UK property investment market with the ability to deliver substantial, objective, and high quality analysis on a structured basis. It will enable the whole industry to engage with the other financial markets, wider business community and government on a range of complementary issues.

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The Size and Structure of the UK Property Market research team

Tony Key and Vicki Law, Research Centre for Real Estate Finance, Cass business School using data from DTZ DebenhamTie Lung Research, IPD, PMA Property Data, ONS and TW Research

The Project Steering Group

The IPF, appointed a project steering group to guide and assist the Research team. They gratefully acknowledges the contribution from:

Stuart Morley (GVA Grimley) - Chairman, Derek Williams (Land Securities), Steffan Francis (PruPIM) Alan Patterson (UBS) and Charles Follows (IPF).

Preface

Introduction

The final report of the IPF *Liquidity in Commercial Property Markets* research project identified the need for better estimates of the size of the investment market in order to calculate more accurate turnover rates. There are many other, often more important, ways in which a robust estimate of market size is needed, for example:

- The allocation of capital to real estate in a fully diversified portfolio, under the Capital Asset Pricing Model, depends upon the value of the investible stock of assets relative to other assets such as equities and bonds.
- Within a real estate portfolio, the same argument applies, with the fully diversified 'market' portfolio weighted by the value of stock in each sub-market defined by type and location.
- In the current climate, the ability of the market to absorb prospective investor demand depends critically upon the balance between the stock already held by investors against commercial stock in other hands which is potentially investible.

Despite the high importance of the figure, the UK market lacks a well defined, transparent and generally accepted measure of market size. Previous work estimated by IPD was in many respects tentative, and has become more questionable with the major changes in the composition of the market over time. There are no doubt many alternative, less publicised, estimates produced for their own purposes by firms of surveyors, fund managers and consultants which are likely to vary considerably with different data sources and assumptions.

Objectives

The project will:

- Establish a well-defined, transparent and robust method for determining the overall value of the stock of commercial investment property in the UK.
- So far as possible from existing sources of data, produce breakdowns of that overall figure by the principal property types, market locations, and types of investor.
- Compare the size of the commercial investment market with the total stock of commercial property, and other salient comparisons such as the market value of residential stock, quoted equities, bonds and other asset classes.
- Establish a base for future monitoring and updating of the size of the market, including recommendations for extensions of the underlying data sources and refinement of the methodology.

The IPF congratulates the Research Team on an excellent project that establishes a baseline for the size and structure of the UK commercial property markets. The intention is that this report can be updated as new data becomes available.

The IPF invite comments on the findings and the recommendations for future research. Please address comments or suggestions to Charles Follows, Research Director, IPF 3 Cadogan Gate, London SWIX 0AS. cfollows@ipf.org.uk 020 7695 1649

Contents

Summary

The report addresses some basic questions about UK property investment to which there are currently no clear answers: the total value of commercial real estate stock, the size of the investment market and its composition by market segment and type of owner, and the characteristics and ownership of the owner-occupied stock.

More robust and clear figures on the size and structure of the market will:

- Add to general understanding of the increasingly diverse investor base of the UK market.
- Inform decisions on the appropriate weighting of property in a mixed-asset portfolio, and the mix of market segments within a property portfolio.
- Contribute new information to the current pressing question of how far the investment market may be expanded to meet strong investor demand.

The research has been conducted by compilation of data from a wide range of existing sources, from Government statistics, from property industry information held by IPD, DTZ, Property Data and TW Research, and general sources such as Companies House records.

There are many points on which information is not available, or is of doubtful reliability. The full report provides a full account of the sources used, the qualifications which need to be attached to the figures, and the assumptions which have been made in arriving at our estimates. We hope this provides the basis for further refinement and updating of the figures in the future.

How big is the UK stock of property?

Rating lists compiled by the Valuation Office Agency (VOA) are the only comprehensive source of data on the total stock. They suggest that:

- Commercial stock (broadly defined as all property outside residential and agricultural) is dominated by shops, offices and industrial buildings which account for 66% of total national rental value.
- Another 13% of total value is in pubs, hotels, restaurants, leisure and roadside property.

Estimates of the total capital value of the commercial stock are calculated by the Office for National Statistics (ONS), applying outdated capitalisation rates to VOA rateable value statistics. The reliability of these estimates is debatable. They put the end-2003 total value of UK commercial stock at £611 billion. For this report, the ONS method has been re-worked to provide a more transparent method of calculation, and a breakdown of the results more in line with the needs of the property industry.

- Within the same £611 billion total capital value of commercial stock, we estimate 33% is retail property, 26% office property, and 21% industrial.
- The remaining 20% covers a wide range including hotels, pubs, leisure, utilities and public service buildings.

How big is the investment market?

Figures on the property stock owned by investors have to be pieced together from a large number of sources, in many cases with a substantial element of guesswork. The results should be taken as the best indicators currently available. They are subject to a range of uncertainty and should not be taken as definitive.

Summary

- We estimate the total value of invested property at end-2003 was £265 billion, of which £254 billion is in the core retail, office and industrial sectors.
- The investment market accounts for a little more than half the total value of the retail, office and industrial stock – just over 60% in the retail and office sectors, but a little less than 25% in the industrial sector.
- Because buildings outside the investment market are much lower in average value per square metre, investors own a much smaller fraction of the total floorspace in each sector – less than one-third of the retail and office sectors, and only 12% in the industrial sector.

Who are the major investors?

- Direct investment by UK insurance and pension funds remains the largest single element of the investment market, accounting for £73 billion (29%) of the £254 billion core commercial total. They are followed by overseas investors, listed property companies, and unlisted property companies each with £36-37 billion portfolios (14% each of the total market).
- The structure of the market has been highly fluid. Over the last five years, overseas investors, pooled funds and limited partnerships and private investors have all seen very high growth in their portfolios. Direct institutional portfolios have grown in size but fallen as a fraction of the total market. Listed property companies have seen an absolute decline in their holdings.

What is the composition of investor portfolios?

- Retail property investment is fairly evenly spread across the country, accounting for 50% to 70% of total value of the stock in each region. Office and industrial investment is, however, very strongly biased toward London and the South East, where the share of total stock held by investors is double the average for other regions.
- The investment market is also heavily concentrated in high value properties in a small number of key markets: taken together 8,000 buildings in shopping centres, retail warehouses, London offices and Central London shops account for 40% of the total number of properties in the investment market, but 70% of its total value.
- There are substantial differences between the weights by capital value of the total market and the weights shown by IPD. London offices make up 27% of the total market against 20% in the IPD, which is relatively highly weighted in all other market segments except shopping centres and other property.
- There are even more striking differences in portfolio mix across types of investor, mostly arising from varying exposure to London offices. London offices account for over 60% of the portfolios of overseas investors, compared with 30% for property companies, and only 17% in the direct portfolios of UK institutions.

How does the value of investment property compare against other assets?

- Against other assets, the value of total commercial property investment at £265 billion compares with a total market capitalisation of UK equities market at £1.4 billion, and of fixed income investments of £540 billion.

Summary

- On that basis a market weighted portfolio would include 12% property on a gross asset value basis, but just under 10% adjusted for debt financing of the investment stock.

What is the owner occupied stock like and who owns it?

- Around £235 billion of retail, office and industrial property remains outside the investment market in the hands of owner-occupiers, close to £100 billion of that in industrial property, £80 billion in retail, and £60 billion in offices.
- On average, the owner-occupied stock is far lower in value than that held in the investment market: for retails and offices rental values per square metre are around one-third of those for invested property, and capital values per square metre a little lower again. For industrials, rental values per square metre are half those in the invested market, and capital values 40% of those in the invested market.
- Average values suggest a very large element of the owner-occupied stock is below the quality currently considered investible. But there are clearly large blocks of property still owned by large corporates or the public sector which in terms of building quality and tenant quality would meet the criteria set by investors.
- For the corporate sector, extensive searches and filtering from a Companies House database show a total of 755 companies with more than £20 million of property in their balance sheets and also in industries most likely to occupy investible commercial properties (i.e. light manufacturing, wholesale and retail distribution, hotels bars and restaurants, office-based services).
- Collectively, these large corporate occupiers hold around £160 billion of property assets, with a high concentration of that ownership in very large companies: 68 retail companies, for example, hold £38 billion of property assets.
- Property held by public sector organisations has been identified as far as possible from Government statistics. Public sector property assets are very large - £217 billion in Central Government bodies and £130 billion in Local Authorities – but are overwhelmingly made up of infrastructure and public service buildings such as schools and hospitals.
- A best estimate of total retail, office and industrial property held by the public sector is £20 - £25 billion, around £7 billion in Central Government and £15 billion in Local Authorities, with most of that stock in the office sector.

Overview

- In recent years, the investment market has accommodated a rapid growth in demand from overseas and private investors, and a large shift toward new unlisted investment vehicles such as pooled funds and Limited Partnerships.
- Through the early 2000s, those flows of new money were facilitated by weak demand for direct investment from UK institutions, a run down of the holdings of listed companies, and large net sales of property by owner occupiers.
- Revived demand from UK institutional investors and the successful launch of a UK REIT may intensify the pressure of demand against the available stock in future.
- The most immediate potential for expansion of the investment market lies outside the sectors which have been most popular among investors – retail warehouses, shopping centres, London and South

East offices – which are already the most heavily invested parts of the stock.

- In the core retail, office and industrial markets, there may be greater expansion potential in provincial office and industrial markets. Outside those core markets, a full expansion into property types such as hotels, pubs, leisure and garages has the potential to add around 10% to the total value of the market.
- The remaining owner-occupied stock is low in average quality, but in the corporate sector £160 billion in property assets are held by less than 800 major companies each holding more than £20 million.
- A further £20 - £25 billion of retail, office and industrial property is owned by Central and Local government bodies, most of that in the office sector.

Recommendations

We suggest that information on the UK property stock and investment market could be improved and maintained by:

- Discussions between the industry and Government on ways in which the accuracy of official statistics on property investment could be improved and the results produced in forms more relevant to the property market.
- Encouraging the main industry suppliers of property market information to produce regular reports on the size and composition of the market.

1. Introduction

Modern investment markets are, it is said, driven by information. The UK commercial property investment industry would certainly want to be rated as modern and rich in information. It is surprising, therefore, to find that one of the most basic facts about property investment - the apparently simple question of how big the market is – is still clouded by uncertainty.

This report was commissioned by the Investment Property Forum (IPF) to fill that gap. In addition to the core task of providing the best possible estimate for the overall size of the existing investment market, the brief for the study also called for findings on:

- The place of the investment market in the total commercial property stock, and the division of that stock between investors and owner-occupiers.
- A comparison of the size of the property investment market with that of other UK investment classes.
- A breakdown of the investment market between types of property, and different types of investor.
- The characteristics of the owner-occupied stock – its quality, and concentration of ownership – which bear upon the potential expansion of the investment market through further transfers from owner-occupation.

The work comes against a backdrop of radical changes in the property market: extremely strong investor demand; the entry of many new overseas and private investors into the market; a proliferation of new investment vehicles, and the prospect of further innovation through a UK REIT.

It is a market which is at its most popular for many years, seems to have the potential for rapid expansion, but is at the same time becoming increasingly diverse and difficult to measure. The following sections of this Introduction discuss the relevance of this research against this industry background, and the sources and methods used in the work.

The remainder of the report is set out in a top-down structure:

- Section 2 sets out a broad framework, showing overall figures on the total size and value of the UK commercial property stock, and the division of that stock between investors and occupiers.
- Section 3 deals with the size and composition of the current investment market, with a detailed split of the stock by sub-market and type of investor.
- Section 4 looks at the characteristics and ownership of the stock currently outside the investment market.

Throughout, the report is concerned only with non-residential property. Although the residential stock offers, in simple size and by comparison with other countries, the largest potential expansion of property investment, it is a subject too large and complex to include within the scope of a study primarily concerned with commercial property.

1.1 Why do we need to know?

Since commercial property investment in the UK has survived – indeed recently it has flourished – without a robust and generally accepted figure for the size of the market, it is reasonable to ask why it is worth going to the trouble of creating one. That effort has, in our view, one strong theoretical justification, and several practical applications.

1. Introduction

Modern financial theory rests on the spreading of risk. A fully diversified portfolio with minimum risk – the market portfolio – is spread across all available assets in proportion to their total market values. A rational investor who does not attempt to beat the market by exploiting mis-pricing would always hold the market portfolio. Investors believing in their ability to forecast returns not priced into the market might from time to time depart tactically from the market portfolio weightings, but would still rationally take the market portfolio as their ultimate benchmark.

This fundamental precept of financial theory appears to be more honoured in the breach than the observance. Even the largest and quantitatively driven investors do not, in fact, hold the market portfolio. One of the largest exceptions, well documented in equities markets, is 'home bias' – the tendency to hold a higher weighting in domestic assets and a lower weighting in overseas assets that the market portfolio would indicate (French and Poterba, 1991).

A simple comparison of Government figures for the total value of the UK commercial property stock at £611 billion against the total value of UK equities, government and corporate bonds at £1,900 million indicates a market portfolio property weight at 24%. But only part of that total commercial stock is actually available in the investment market, with the rest being held by owner-occupiers and, arguably, partly capitalised in the equity and corporate bond markets through the balance sheets of those corporate occupiers.

Knowing the market value of investment property would therefore, in theory, determine its weighting in the market portfolio, and therefore the correct 'benchmark' weight for property in multi-asset portfolios (see, for a USA example, Chun, Sa-Adu and Shilling 2002). This report will therefore use its estimate of the value of the existing and potential property investment market against the other main UK asset classes. By doing so, it adds a further indicator to the running debate surrounding the appropriate weighting of property for multi-asset investors.

Precisely the same argument applies within a portfolio of property investments: a fully diversified portfolio would have the same weights by sector, property type, region as the split by value of the respective total markets. For UK investors, the composition of the Investment Property Databank (IPD) universe is generally taken as the market portfolio for property investors. The report therefore checks how far the IPD universe in fact differs in composition from the total UK market. The extent that it does differ from the total market, might be taken as an indicator that the IPD is a less than wholly accurate benchmark, and measure the extent to which investors not covered by IPD take a different view of the market from those who are.

The notion of market portfolios contributes to the long-term case for property as an asset class, and the composition of property portfolios. A second major application of the results of this report is to the more current and pressing debate over what property weightings investors may be able to achieve. Strong returns on property over the last decade, a slump in stock markets, low yields on bonds, low interest rates relative to property income returns, banks keen to lend on property – there are multiple reasons why property has attracted strong demand from a wide range of UK and overseas, institutional and private investors in the last few years.

If, as widely reported, UK institutional target allocations to property are being raised to 10%, the potential demand for investment property will run at unprecedented levels. If that demand is to be met without a dangerous compression of yields, the investment market has to expand at a rate far higher than the underlying growth rate of the total stock. It can do so only by absorbing existing stock from other owners, either increasing the investment market's penetration of the retail, office and industrial markets where it is already well established, or by expanding the range of property types mainstream investors hold in their portfolios – into hotels, pubs or, through public-private partnerships, into public service buildings like hospitals, schools, or perhaps even infrastructure like roads and bridges.

The research has therefore made a special effort to quantify the value of assets currently outside the investment market, but which might be brought into the market in coming years.

One final added question the report aims to address it not only how much investment property there is, but who are the investors who own it. Only a decade ago, the UK market could fairly safely be viewed as an interplay between two major types of investor: domestic institutions, investing directly or indirectly through a small number of Property Unit Trusts, and property companies acting as long-term investors or more tactical developer-traders.

That simple picture has been broken up by the entry into the market of new waves of overseas and private investors, who have in recent years been the dominant net buyers of UK property. This change in the investor base influences the behaviour of the market. Demand from highly geared private investors, for example, was thought to be responsible for much of the fall in yields in the period of very low interest rates through 2002 and 2003. Wherever possible, therefore, the report adds a breakdown of current investment by type of owner to the analysis.

1.2 Definitions

At the top level, this follows Government sources such as the Office for National Statistics (ONS) and Valuation Office Agency (VOA) in taking a very broad definition of "commercial industrial and other property", which we shorten to "commercial property" from here on, covering all forms of building except residential and agricultural. Total commercial property therefore includes everything which is assessed for non-domestic rates, from shops, offices and industrial through hotels, pubs, restaurants and petrol stations to sports grounds, schools, and hospitals (Table 1).

1. Introduction

Table 1: VOA Coverage of Commercial, Industrial and Other Property

Commercial	**Industrial**
Advertising rights	Factories, mills & workshops
Holiday sites	Quarries, mines etc.
Garages & petrol stations	Other industrial
Hotels etc.	
Pubs & wine bars	**Leisure**
Offices	Community centres & halls
Car parks	Sports centres & stadia
Restaurants & cafes	Sports grounds, golf courses etc
Shops	Cinemas, theatres etc.
Warehouses & stores	Other leisure
Other commercial	
	Miscellaneous
Educational, training & cultural	Cemeteries and crematoria
Local authority schools & colleges	Local government offices
Libraries and museums	Police stations & courts
Private schools & colleges	Hostels & homes
Universities	Other properties
Other educational, training and cultural	
Utilities	
Docks	
Electricity companies	
British Gas – Transco	
Railways	
Telecommunications	
Water companies	
Bus stations, moorings etc.	
Other utilities	

Source: VOA

Within the total commercial stock, shops, offices factories and warehouses categories (or retail, office, industrial) are the staple of the existing investment market, and dominate those sections of the analysis concerned with the make up of that market. These categories we term "core commercial".

1. Introduction

We recognise, however, that investor interest is spreading rapidly to embrace leisure, nursing and retirement homes, student accommodation, leisure, and other sectors such as hotels, cinemas and pubs. Indeed, pressure of demand for property investment may well lead to further types of property being drawn into mainstream investment portfolios – hospitals and other public service buildings, "roadside" petrol stations and car showrooms, pubs, infrastructure.

Total stock of commercial property: straightforwardly means the UK total stock of commercial space, whether owned by investors or owner occupiers, in the public or private sectors.

Invested stock / investment market: a category again straightforward in principle, for which a one-line definition would mean: "all commercial properties held as investments" i.e. basically those held by an investor rather than an owner-occupier.

There are, however, some properties held as investments which would not fall into what the property industry would generally regard as the "investment market". There is clearly a stratification of investors with large institutions, listed property companies, and third-party managers of pooled investment vehicles at the top, a middle tier of unlisted property companies, high net worth individuals, and smaller money managers, and a bottom tier of very many small corporate or private individual investors. At the lower end of the range, many small landlords hold stock which in terms of lot size, building quality, and quality of covenant will fall below the conventional thresholds applied by institutions, listed property companies and other large investors. The investment market may therefore be identified as that part of the total invested stock in the hands of those large, professionally managed investors which can be identified from industry sources.

Investible stock: The simplest measure of potentially investible stock would be all stock not currently in the hands of investors. Not all that stock is, however, would be rated as "investment grade" – a fuzzy concept embracing transferability of use between tenants, lot size, and building quality.

There is no direct means of partitioning the currently owner-occupied stock by lot size and building quality to identify that fraction which would meet the requirements for investment grade. The primary distinction applied in the study has been by the nature of current occupier – picking out those parts of the owner-occupied stock occupied by the types of industry (eg retailing, provision of financial & professional services) most likely to be associated with standard retail, office and industrial premises, and also those parts owned by government or large corporate occupiers most likely to be attractive to mainstream investors.

1.3 Sources and Methods

There is no generally accepted measure of the current or potential size of the investment market in commercial property because the question is hard to answer. In approach, the study adopts a mixture of top-down and bottom up methods.

From the top-down, the only sources which cover the whole of the property stock – the VOA ratings lists, and ONS estimates of capital value which are derived from them – do not identify ownerships. Those government sources provide starting-point figures on the area, rental value and capital value of the commercial stock.

A picture of the ownership of that stock, and in particular the division between investors and other owners, can be pieced together only from a wide range of industry sources, summarised in Table 2. For some parts of the stock – notably the investment stock covered by Investment Property Databank – the information is robust and detailed. For other parts – in particular the relatively recent but most rapidly growing participants in the market such as overseas and private investors – we have to resort to much more indirect and less accurate methods. Drawing on a wide range of sources also inevitably introduces problems with inconsistencies in definitions and classifications of the data.

At many points, therefore, the results presented depend upon assumptions or judgements rather than definitive evidence, and are subject to qualifications. We have aimed to document in full the sources used, the assumptions made and qualifications on reliability throughout the report, so that it can serve as a basis for refinement and updating in the future.

Table 2: **Primary Data Sources**

Source	Measures	Categories
	The Total UK Stock	
ONS National Accounts (Blue Book)	Market Capital Value of Commercial, Industrial & Other Buildings	5 Broad Ownership Types – Central & Local Government, Financial & Non Financial Corporations, Households
ODPM / VOA	No of Hereditaments, Rateable Value, Floorspace	Retail, Office, Factory, Warehouse by Region & Local Authority District
	The Investment Market by Owner	
DTI Business Monitor MQ5	Total Market Value, Acquisitions, Disposals	Insurance Funds, Pension Funds, PUTs, , Investment Trusts
FAME (Companies House) Database	Balance Sheet Values of Land and Buildings	Listed Property Companies, Unlisted Property Companies
IPD	Number & Value of Properties	Full cover of some categories (Pooled Funds), good but partial coverage of UK institutional and listed owners.
IPD and OPC Property Vehicles Databank	Number and Value of Properties, potentially full analysis	Limited Partnerships & other unlisted vehicles
DTZ & Property Data deals registers	Number and Value of Properties, potentially full analysis	Private and Overseas Investors
Ad hoc & individual searches	Value of Investments	Charities, Landed Estates & other traditional owners
	The Total Stock by Segment	
TW Research Associates	Number and Floor Area of Properties	Shopping Centres, Retail Parks, Leisure Parks by Owner
Property Market Analysis	Total floor Area of Stock	Office Markets Central London, M25 & Major Provincials
	The Owner Occupied Stock by Owner	
Central Government Asset Registers	Number and Value of Properties	By department, rough splits by type of property.
CIPFA / Local Authority Asset Registers	Value of Properties	By department, rough splits by type of property.
FAME (Companies House) Database	Balance Sheet Value of Assets	Listed & unlisted corporates outside real estate sector by industry and company size

1.4 Section Summary

- The report addresses some basic questions about UK property investment to which there are currently no clear answers: the total value of commercial real estate stock, the size of the investment market and its composition by market segment and type of owner, and the characteristics and ownership of the owner-occupied stock.
- More robust and clear figures on the size and structure of the market will inform decisions on the appropriate weighting of property in a mixed-asset portfolio, the mix of market segments within a property portfolio, and add to understanding of an increasingly diverse investor base.
- The analysis of the total stock and the owner occupied stock, moreover, contributes to the current pressing question of how far the investment market may be expanded to meet strong investor demand.
- In the absence of any one comprehensive source of information on the UK property stock, the research pieces together information from a wide range of existing sources. Government statistics provide a top-down basis for the measurement of total stock. Industry sources provide a bottom-up analysis of the investment market and owner-occupied stock.
- There are many points on which information is not available, or of doubtful reliability. The full report provides a full account of the sources used, the qualifications which need to be attached to the figures, and the assumptions which have been made in arriving at our estimates. We hope this provides the basis for further refinement and updating of the figures in the future.

2. The total stock of UK commercial property

Government statistics provide the only available measures of total size and value for the commercial property stock. Estimates for the total value of the stock are generally taken from the Office for National Statistics (ONS) United Kingdom National Accounts, or "Blue Book". This provides national balance sheet values for residential and commercial buildings alongside other tangible assets such as civil engineering works, plant and machinery. The ONS value of the property stock – along with other indicators of the total stock such as floor area – are originally based on the only comprehensive record of buildings in the country, the Rating Lists maintained for England and Wales by the Valuation Office Agency (VOA), and its equivalents in Scotland and Northern Ireland.

Starting from that basic source, this section explains the methods used in this report to produce estimates of the total value of the stock, and compares those methods and their results with the slightly different figures given in the Blue Book.

2.1 Valuation Office Agency Rateable Values

Comprehensive records of all non-residential rateable buildings are maintained by the VOA in England and Wales (and their equivalent Assessors in Scotland, Land & Development Agency in Northern Ireland) to assess liability for property taxation. There are 1.75 million rateable hereditaments in England and Wales. Around 80% of them are broadly classed as core commercial retail, office, factory or warehouse premises. The other 350,000 are spread across the wide range of property types already shown in Table 1.

In England and Wales (practices are slightly different in Scotland and Northern Ireland) rateable values are determined through rating lists which are fully updated every five years. Rateable values are essentially defined in the same way as the open market rental values which would be used in commercial valuation practice.

The rating list used on our analysis was determined in 2000, based on rateable values fixed at 1st April 1998. Annual reviews update the ratings lists for physical changes in the stock, changes of use, or changes in assessed values resulting from rating appeals. The most recent published analysis of the lists relates to stock at 1st April 2004, but still based on the rental values which would have applied in 1998. (Draft 2005 ratings lists showing 2003 rateable values were published in late 2004, but final figures and analytical tables from that list were not available at the time of writing).

The rating lists give an invaluable picture of the commercial property stock, offering measures of floor area and rents defined on the same conventions as those applied in the investment market, and also classified into broad use types - shops, pubs, restaurants, offices – in a way which is broadly the same as used in the property market research. Very full information is produced from the lists for England and Wales. The only difficulty with the data is that different processes and definitions used in Scotland and Northern Ireland make grossing up to UK totals a little difficult.

VOA figures for England and Wales, because they provide the most detailed picture and because they are the last figures used which are direct from original data without added assumptions or estimates, are worth pausing on to provide some indications of the mix of uses in commercial property.

Two-thirds of total rateable value is in the primary "core commercial" office, shop warehousing and industrial uses (Table 3). Some other uses which appear prominent in the townscape – such as hotels and pubs – individually account for surprisingly small fractions of the total rateable value of the stock of UK space.

2. The total stock of UK commercial property

Table 3: April 2004 Rating List by Detailed Property Type, England and Wales

	Rateable Value £m	% Total Rateable Value		Rateable Value £m	% Total Rateable Value
Offices	9,591	21.9	Car parks	371	0.8
Shops	8,656	19.7	Other leisure	364	0.8
Warehouses & stores	5,681	13.0	Universities	311	0.7
Factories, mills & workshops	4,871	11.1	Police stations & courts	264	0.6
Pubs & wine bars	1,320	3.0	Sports grounds, golf courses etc	247	0.6
Electricity companies	1,308	3.0	Local government offices	222	0.5
LA schools & colleges	1,089	2.5	Railways	208	0.5
Garages & petrol stations	906	2.1	Cinemas, theatres etc.	208	0.5
Hotels etc.	887	2.0	Private schools & colleges	207	0.5
Other commercial	869	2.0	Libraries and museums	169	0.4
Medical facilities	783	1.8	Holiday sites	146	0.3
Other properties	715	1.6	Other educational, training cultural	129	0.3
Other industrial	685	1.6	Sports centres & stadia	93	0.2
Restaurants & cafes	656	1.5	Advertising rights	63	0.1
Telecommunications	527	1.2	Docks	53	0.1
British Gas – Transco	463	1.1	Markets	51	0.1
Community centres & halls	451	1.0	Bus stations, moorings etc.	34	0.1
Water companies	438	1.0	Cemeteries and crematoria	20	0.0
Other utilities	380	0.9	Hostels & homes	18	0.0
Quarries, mines etc.	379	0.9	**Total All Properties**	**43,831**	**100**

Source: Inland Revenue Non-Domestic Rating in England & Wales, Table 17.1

Table 4 is a re-grouping into categories based upon the characteristics of property types from an investment market viewpoint. Core commercial contains the retail, office and industrial property types most commonly leased under standard terms, which have for over 30 years dominated the portfolios of mainstream investors in UK property. It accounts for two-thirds of total rateable value.

The second largest category has been termed near-commercial, comprising stock mostly occupied by private sector business on lease terms similar to those in the core commercial market, but relatively rarely held in mainstream investment portfolios. Private equity funds and private investors have been active investors in some of these property types in recent years, and may be leading the way to acceptability for more traditional investors. Near-commercial property types, however, only account for 13% of total national rateable value, equivalent to one-fifth of the value of the core commercial markets.

2. The total stock of UK commercial property

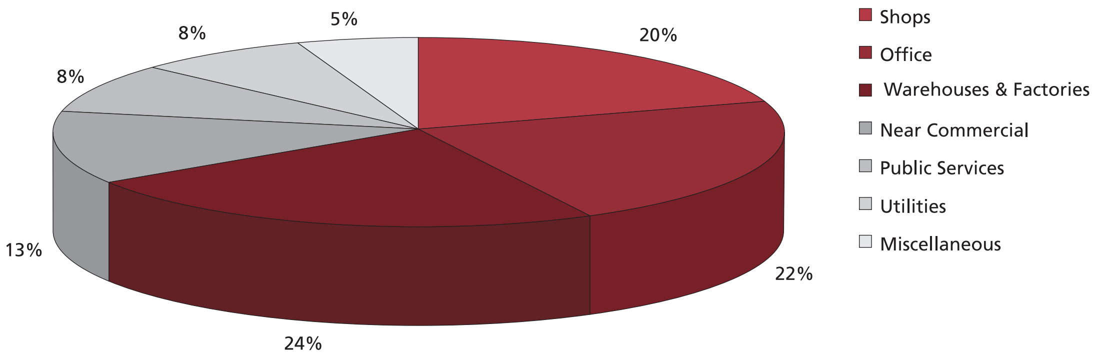
Table 4: Reclassification of 1998 Rateable Value by Property Type, England & Wales

	Rateable Value £m	% Total Rateable Value		Rateable Value £m	% Total Rateable Value
Core Commercial	**29,022**	**66.2**	**Utilities**	**3,410**	**7.8**
Offices	9,591	21.9	Electricity companies	1,308	3.0
Shops	8,656	19.7	Telecommunications	527	1.2
Warehouses & stores	5,681	13.0	British Gas - Transco	463	1.1
Factories, mills & workshops	4,871	11.1	Water companies	438	1.0
Local government offices	222	0.5	Other utilities	380	0.9
			Railways	208	0.5
Near Commercial	**5,599**	**12.8**	Docks	53	0.1
Pubs & wine bars	1,320	3.0	Bus stations, moorings.	34	0.1
Garages & petrol stations	906	2.1			
Hotels	887	2.0	**Miscellaneous**	**2,398**	**5.5**
Other commercial	869	2.0	Other properties	715	1.6
Restaurants & cafes	656	1.5	Other industrial	685	1.6
Car parks	371	0.8	Quarries, mines.	379	0.9
Other leisure	364	0.8	Sports grounds, golf courses	247	0.6
Cinemas, theatres.	208	0.5	Holiday sites	146	0.3
Hostels & homes	18	0.0	Sports centres & stadia	93	0.2
			Advertising rights	63	0.1
Public Services	**3,401**	**7.8**	Markets	51	0.1
LA schools & colleges	1,089	2.5	Cemeteries and crematoria	20	0.0
Community centres & halls	451	1.0			
Universities	311	0.7			
Police stations & courts	264	0.6			
Private schools & colleges	207	0.5			
Libraries and museums	169	0.4			
Other ed, training & culture	129	0.3			
Medical facilities	783	1.8			

Source: as Table 3

2. The total stock of UK commercial property

Figure 1: Rateable Values by Type of Property, % of total 1998



Source: as Table 3

The next two categories in the listing have been classed as public services (though including privately operated schools, colleges and hospitals), utilities and infrastructure. These are the areas which might be opened up to "property" investors through PFI or out-sourcing arrangements. They both account for 8% of total national rateable value, and would add only a little over 10% to the core commercial markets.

Although the ratings list stops short at rental value, it does offer a good first indicator in terms of orders of magnitude of the relative size of potential new segments for investment. On these figures, the potential addition to the property investment market through extension into sectors which have recently received a lot of industry attention such as hotels, cinemas and leisure facilities look surprisingly small. Taken together, they command only about 16% of the total represented by shops alone.

2.2 The ONS Total Capital Value of Commercial Stock

Quoted estimates of the total value of UK property usually rest on ONS figures published in The United Kingdom National Accounts, known as the Blue Book. In that publication, balance sheets of non-financial assets at market values are provided for broad categories of owner: public and private non-financial corporations; financial corporations; central government; local government; and households and non-profit institutions serving households (Tables 10.1-10.10 of the 2004 edition). Property assets are split into three categories: residential, agricultural, commercial industrial and other buildings. Annual figures are available back to 1987.

These estimates of capital value are based on VOA Rateable Value figures. The ONS has kindly provided us with a full explanation of the method. Capital values are calculated from rateable values split into four categories by type of property (retail, office, industrial and other) in each region of the country, by applying capitalisation rates (effectively a reversionary yield) specific to each property type and region.

The capitalisation rates used were produced by consultants to the ONS in 1992, based on rateable values applying in 1990. To use those old capitalisation rates, therefore, the ONS has to work current rateable values back to 1990 values, using ratios between total 1990 rateable value and current rateable

2. The total stock of UK commercial property

value, and then adjust for change in total stock. As a final step, to pick up annual changes in market values not reflected in the fixed base dates for rateable value and capitalisation rates, the total is grossed up by the annual change in IPD all-property capital value.

The process is reliant on extremely outdated capitalisation rates. They were, moreover, produced at a time of severe pricing turbulence as the market shifted from late-1980s boom to early-1990s slump. In many instances, the relativities in yield which applied at that point (say between London offices and those elsewhere in the country) are likely to have changed radically since 1990. To the extent that relative yields have shifted, the estimation process will mis-represent the current regional mix of current values.

Perhaps the most pertinent element of the ONS calculation is that which uprates the final aggregate estimate of stock value estimate by overall IPD capital growth – a step which would be expected to keep changes in the estimate of the total capital stock broadly in line with movements in the most broadly-based indicator of market values.

In essence, the ONS method is capturing annual changes in the physical volume of the stock through annual updating of the VOA Ratings List, but picks up changes in market rental values only on the ratings revaluations every five years. Outside those years, annual changes in capital values arising from both changes in market rental values and changes in yields are being incorporated only through the use of IPD capital growth rates as a grossing up factor.

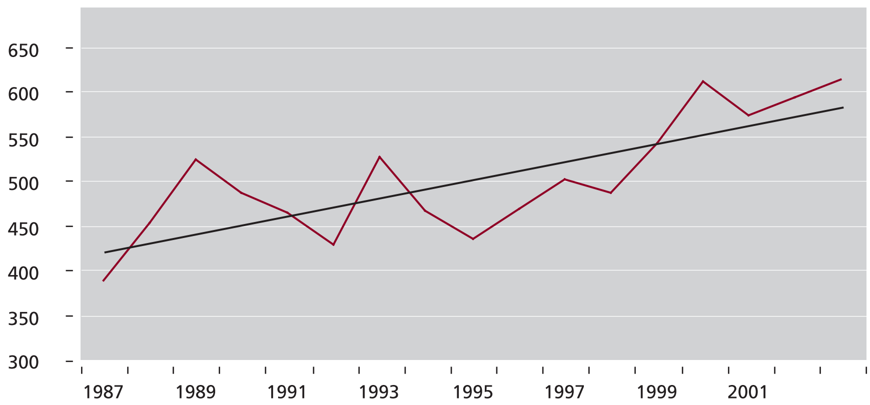
On top of a lack of transparency in the method of calculation, the ONS results are not presented in a form very useful for property market analysis. Although the underlying method creates estimates of capital value separately for retail, office, industrial and other commercial property, final results are published only for the all-property total, split by broad type of owner. The ONS figure therefore includes many of types of building – Universities, hospitals, sports grounds – which still lie well beyond the boundary of the investment market. And within the industrial category, it will include many occupier-specific manufacturing plants which would again lie outside any conventional definition of investible property.

As explained in the next section, for this report we have chosen to re-work the ONS method of calculation using a more transparent method, and a classification more in line with property market conventions. Before moving on from the ONS figures, however, the remainder of this section extracts what can be gleaned from them on trends in the size and ownership of the total stock.

At end-2003 (the latest available date), the ONS put the total value of UK commercial stock at £611 billion (note that this is a revised estimate from the £573 billion published in the last edition of the Blue Book). Over time (Figure 2), the total value of the stock is shown to have grown at between 2% per year (calculated from the fitted trend) and 2.9% per year (calculated from the 1987 and 2003 raw values). Year on year changes in the total value have been erratic, but very broadly in line with shifts in the market, showing high growth in the boom of the late 1980s and a decline in the slump of the early 1990s.

2. The total stock of UK commercial property

Figure 2: **ONS Total Value of UK Commercial Stock £billion**

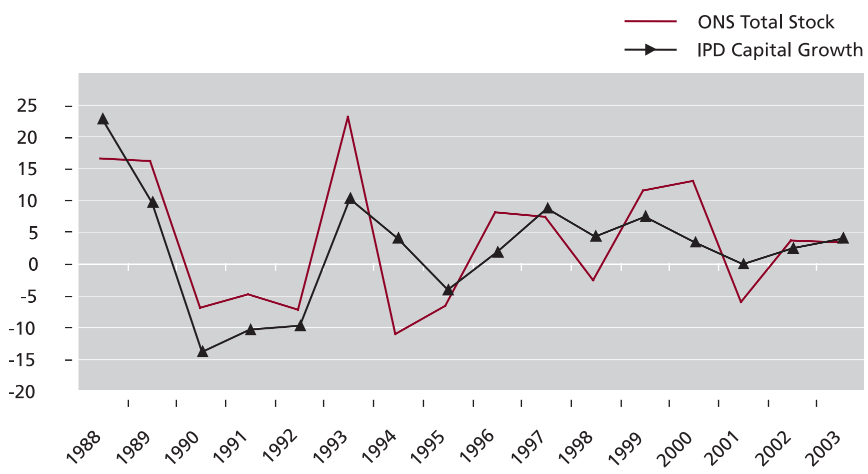


Source: ONS Blue Book, Table 10.2

The trend growth in total market value is composed of two elements: changes in physical volume of stock, and changes in average capital values. There is no exact measure of either of those factors as represented in the ONS data. The nearest available proxies are respectively ODPM statistics on Commercial and Industrial Floorspace (for England and Wales only), and IPD's overall average rate of capital growth.

Over the same period as the ONS suggests a growth rate of 2% to 3% per year in total value of the stock, the stock of floorspace has grown by 1.8% per year, and IPD shows a growth rate in market capital values of 3% per year. Taken together, they point to an underlying growth in core commercial property (retail, office, industrial) of the order of 4% per year.

Figure 3: **Changes in ONS Total Stock & IPD Capital Value Growth, % per year**



Source: ONS, IPD

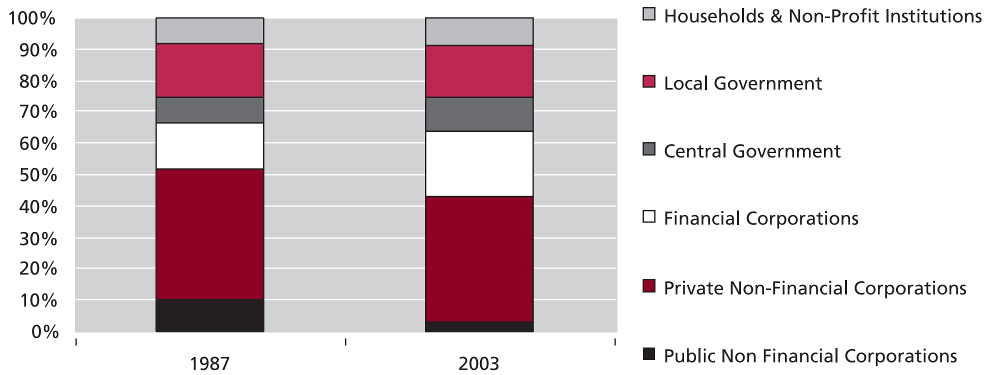
2. The total stock of UK commercial property

No year by year figures on floorspace growth are available for the period 1987 to 2003. As Figure 3 demonstrates, the relationship between ONS estimates of changes in total stock value and IPD capital growth rates has been highly variable. While both follow the broad swings of the property cycle, there are several years in which the differences in growth rate are clearly much larger than might be accounted for by changes in the physical size of the stock – the only difference between the two series outside years in which ratings revaluations are undertaken. In 1994, for example, the ONS shows a 1% fall in the value of the stock, while IPD capital values rose by 4%, which would suggest a 5% contraction in the total stock.

There are, in short, worrying discrepancies between ONS figures and other indicators both in terms of trend growth rate and year to year changes. Though the differences may conceivably be accounted for by slower growth in physical stock and values outside the core commercial markets (in property types, for example, associated with public services and utilities), it seems more likely than not that the ONS has understated the growth in value of the stock over time. The occasional major discrepancies in annual movement between the ONS and IPD figures also require further explanation. One possibility is that they reflect revisions to rateable value figures through corrections and appeals, rather than changes in the physical stock.

The Blue Book breakdown of the ONS total stock estimate by six types of owner is based on a National Accounts classification which is not very useful for other purposes, but may cast some light on shifts in the stock over time (Figure 4). For the public sector, estimates are currently compiled from the Governments National Asset Registers, and the annual reports of public corporations. Those for financial corporations are sourced from annual returns from the members of the Major British Banking Group, and those for households from a mixture of rating statistics, surveys, and estimates. The total for private non-financial corporations (ie all private sector companies outside the financial sector) is calculated as a residual, arrived at by deducting all other categories from the total. Estimates for this last category will, therefore, reflect any errors in the total or any of the sub-categories, and are likely to be particularly unreliable.

Figure 4: ONS % of Total Value of Stock by Type of Owner



Source: ONS

Since 1987, these estimates show a large fall in the share of UK property assets held by public corporations, to 3.4% from 10.3%, a result of the privatisation programmes of the late 1980s and early 1990s. The sector into which those companies have mostly been transferred, private non-financial corporations, has also seen a marginal fall in its share of total commercial property, from 42% to 40% (though as noted above this is the category for which the accuracy of figures is most doubtful).

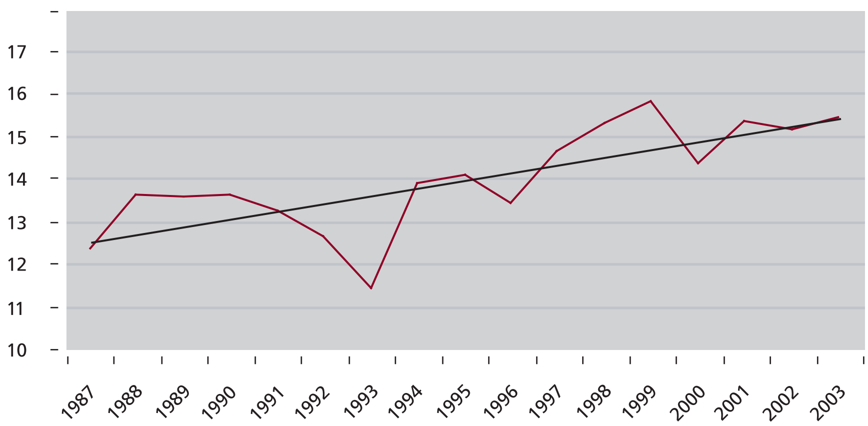
2. The total stock of UK commercial property

The major growth in ownership has been among financial corporations, rising from 15% of total value in 1987 to 21% in 2003, and much more surprisingly in Central Government with a rise from 8.5% to 11% of total assets.

The trend in these results – a fall of 9% in the share of total stock held by public and private non-financial corporations – may be taken as an indicator, though far from a precise measure, of the shift from owner-occupation to leasing which has clearly been a strong force over the last decade.

A further indicator which points in the same direction is the total value of property assets held by domestic institutional investors. As recorded by the ONS Business Monitor MQ5 Investment by insurance companies, pension funds and trusts, the total market value of UK property assets in the hands of these owners has risen from £48 billion in 1987 to £94 billion in 2003. Their share of the total stock shown by ONS has risen to 15% from 12%, contributing to the 9% fall in ownership by non-financial corporations (Figure 5). While the trend in institutional ownership seems well-established, as with the other comparisons given above year-by-year shifts in that share seem larger than could be accounted for by actual capital flows by institutional investors, and again point to possible errors in the ONS estimates of total stock.

Figure 5: Share of UK Institutions in Total Value of UK Commercial Property, %



Source: ONS, Business Monitor MQ5

Our review of the standard source for total stock value, the ONS Blue Book figures, indicates they are subject to substantial reservations, arising from methods of calculation which are based on very outdated inputs, and inconsistencies with other measures of change in the stock. A more accurate re-working of the estimates would required a full update of the capitalisation rates applied to a large sample of VOA properties, as done by consultants to the ONS in 1992. Such an exercise is beyond the scope of the current research, though it would appear in principle no reason which it would not be feasible. Indeed, with the improvements in market information which have been brought about in the last ten years, it might be undertaken more comprehensively and accurately than in 1992.

2. The total stock of UK commercial property

It is, unfortunately, the case that there is not enough evidence from other sources to conclude that the ONS estimate is definitely wrong, or by how much it might be wrong. Our own judgment, based primarily on the low trend growth shown in the results compared with other sources of information, is that the ONS figure is more likely to understate than overstate the current total value of the stock.

2.3 Recalculating the Value of the Total Stock

Given the reservations set out above, we have chosen to re-work the ONS figures on total value of the stock as an input to this report. Our primary aim has not been to produce an overall figure radically different from the ONS, which would demand a large scale valuation exercise based on VOA inputs. Rather, we have set out to produce estimates which are based on a clearer and more readily reproducible method, and also to classify the results in a form more useful to the property industry.

The starting point is the same VOA rateable value statistics used by the ONS. The ODPM's Commercial and Industrial Floorspace and Rateable Value Statistics 2003 (Table 17.3) gives aggregates from the April 2004 rating lists based on 1998 rateable values for retail, office and industrial and other commercial property types for each Government Office Region (termed regions from here on) in England and Wales.

From that starting point, our estimates of end-2003 capital value have been arrived at by:

- Adding in rateable value figures for Scotland (adapted from a slightly different classification from that used in England and Wales), and estimates for Northern Ireland based on its share of UK GDP.
- Applying a rental value uprating factor to the retail, office and industrial sectors in each region, using a rental value growth rate for that sector and region between April 1998 and December 2003 taken from IPD results published in its Property Investors Digest.
- For the other commercial category in each region, an unweighted average of the IPD regional rental value growth across sectors has been used to uprate the rateable 1998 values.

Finally, a capital value of the total stock for each sector and region can be created by applying a reversionary yield to the estimates of total rental value. This is, in essence, the method applied by the ONS to calculate their figures for the total capital value of the UK property stock, but applying our own current yield figures.

The obvious difficulty is choosing a yield to apply. All yield series produced on commercial property relate to "investment grade" buildings, and not to the total stock. Comparing rental values per sq metre for the investment grade stock covered by IPD with the average for the stock drawn from the VOA data points to very large differences in the quality between the invested stock and the total stock.

In most sector-region sub-markets, IPD rental values per sq metre are 1.7 to 1.8 times the average for the whole of the stock – suggesting an even larger gulf between average values for stock in the invested market and that outside it. London is the only area where IPD average rental values are closer to those for the total stock, at 1.4 times the stock average for offices, and 1.3 times industrials the stock average for industrials.

It would be expected that the stock outside the invested market represented by IPD would be valued off a higher yield as well as a lower rental value – to reflect lower building quality, particularly for highly specialised production facilities in the industrial sector with low values to other occupiers. As a rule of thumb, therefore, a

2. The total stock of UK commercial property

reversionary yield has been applied for each sector and region which is 1.1 times the IPD reversionary yield at end-2003 for retail and industrial, and 1.2 times the IPD reversionary yield for industrials.

The other commercial category has been used as balancing item, calculated as a residual between the ONS estimate of total value of £611 billion and our own re-calculated total for retail, office and industrial. For this category, therefore, the reversionary yield shown has been set at 1.32 times the IPD average yield in each region to produce the £122 billion total value required to reconcile our estimates with the ONS total.

Setting these rule of thumb reversionary yields is admittedly a crude assumption. But it is not an entirely arbitrary judgement. The choice of yield is bounded by the relationship between values for the stock inside and outside the investment market. Setting too extreme a yield on the stock will produce implausible values for that part of the stock outside the investment market. A yield for the whole of the stock further above that on the IPD results in low capital values for the remainder of the stock and extremely low values per square foot.

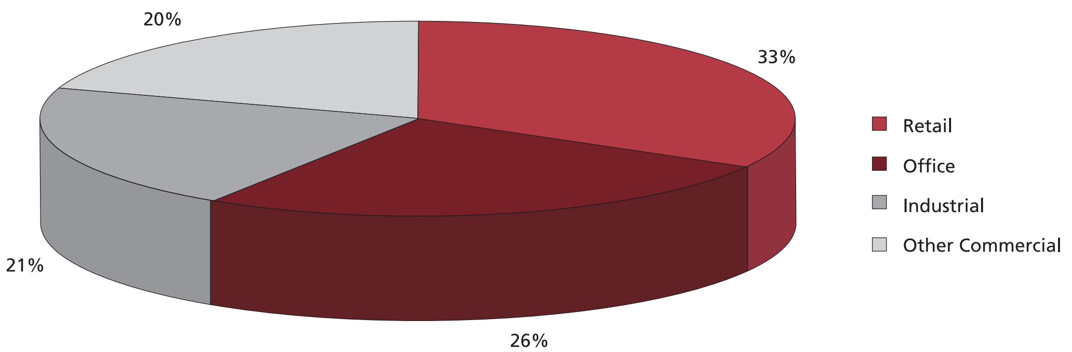
Table 5 gives a full set of sector and regional figures which result from this process, and the most comprehensive view it is possible to offer of the whole of the commercial property stock. The property categories are defined by the base source of floorspace and rental value data, the ODPM's Industrial and Commercial Floorspace.

Retail properties are classified by type of use – the supply of "off street" goods and services to the public. Beside obvious retail 'shops', taking in shopping centres and retail warehouses, retail embraces small bank branches, post offices, restaurants, wine bars (but not pubs), and cafes.

Office and industrial buildings are classified by type of building. Besides standard offices, surgeries, health centres and (oddly) police stations are included in the office category. The industrial category includes some car showrooms, garages, fire and ambulance stations.

Rental values, the base data for the calculations, show a remarkably evenly split between the major types of property, with retail accounting for £15 billion and office, industrial and other commercial categories each accounting for £13 billion of the total rental value of £54.2 billion.

Figure 6: UK Total Commercial and Other Stock, % of Capital Value end-2003



Source: own calculations from VOA, IPD

2. The total stock of UK commercial property

Table 5: **The UK Commercial Property Stock - sectors & regions end-2003**

	Retail	Office	Industrial	Other Commercial	Total
A Floorspace 000,000 sq meters					
London	16.3	28.9	27.1	..	72.3
South East	16.2	16.1	40.3	..	72.6
South West	10.3	7.2	30.7	..	48.2
Eastern	11.1	8.7	36.1	..	55.9
East Midlands	8.2	5.2	40.3	..	53.7
West Midlands	10.7	7.6	53.4	..	71.7
Yorks & Humber	12.2	7.4	46.5	..	66.1
North West	15.5	10.9	59.4	..	85.7
North East	6.6	3.6	19.6	..	29.8
Scotland	10.3	9.0	34.3	..	53.6
Wales	6.2	3.8	25.0	..	35.0
Northern Ireland	2.8	2.5	9.5	..	14.8
UK Total	**126.3**	**110.9**	**422.1**	**..**	**659.3**
B Total Rental values £bn					
London	3.1	6.1	1.7	2.3	13.1
South East	2.1	1.7	1.8	1.8	7.3
South West	1.1	0.6	0.9	1.0	3.6
Eastern	1.3	0.9	1.4	1.1	4.7
East Midlands	0.9	0.3	1.2	0.8	3.1
West Midlands	1.3	0.7	1.6	1.0	4.5
Yorks & Humber	1.2	0.5	1.1	1.0	3.9
North West	1.7	0.9	1.5	1.5	5.6
North East	0.6	0.2	0.4	0.5	1.7
Scotland	1.2	0.9	0.6	1.0	3.7
Wales	0.6	0.2	0.6	0.6	1.9
Northern Ireland	0.3	0.1	0.3	0.3	1.1
UK Total	**15.4**	**13.2**	**13.0**	**12.7**	**54.2**
C Total Capital Value £m					
London	41	82	17	23	163
South East	27	20	18	17	82
South West	14	6	9	9	38
Eastern	18	9	14	11	52
East Midlands	12	3	12	7	34
West Midlands	16	8	16	9	49
Yorks & Humber	16	6	10	9	41
North West	22	9	15	14	59
North East	8	3	3	4	19
Scotland	16	10	6	9	41
Wales	7	2	5	5	19
Northern Ireland	4	2	3	3	12
UK Total	**202**	**159**	**127**	**122**	**611**

2. The total stock of UK commercial property

Table 5: (cont d) UK Commercial Property Stock - sectors & regions end-2003

	Retail	Office	Industrial	Other Commercial	Total
D Reversionary Yield %					
London	7.5	7.5	9.5	9.8	8.0
South East	7.6	8.7	10.0	10.2	8.9
South West	8.1	9.5	10.1	10.7	9.4
Eastern	7.4	9.5	9.9	10.4	9.0
East Midlands	7.4	10.1	10.1	10.6	9.2
West Midlands	7.7	9.0	10.1	10.4	9.2
Yorks & Humber	7.6	9.3	10.8	10.7	9.3
North West	7.7	9.7	10.5	10.8	9.4
North East	7.3	9.2	11.2	10.7	9.1
Scotland	7.5	8.7	11.0	10.5	9.0
Wales	8.1	9.7	11.2	11.2	9.9
Northern Ireland	6.9	8.4	11.1	10.2	9.1
UK Total	**7.6**	**8.3**	**10.2**	**10.4**	**8.9**
E Rental Value per square metre					
London	190	211	61	..	..
South East	127	107	44	..	..
South West	106	84	29	..	..
Eastern	120	102	38	..	..
East Midlands	106	63	29	..	..
West Midlands	119	90	30	..	..
Yorks & Humber	100	73	23	..	..
North West	110	81	26	..	..
North East	94	64	20	..	..
Scotland	120	95	19	..	..
Wales	94	58	22	..	..
Northern Ireland	97	55	36	..	..
UK Total	**122**	**119**	**31**	**..**	**..**
F Total Capital Change per square metre					
London	2,519	2,824	641	..	..
South East	1,681	1,225	443	..	..
South West	1,321	884	291	..	..
Eastern	1,626	1,081	386	..	..
East Midlands	1,436	626	288	..	..
West Midlands	1,545	998	295	..	..
Yorks & Humber	1,314	790	217	..	..
North West	1,426	839	246	..	..
North East	1,282	699	179	..	..
Scotland	1,596	1,101	168	..	..
Wales	1,155	594	199	..	..
Northern Ireland	1,404	658	325	..	..
UK Total	**1,601**	**1,435**	**302**	**..**	**..**

Source: own calculations from VOA and IPD inputs

2. The total stock of UK commercial property

The overall result sets the capital value of the commercial property stock of £611 billion, of which £489 billion (80%) is in the core commercial categories of retail (one-third of the total), office (one quarter of the total) and industrial (one fifth of the total). That core commercial stock is in turn made up of 1.5 million separate tenancies, a floorspace of 659 million square meters, commanding a total rental value of £42 billion, valued at an average reversionary yield of 8.5%.

The London office market is, not surprisingly, the largest element of the total value of the stock, making up 17% of the total in core commercial markets. Below that level, only London retail and South East retail command more than 5% of total value.

2.4 Section Summary

- Rating lists compiled by the VOA are the only comprehensive source of data on the stock of property. Commercial stock (broadly defined as all property outside residential and agricultural) is dominated by shops, offices and industrial buildings which account for 66% of total national rental value. Another 13% of total value is in pubs, hotels, restaurants, leisure and roadside property.
- Estimates of the total capital value of the commercial stock are calculated by the ONS, applying outdated capitalisation rates to VOA rateable value statistics. The reliability of these estimates is debatable. They put the end-2003 total value of UK commercial stock at £611 billion.
- For this report, the ONS method has been re-worked to provide a more transparent method of calculation, and a breakdown of the results more in line with the needs of the property industry. Within the same £611 billion total capital value of commercial stock, we estimate 33% is retail property, 26% office property, and 21% industrial. The remaining 20% covers a wide range including hotels, pubs, leisure, utilities and public service buildings.

3. The Size of the Investment Market

There is no way of identifying from either the ONS or VOA aggregate data used in the last section the fraction of the total stock in the hands of investors or the division of that stock between types of investor. Estimates for the invested stock have to be pieced together from the bottom up, drawing on different sources of data for each main investor type. Working through that range of sources, sometimes with a large measure of estimation, this section puts the end-2003 total value of the investment market in retail, office and industrial property at £254 billion, a little more than half the £489 billion total stock of core commercial property.

An end-2004 update (assuming values have increased through 11.4% capital growth, £3.4 billion of net sales by owner-occupiers indicated by Property Data, and £3 billion in development completions) would put that total at £290 billion.

Below, we first give a full account of the sources and methods used to measure the investment market, and then move on to analysis of the invested stock by property type and type of owner, ending with a comparison of the value of the property market against other assets.

3.1 Sources and Methods

The starting point for the analysis is the investment stock covered by Investment Property Databank (IPD). It is the only source to offer a complete and reliable classification by both type of property and type of investor for a substantial fraction of the total market. At end-2003, IPD covered a total of £128 billion of property investment (including estimated end-2003 values for properties with non-December valuation dates).

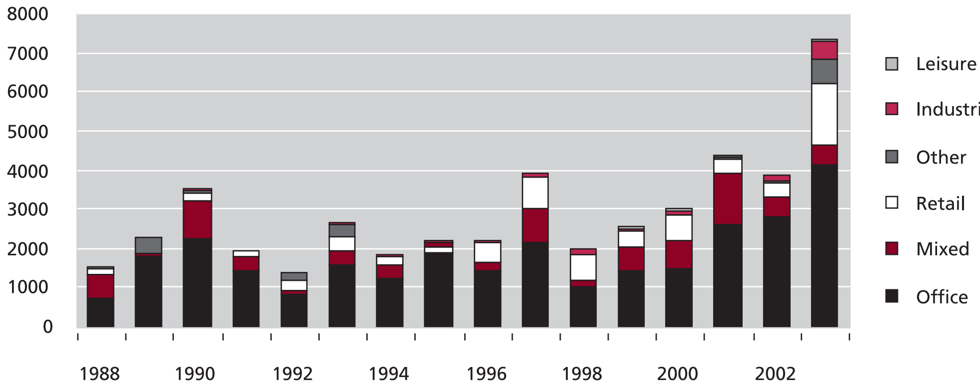
Overall, we estimate that the direct holdings of the investors captured by IPD account for half the total of retail, office and industrial invested stock. IPD does not, however, have a comprehensive coverage even among the large domestic institutional and listed investors who make up the bulk of its databank. For some categories – overseas and private investors – its coverage is close to nil. Sources for each of element of the stock outside IPD are described below.

For **overseas investors,** figures on the total current ownership of property have been calculated from DTZ's transactions database, which tracks the annual investment flows published in the company's widely used Money into Property. From the deal-by-deal record held by DTZ, all purchases of properties by overseas investors back to 1988 which have not been recorded as subsequently sold have been extracted, together with codings for property type and region. The purchase prices recorded for those properties have been uprated to end-2003 capital values by applying an IPD capital growth rate for the appropriate sector and region from the date of purchase. This procedure yields a total of £47 billion accumulated overseas investment, 60% of that total in the office sector, and 40% of it in the London office market.

The figure may be taken as a low estimate since it excludes any properties purchased by overseas investors prior to 1988 but not subsequently sold. Official statistics on investment flows for earlier years (from the ONS UK Balance of Payments) are not very helpful, since they cover all types of property and types of spending, not just investment in commercial property. They do, however, suggest that net inflows of property capital from overseas took off only in 1986. Adjusted for change in capital values, 83% of total inward investment recorded by the official statistics since 1974 fell in the period after 1987 covered by the DTZ data. Since properties purchased 20 or more years ago are more likely to have been sold, the degree of understatement of current holdings of overseas investors is probably under 10%.

3. The Size of the Investment Market

Figure 7: **Overseas Investors Portfolio by Type & Date of Purchase, £m at 2003 values**



Source: own calculations from DTZ, IPD

As Figure 7 shows, overseas investors have consistently put most money into the office market, with more variable annual flows into other property types. Purchases made since 1998 account for 45% of their current holdings. One by-product of the concentration of investment into offices and particularly central London offices with relatively low rates of capital growth is that the current total value of overseas holdings at £47 billion is only 7% above the accumulated total of their purchase spending.

For **unlisted property companies,** information has been taken from the Financial Analysis Made Easy (FAME) database, a commercial service which captures Companies House records for all UK registered business. For each company, FAME offers a full set of accounting measures, including holdings of Land and Buildings shown on company balance sheets.

Using the FAME records raises the customary difficulties of interpreting Companies House records – late or incomplete filings, duplication of the same activities under different registered names, lack of clarity on the consolidation of subsidiaries into parent companies, and an uncertain base for the valuation of property assets, which are often based on market valuations, and sometimes depreciated cost valuations.

FAME shows records for nearly 100,000 unlisted live businesses whose primary activity is classified as "Owning and Dealing in Real Estate" (Section 70 of the 2003 Standard Industrial Classification), the same heading to which all listed property companies are allocated. The majority of these companies are very small. Based on accounts data closest to end-2002 (the latest year with near-complete filings), only 4,000 of them record property assets over £1 million, collectively showing total land and building assets of £62 billion.

This, however, includes many entities outside our target category of UK private businesses engaged in commercial real estate investment. Many are subsidiaries of listed property companies (due to the common practice of incorporating individual buildings), or have non-UK parent companies and should therefore have been captured under overseas investors, or deal primarily in housing, pubs and hotels outside our commercial category, or are holding vehicles for the estates of owner-occupiers. Non-qualifying companies were removed by a mixture of filtering (to strip out those with ultimate parents which were listed property companies, overseas companies, or firms with primary businesses outside real estate such as retailers), with individual scanning and company searches on the top 100 by value of property assets.

3. The Size of the Investment Market

After this screening, the total of UK private property companies reduces to 3,800 with total land and building assets of £45 billion, this includes 14 companies with £200 million in assets which are listed on OFEX or AIM. Because some duplicated entries and companies investing in property outside the commercial sector are likely to have escaped the screening checks, the final estimate of value for this category has been put at a round £40 billion. There is no independent information on split of portfolios by sector for private property companies, which has been taken to be the same as that of the listed companies.

At the top of ranking of unlisted companies, six companies with property holdings of £1 billion plus portfolios account for close to £10 billion of the £45 billion total. These very large private owners are dominated by recently de-listed vehicles: Songbird Estates (previously Canary Wharf Group), Peel Holdings, Duelguide plc (Chelsfield), Cadeucus Estates (MEPC), Vin-Rotch Properties, and Topland Group Holdings. As Table 6 shows, the ownership of stock by unlisted companies is concentrated at the top and bottom of the size range: the very long tail of companies with between £1 million and £50 million holds nearly 40% of total value. There are only 22 companies over the £250 million asset value which might be taken as the minimum threshold for a listed company or REIT.

Table 6: Unlisted Property Companies by Value of Assets

Property Assets £billion	Number of Companies	Value of Property	% of Total Unlisted Value
1,000 +	6	9,597	21.5
500 – 1,000	5	3,480	7.8
250 – 500	11	3,865	8.7
100 – 250	40	6,300	14.1
50 – 100	57	3,960	8.9
1 – 50	3,187	17,410	39.0
Total	**3,306**	**44,611**	**100.0**

Source: FAME company database

Listed property companies are taken as the 32 currently listed on the main LSE exchange. For 17 of those companies, which account for 86% of the total market capitalisation of the FTSE real estate sector, ABN AMRO have kindly supplied figures on gross asset value at the closest reporting date to end-2003, together with splits of those assets between UK and overseas, and within the UK splits between market segments. From that list, those companies not covered by IPD have been identified. After excluding a few companies engaged in residential property or agency rather than commercial investment, and grossing up to estimate figures for the companies not detailed in the ABN AMRO data, it is estimated that £11 billion of listed company assets are outside IPD, and £29 billion are already included in the IPD data.

The assets of listed property companies are very heavily concentrated among the six-strong group – Land Securities, British Land, Liberty, Hammerson, Slough and Brixton – with gross assets over £1 billion. Between them these companies account for £32 billion (80%) of the estimated listed company total commercial assets of £40 billion.

3. The Size of the Investment Market

Limited Partnerships (LPs) have been treated in a similar way. IPD / OPC 's Property Vehicles Databank shows total UK LP assets at the end of 2003 stood at £19 billion. Of that total, £9 billion is covered by the IPD data. The sector split of the £10 billion outside IPD has been assumed to be the same as the IPD sample.

Traditional estates are among the most difficult category of investor to define or measure. Some of the largest – Crown Estate, Grosvenor – are wholly or partially covered by IPD. Other well known examples – such as the Cadogan Estate – can be identified from operating entities recorded under private property companies in the FAME database. Where possible, these have been excluded from the unlisted property company category and reclassified to traditional estates. Many smaller provincial urban estates undoubtedly exist, but are extremely hard to identify, and are likely to be included under unlisted property company vehicles. Overall, we have made a rough estimate of £11 billion total investment for this category, £6 billion of which is outside IPD, and assumed to have the same sector mix as traditional estates within IPD.

Holdings of **private investors** present major problems in definition and measurement. Here we are not aiming to measure the total exposure of private investors to property investment, a large part of which will be through investment vehicles already covered such as limited partnerships, pooled funds and unlisted property companies. Nor are we counting as private investments the interests of personally wealthy professional property investors who often sit behind the larger unlisted companies. We are trying to identify the direct investments of the non-professional investor made through a wide variety of forms including personal ownership, partnerships, or SIPPS. DTZ's Money into Property, which would have been the ideal source because is provides a long history and a basis consistent with our analysis of overseas investors, adopts a broad definition of "private" investors which embraces very large flows from unlisted property companies.

A similar source which does adopt a narrower definition of private investor in line with our objectives is the transactions record compiled by Property Data. Working from a mix of information direct from the records of leading investment agents and from reported deals, Property Data construct a deal-by-deal register classified by property type, type of buyer and seller, and region. Property Data have kindly supplied a full record of deals from 2000 to 2003 inclusive for use in this study.

That record has been analysed by a method similar to that used to estimate holdings of overseas investors from DTZ data. The net investment flow from UK private investors was extracted for each year, and classified by property sector and region. Each year's net investment has been uprated to an estimated end-2003 capital value by applying IPD capital growth rates for the corresponding sector and region.

This produces an overall current stock held by private investors of £6.1 billion, built up over only four years. Although some of this flow of private investment has probably been picked up in the unlisted property company category, we have increased this estimate to £8 billion as the figure for total holdings in this category to compensate for the short history available from Property Data, and the fact that Property Data do not cover sales through property auctions.

For **charities,** a special analysis of the land and building assets for the top 3,000 UK charities has been obtained from the Caritas database. This in principle distinguishes between 'operational' properties – such as charitable residential trusts, museums and art galleries, and owner-occupied offices – and properties held as investments. Inspection of the records, however, suggests the coding is not wholly reliable. After some adjustment, the analysis suggests the top 3,000 charities hold £12 billion in operational assets (dominated by cultural institutions such as the National Gallery, religious organisations and hospitals), but only £5 billion in investment properties. After allowing for £2 billion of charitable funds covered by IPD, we have estimated a further £3 billion outside IPD, and assumed to have the same portfolio structure as those within IPD.

The small proportion of **UK institutional portfolios** which remains outside IPD can be estimated by subtracting IPD's coverage from totals shown in the ONS Business Monitor MQ5 Investment by Insurance Companies, Pension Funds and Trusts. After adjusting the latest ONS figure for end-2002 for net investment and capital growth to end-2003, and subtracting figures for IPD's coverage of both direct portfolios and holdings of LPs, an estimated £11.7 billion of institutional holdings are outside IPD.

Figures for a final category of owner – **Local Authorities** – has been taken from Chartered Institute of Public Finance & Accountancy statistics which show £7 billion in investment properties (excluding all operational buildings) held by local authorities in England. It seems these figures are often based on current replacement cost rather than full market values. To compensate for this, and gross up from England to the UK, a total value of £10 billion has been assumed. It has also been assumed that these investments are Local Authority ownership shares in shopping centres and direct ownership of local shopping parades (80% of total value) and small industrial estates (20% of total value).

3.2 The Investment Market – Overview

As described above, the analysis has worked from a basis of the investment stock covered by IPD, the only source which gives complete breakdowns of investment by type of property and owner. A breakdown of the IPD coverage at end-2003 is shown in panel B of Table 7. Figures for those investor categories which lie wholly outside IPD's coverage (almost all overseas and private investors) or partly outside IPD (like UK institutions and property companies) are shown in panel C of the Table. Panel D provides the totals for each main type of investor.

3. The Size of the Investment Market

Table 7: The Invested Property Stock – Core Commercial Sectors only, end-2003 £ billion

	Retail	Office	Industrial	Total
A Estimated Capital Value of Total Stock	**202**	**159**	**127**	**489**
B Invested Property - Covered by IPD [1]	65	41	18	124
Insurance Funds	20	14	5	40
Listed Property Companies	16	11	1	28
Segregated Pension Funds	10	7	5	22
Unitised and Pooled Funds	5	3	3	11
Limited Partnerships	6	1	2	9
Property Unit Trusts	5	2	1	9
Traditional / Charities	2	2	0	4
Other Funds	1	1	1	2
C Invested Property - Outside IPD	**59**	**59**	**12**	**129**
Overseas Investors [2]	7	29	1	37
Unlisted Prop Companies [3]	21	15	1	37
Listed Property Companies [4]	4	3	0	8
Limited Partnerships [5]	6	1	2	10
Traditional Estates [6]	3	2	1	6
UK Private Investors [7]	2	5	1	8
Insurance Funds [8]	3	2	1	7
Pension Funds [8]	2	1	1	5
Charities [9]	1	1	0	3
Local Authorities [10]	8	0	2	10
D Total Invested by Main Types of Owner				
UK Institutions	36	24	12	73
Overseas Investors	7	29	1	37
UK Listed Property Companies	20	14	1	36
UK Unlisted Property Companies	21	15	1	37
Unitised & Pooled Funds	11	5	4	20
Limited Partnerships	12	2	4	18
Traditional Estates / Charities	6	5	2	13
UK Private Investors	2	5	1	8
Other Investors	8	1	3	12
Total Invested Property	**124**	**100**	**30**	**254**
Invested % Value of the Total Stock	**61%**	**63%**	**23%**	**52%**

Sources: [1] IPD [2] DTZ Money into Property [3] FAME database [4] ABN AMRO [5] IPD / OPC [6] Own estimates [7] Property Data [8] ONS Business Monitor MQ5 & IPD [9] Caritas database [10] CIPFA Local Government Statistics.

Overall, these estimates suggest a total value for invested core commercial property of £254 billion, or 52% of the value of the UK total retail, office and industrial stock.

Within IPD, there is £3.8 billion investment in "other" property types – around one-third of that classified as leisure. Investments in non-core market segments by other investor types is difficult to identify, because in several sources there are large amounts of "other" or unclassified investments. There are some sectors – such as pubs and hotels – where large holdings of investment stock have been built up in recent years by private property companies, private equity funds and banks.

We would tentatively, therefore, put the total value of invested stock outside the core retail, office and industrial sectors at between £10 and £12 billion, with the bulk of that held by investors outside the IPD. This would represent a little under 10% of the total value of the total stock of "other commercial" buildings identified in Table 5.

More tentatively still, assuming that the near-commercial category of pubs, hotels, cinemas etc accounts for two-thirds of the total value of other commercial property, the invested share of total other commercial stock may stand at around 15%.

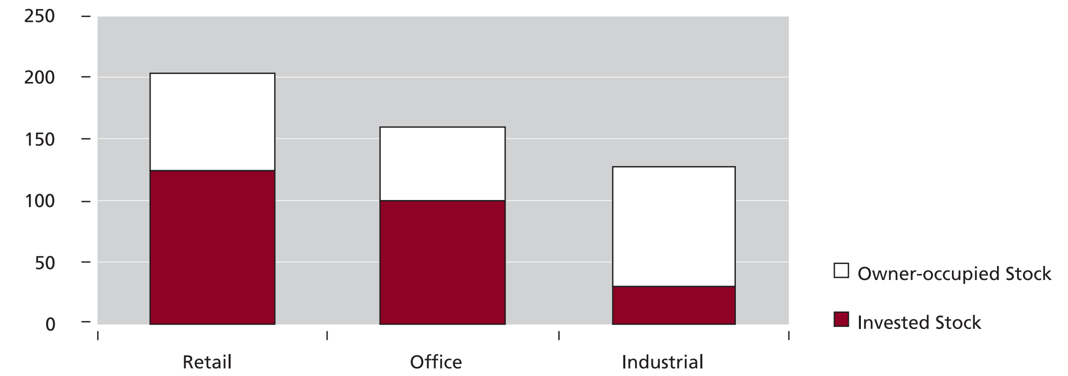
Within the core commercial sector, the invested market as a fraction of the total stock is a little over 60% for both the retail and office sectors, much higher than the industrial sector at only 24% (Figure 8). Most of the value of the remaining owner-occupied stock therefore resides in the industrial sector (close to £100 billion) rather than retail (£80 billion) or office (£60 billion)

The fraction of the total stock controlled by investors is higher when measured by capital value than by floorspace, because investors on average hold stock with relatively high rental values and lower yields. Overall, only one-fifth of total retail, office and industrial floorspace is owned by investors: that fraction is approximately 30% for retail and office floorspace, and little over 10% for the industrial stock (Figure 9). Particularly in industrials the figures might be taken as suggesting that the economic role of the investment market as suppliers of physical space is far below their role in financing the total value of space.

Rental value, however, might be more correctly taken as the yardstick of economic value – since it reflects the market price at which occupiers consume resources. On that score, the fairest measure of the contribution of investors to the economy is that shown in Figure 10. Invested stock accounts for 45% of total market rental value, a little under 60% in the retail and office sectors, and just under 20% in the industrial sector.

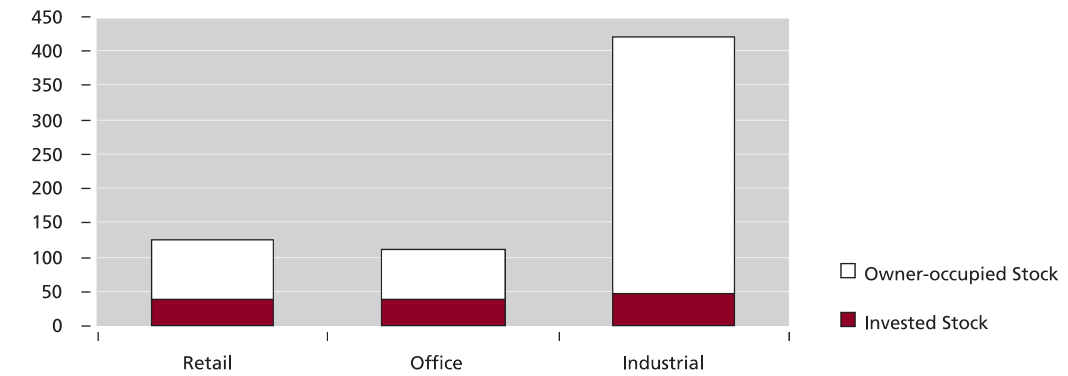
3. The Size of the Investment Market

Figure 8: **Invested Property & Total Stock – by Capital Value £billion 2003**



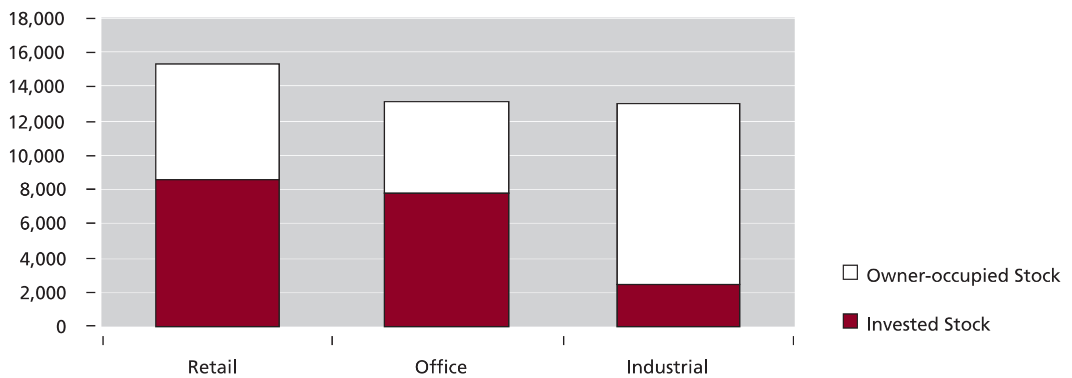
Source: VOA, own calculations

Figure 9: **Invested Property & Total Stock – by Floorspace million sq meters 2003**



Source: VOA, own calculations

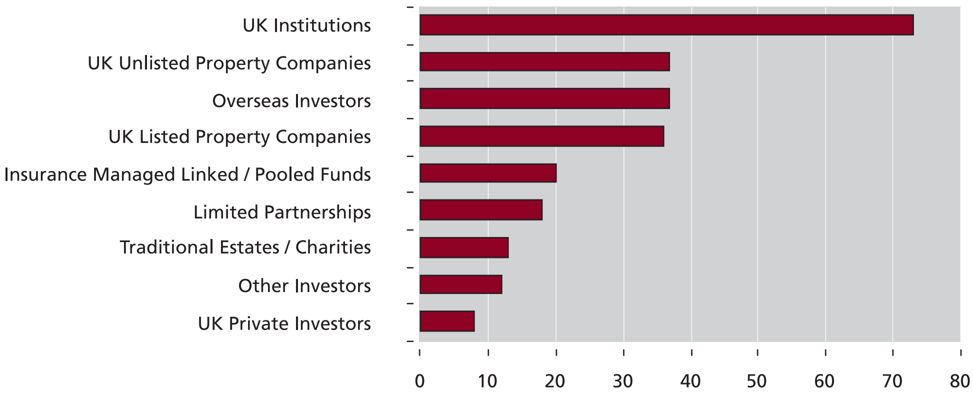
Figure 10: **Invested Property & Total Stock – by Rental Value million £ billion 2003**



Source: VOA, own calculations

3. The Size of the Investment Market

Figure 11: Invested Property by Type of Investor £billion end-2003



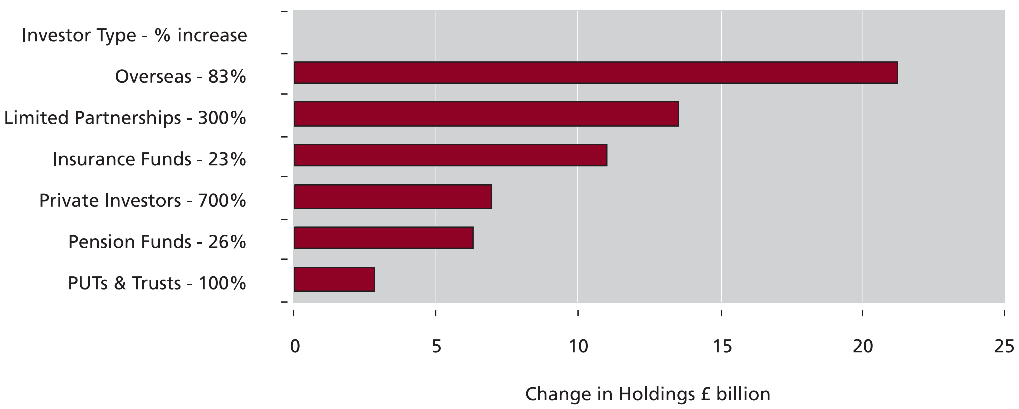
Source: Table 6

Split by type of investor, UK institutional investors are still the largest categories of owner, but not by a large margin (Figure 11). The direct portfolios of UK insurance and pension funds together make up the largest block of investment property (28% of the total).

They are followed by overseas investors, UK listed and unlisted property companies, each with very similar total portfolios of £36-37 billion, and each accounting for 14% to 15% of the total invested stock. If we assume that institutional investors also account for 90% of holdings in pooled funds, and 50% of holdings in Limited Partnerships, they account for exactly £100 billion of total invested stock, or 40% of the total market.

Though it is outside the main aims of this study to track changes in the investor composition of the market over time, some of the sources used clearly show major shifts in the ownership structure of the investment market over the last decade. Figure 12 shows changes in total portfolio value (the bars) and percentage changes in value (in the labels) for those categories of investor which can readily be tracked.

Figure 12: Changes in Invested Stock by Selected Investor Type, 1998-2003



Source: ONS MQ5, other sources as Table 6.

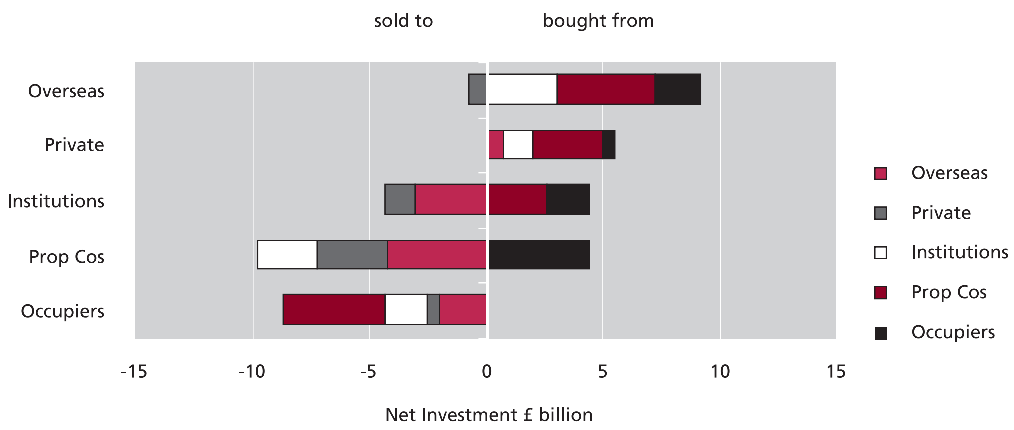
3. The Size of the Investment Market

The direct portfolios of insurance and pension funds have increased, but at percentage growth rates (around 25%) not far ahead of the general rise in market capital values over the same period (18%). On the other hand, there have been enormous growth rates – upwards of 80% - in the portfolios of overseas investors, the indirect vehicles of pooled funds and Limited Partnerships, and private investors.

Although no figures for the gross assets of listed and unlisted property companies are available for the same period, the de-listing of many companies over those five years, plus the conversion of some portfolios into Limited Partnerships, would inevitably show a decline in the portfolios of the listed sector partly balanced by a rise in the unlisted sector.

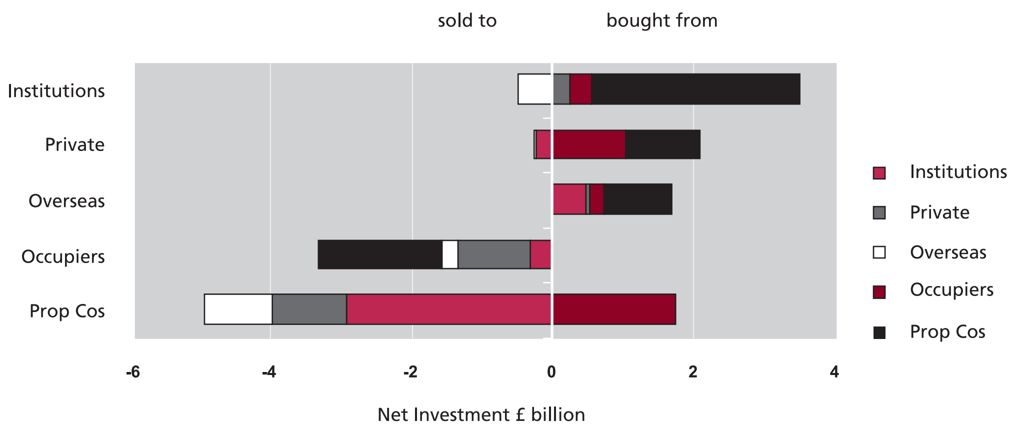
Figures 13 and 14, taken from Property Data's transactions records which are limited to the period from 2000, fills some of those gaps. The charts are a transactions matrix, showing net investment flows between types of investor, and from occupiers into the investment market.

Figure 13: **Net Investment Flows by Investor Type £ billion 2000-2003 inclusive**



Source: Property Data

Figure 14: **Net Investment Flows by Investor Type £ billion 2004 inclusive**



Source: Property Data

Over the four years to 2003, overseas investors were by far the largest spenders, with net purchases of £8.5 billion bought mainly from UK institutions and property companies. They were followed by private investors with net purchases of £5.5 billion. At the other end of the scale, occupiers fed investor demand for stock with net sales of £8.7 billion, followed by property companies who were net buyers only from occupiers, and heavy net sellers to overseas, institutional and private investors.

UK institutions sat in the middle of these major investment flows, effectively re-cycling stock from property companies and occupiers to private and overseas investors. They were modest net investors over the period, because falling equity values were raising their property weights without active investment, but the institutions took the opportunity to massively restructure their portfolios. They were heavy sellers of office and retail stock to overseas and private buyers, while buying in retail warehouses and industrial stock on a large scale.

But, as Figure 14 demonstrates, that passive institutional role may now have changed with upward revisions to their target asset allocations to property. In 2004, the institutions were the largest investors. There were also continued strong inflows from overseas and private investors, and heavy outflows from property companies and occupiers. In the Property Data figures, institutional direct portfolio investment and indirect investment through pooled funds and Limited Partnerships are combined. IPD investment flows for 2004 suggest that the relatively rapid growth of indirect vehicles within institutional portfolios continued, with 30% - 40% of total net investment going into indirect vehicles.

These results highlight the diversity and fluidity of the current investment market. It has absorbed a very rapid growth in demand from overseas, private and latterly institutional investors, and an expansion of the total market, partly through a sell-off by owner-occupiers, and partly by transference of stock from the listed property companies. With a 75% rise in the share price of listed property companies since the end of 2002, and the probable introduction of a UK REIT, the shift away from the listed sector may already have come to an end, and may in future be reversed.

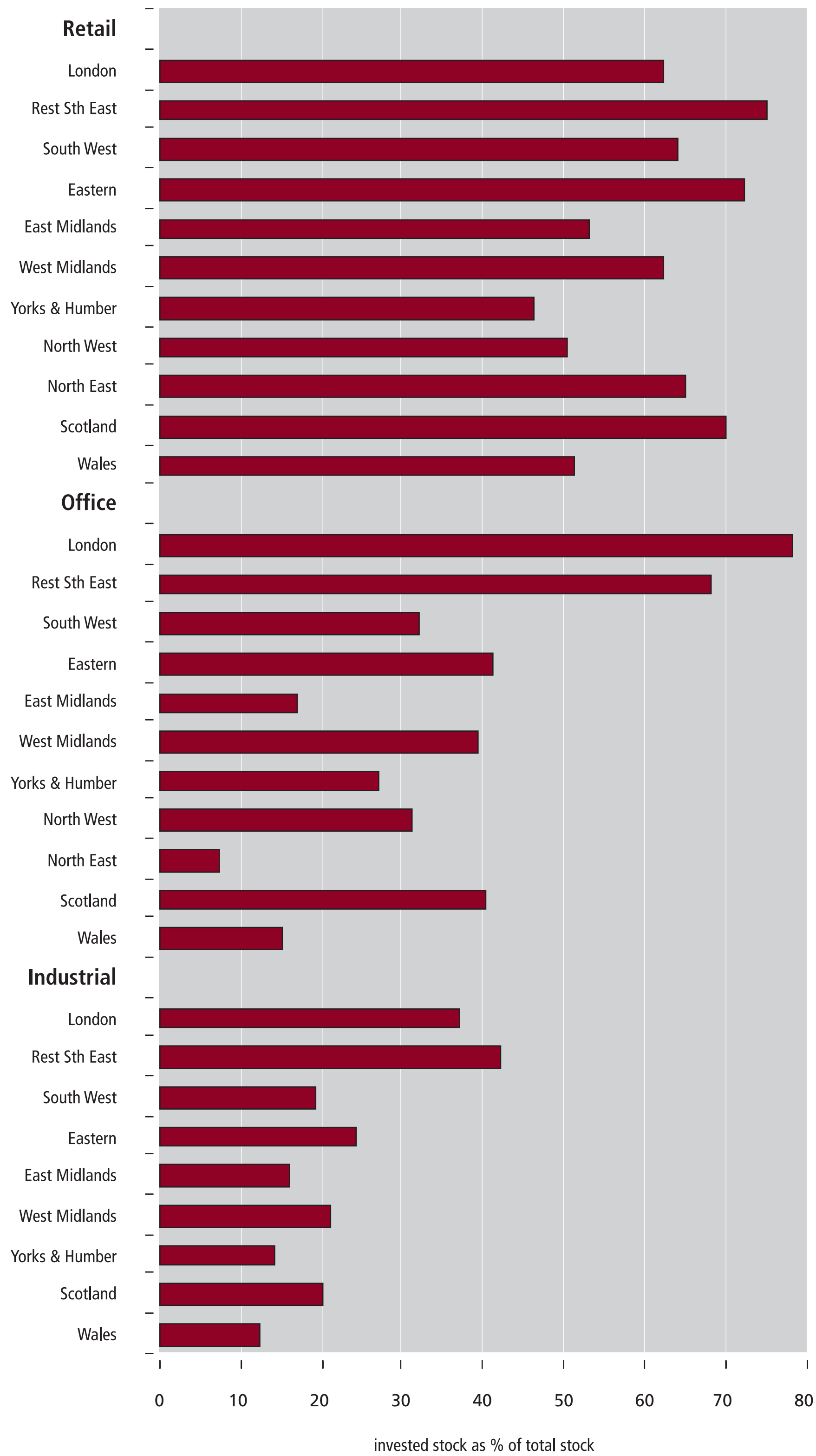
3.3 The Invested Stock by Region

It is often alleged that there are significant regional biases in the preferences of investors in favour of stock in London and the South, and against stock in the rest of the country. For some observers, this tilting of investment works to the detriment of provincial markets, depriving them of the new development and modern stock needed to compete with 'favoured' southern locations (Henneberry & Rowley, 2000).

A tilting of portfolios toward London and the South East is sometimes attributed to irrational "home bias" on the part of major investors who are mostly based in London. Alternatively, it might be attributed to more rational factors, such as larger market size, more modern stock, larger lot sizes, higher tenant quality and a broader investor base found in London and its satellites than in the smaller provincial cities.

3. The Size of the Investment Market

Figure 15: **Invested Stock as % of Total Regional Capital Value end-2003**



3. The Size of the Investment Market

Figure 15 confirms that, split by sector and region, there is a much higher level of investment ownership of the office and industrial stock in London and the South East than in other regions, but that the retail stock is much more evenly distributed. The chart shows the share of total stock held by investors in each region of the country, the top block for retail, the middle for offices and the lower block for industrials. The percentage shares should not be taken as precise, because a complete and reliable breakdown of investment portfolios by region is available only for that part of the market covered by IPD. For the retail and industrial markets, in the absence of any strong evidence to the contrary, the regional split of total investment has been assumed to be the same as shown by IPD. For the office market, where overseas investors and property companies in particular have much higher London weightings than the IPD average, the regional splits of non-IPD investors have been separately estimated.

For retail property, apart from Northern Ireland, between 50% and 70% of the total stock is already held by investors. There seems to be no obvious factor - such as north-south bias or the extent to which regions are dominated by large cities - which explain the differences in investor penetration across regions.

In the office market, by contrast, there is a very strong tilt toward the South East and London. Investors covered by IPD alone own 31% of the London office stock and 36% of the South East office stock, but no more than 20% in any other region. An even stronger Southern bias in the holdings of overseas investors and property companies not covered by IPD means that the total share of investors in the London stock is close to 80%, and in the South East stock is close to two thirds. In other regions, the share of the stock held by investors is no higher than 40%, and is under 20% in the East Midlands, North East, and Wales.

There is the same Southern bias in ownership of the industrial stock. In London and the South East, 35% - 40% of the total stock is in the investment market, against 10% to 20% in other regions of the country.

These figures compare the composition of the invested portfolio against the "market portfolio" represented by the total stock. From an economic viewpoint – to measure the contribution of investors to the economic development of regions – it will be more appropriate to compare the investor share of the stock in terms of floorspace or rental value. Substituting those measures modifies, but does not remove, the overall regional biases in the office and industrial sectors shown by capital values.

Measured by floorspace, the invested market accounts for 35% of the office stock in the South East, and 60% in London, and 24% in the Eastern region, but less than 20% in all other regions. In the industrial sector, invested stock amounts to 25% of the floorspace stock in London and the South East, but less than 10% in most other regions.

Measured by rental value, invested stock amounts to more than 60% of the office stock in London and the South East, but less than 40% in all other regions. And invested stock accounts for over 30% of industrial rental value in London and the South East, but less than 20% in all other regions.

We do not seek here to give a full explanation for the marked preference of investors for office and industrial stock in London and the South East. Crude versions of home-bias are perhaps fairly conclusively ruled out by the much more evenly balanced distribution of the retail stock across the total stock in each region: it does not seem plausible that home bias would apply in some sectors but not others. A more likely explanation lies in the differences in market size, together with physical size and lot size of the individual buildings available in London and the South East against the provincial markets.

3. The Size of the Investment Market

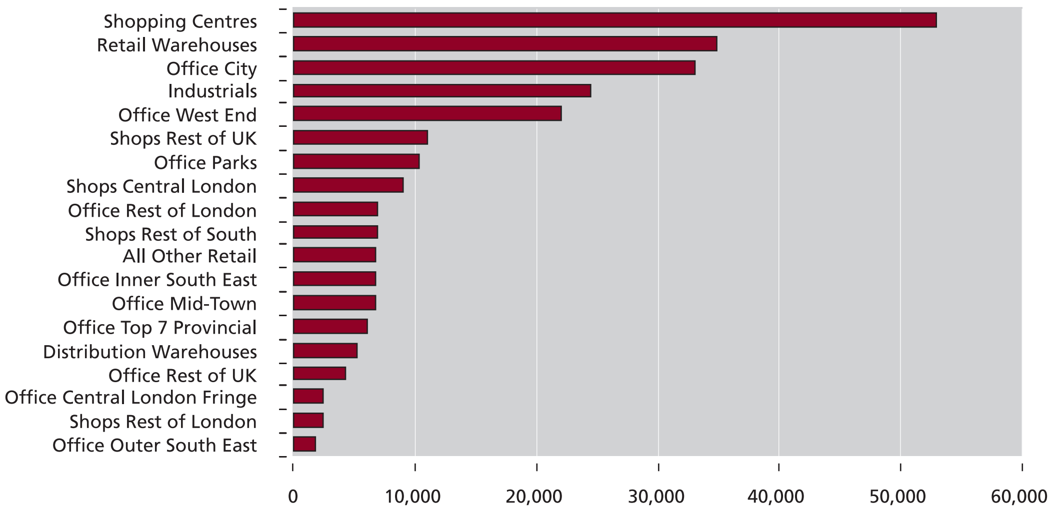
3.4 The Composition of the Investment Market

This section gives the fullest possible breakdown of the invested commercial stock. It highlights some significant differences between the composition of the total investment market and that of the IPD which is normally taken as a proxy for the total market, and also major differences between investor types in their exposure to different markets.

For each of the main categories of investor, a split of portfolios across 21 main segments of the market has been constructed, producing a more detailed picture of the structure and ownership of the invested stock. Direct information on portfolio structure has been taken from DTZ's Money into Property database for overseas investors, IPD/OPC for Limited Partnerships, and Property Data for UK private investors. For other investor types, the split of the total market has been assumed to be the same as the equivalent investors within IPD.

The invested market in core commercial properties is made up of 23,000 buildings, 123 million sq meters of floorspace, worth a total of £254 billion at end-2003. As split in Table 8, there are five major segments each worth more than £20 billion and more than 5% of the total value of the market – shopping centres, retail warehouses, City offices, industrials and West End offices. Together they make up two-thirds of the value of the investment market.

Figure 16: **Total Capital Value of Invested Stock by Market Segment £ million end-2003**



Source: IPD, VOA

3. The Size of the Investment Market

Table 8: The Structure of the Invested Property Stock end 2003

	No of Properties (000)	Floorspace (million sq meters)	Capital Value (£ billiuon)	Average Lot Size £ m	% of Properties	% of Floorspace	% of Total Capital Value
Standard Shops	5.5	7.5	29.5	5.4	24.2	6.1	11.6
Central London	0.7	1.1	9.1	12.2	3.3	0.9	3.6
Rest of London	0.6	0.6	2.4	4.3	2.5	0.5	1.0
Rest of South	1.9	2.2	6.9	3.7	8.2	1.8	2.7
Rest of UK	2.3	3.1	11.1	4.9	9.9	2.5	4.4
Shopping Centres	0.7	13.8	53.1	72.8	3.2	11.2	20.9
Retail Warehouses	2.0	12.8	35.0	17.8	8.7	10.4	13.8
All Other Retail	0.9	3.3	6.8	7.9	3.8	2.7	2.7
Standard Office	7.7	32.7	88.3	11.4	34.0	26.6	34.8
City	1.5	8.0	32.8	22.4	6.4	6.5	12.9
Mid-Town	0.6	1.8	6.9	11.6	2.6	1.4	2.7
West End	1.6	5.0	22.4	13.8	7.2	4.0	8.8
Central London Fringe	0.1	0.5	1.2	9.4	0.6	0.4	0.5
Rest of London	0.6	2.7	6.1	10.1	2.7	2.2	2.4
Inner South East	0.9	2.9	6.7	7.1	4.1	2.3	2.6
Outer South East	0.4	1.2	1.8	5.1	1.6	1.0	0.7
Top 6 Provincial Cities	0.7	2.9	6.3	9.3	3.0	2.4	2.5
Rest of UK	0.8	3.1	4.4	5.6	3.5	2.5	1.7
Office Parks	0.8	4.5	10.7	13.6	3.5	3.6	4.2
Standard Industrials	4.6	41.5	25.0	5.4	20.4	33.7	9.9
Distribution Warehouses	0.6	7.4	5.3	9.6	2.5	6.0	2.1
All Property	22.7	123.1	253.7	11.2	100.0	100.0	100.0
Retail	9.0	37.0	124.4	13.8	39.6	30.1	49.0
Office	8.5	37.2	98.9	11.6	37.5	30.2	39.0
Industrial	5.2	48.9	30.4	5.8	22.9	39.7	12.0

Source: as Table 6

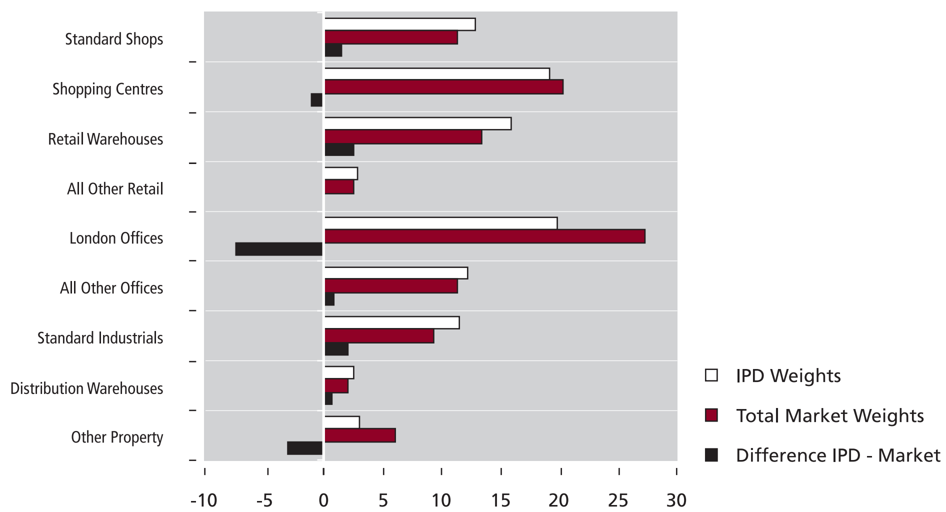
3. The Size of the Investment Market

Invested property is also highly concentrated in a relatively small number of high-value properties. The markets segments with an average lot size over £10 million per property – shopping centres, retail warehouses, London offices, Central London shops – together show an average lot size of £21 billion, and contain 8,000 (just under 40%) of the market's total number of buildings, but £176 billion (70%) of the total market value. The rest of the market – basically offices and shops outside London – have an average lot size under £6 million, making up 60% of the number of buildings but only 40% of total market value.

The composition of the total market shows some important differences between the sub-market weightings of the total market compared with those in the IPD Index (Figure 17). London offices account for 27% of the total invested market value, against 20% in the IPD, which is also slightly underweight in shopping centres. IPD's relatively low weighting in London offices is mostly accounted for by the very high concentration of overseas investment in that market. Its low weighting in shopping centres probably reflects the recent switch of ownership of that segment from the direct portfolios of large insurance and pension funds into Limited Partnerships.

IPD's underweighting in London offices and shopping centres segments is balanced by relatively high weights across all other segments, but principally a higher weighting in standard shops, retail warehouses and industrials.

Figure 17: **IPD vs Total Investment Market Weights**



Source: as Table 6

There are other major differences in the composition of the portfolios of different types of investor in the market. Tables 10 and 11 split the market in two ways, showing the weight of each market segment in the portfolios of different investor types, and then the share of each market segment in the ownership of different types of investor.

Office weightings are high among overseas investors (70%), traditional estates (57%) and private investors (58%). Industrial weightings are highest for pooled funds (21%) and very low for overseas investors (5%). These differences mean that a third of the invested office stock is in the hands of overseas and private owners – over one-third of the City and Mid-Town office markets - but less than 10% of the total retail market.

Table 9: Differences from Total Market Average Weights percent points 2003

	Insurance & Pension Funds	Pooled Funds	Limited Partnerships	Listed Property Companies	Unlisted Property Companies	Private Investors	Other Funds	Overseas Investors
Standard Shops	2.5	4.8	-6.7	-1.8	-1.8	7.3	6.9	-6.9
Shopping Centres	-3.6	-15.3	23.3	11.2	11.2	-19.2	-0.7	-13.7
Retail Warehouses	2.1	15.6	2.2	-3.6	-3.6	-7.1	4.9	-7.9
London Offices	-11.1	-15.7	-20.5	6.7	6.7	0.8	-12.0	34.8
Non-London Offices	5.0	2.5	-7.9	-6.6	-6.6	20.2	-3.0	3.3
Industrial & Warehouse	4.9	8.9	11.7	-8.2	-8.2	4.6	5.0	-8.1

Source: as Table 6

Table 10: The Structure & Ownership of Invested Property end 2003 – Portfolio Weights for each Investor Type

	Insurance & Pension Funds	Pooled Funds	Limited Partnerships	Listed Property Companies	Property Companies	Unlisted Private Investors	Other Funds	Overseas Investors	Total
Standard Shops	14.1	16.4	4.9	9.8	9.8	18.9	18.5	4.7	11.6
Central London	3.6	1.7	2.9	4.3	4.3	1.3	7.3	1.4	3.6
Rest of London	1.3	1.9	0.2	0.6	0.6	0.6	1.5	0.4	1.0
Rest of South	3.5	4.9	0.6	1.7	1.7	8.5	3.7	1.1	2.7
Rest of UK	5.7	8.0	1.2	3.1	3.1	8.5	6.0	1.8	4.3
Shopping Centres	17.2	5.5	44.1	32.0	32.0	1.6	20.1	7.1	20.8
Retail Warehouses	15.8	29.3	15.9	10.1	10.1	6.6	18.6	5.8	13.7
All Other Retail	2.8	1.9	0.4	4.8	4.8	0.0	1.7	1.0	2.7
Standard Office	27.5	22.5	11.2	36.9	36.9	51.7	21.7	72.4	35.4
City	5.5	5.2	4.3	17.6	17.6	14.7	7.3	30.6	13.0
Mid-Town	2.2	1.1	0.4	2.1	2.1	2.2	1.6	7.1	2.6
West End	6.4	3.1	1.7	12.8	12.8	8.3	5.5	13.5	8.7
Central London Fringe	0.5	0.4	0.0	0.3	0.3	0.2	0.5	4.4	1.0
Rest of London	2.3	2.5	1.1	1.9	1.9	3.4	1.1	7.2	2.7
Inner South East	4.1	3.8	0.9	0.7	0.7	5.2	2.1	3.6	2.7
Outer South East	0.8	1.2	1.2	0.1	0.1	2.3	0.7	0.9	0.7
Top 6 Provincial Cities	4.0	2.8	0.8	0.2	0.2	11.8	1.3	3.1	2.4
Rest of UK	1.7	2.4	0.7	0.9	0.9	7.7	1.8	2.0	1.7
Office Parks	6.0	3.9	0.1	3.1	3.1	4.8	2.7	5.3	4.1
Standard Industrials	12.8	18.1	21.4	3.0	3.0	13.3	13.6	2.9	9.7
Distribution Warehouses	3.8	2.5	2.0	0.5	0.5	3.0	3.1	0.7	2.1
All Property	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Retail	49.9	53.1	65.2	56.7	56.7	27.1	58.9	18.7	48.8
Office	33.5	26.4	11.3	39.9	39.9	56.6	24.4	77.8	39.4
Industrial	16.7	20.6	23.4	3.4	3.4	16.3	16.7	3.6	11.7

Source: as Table 6

Table 11: The Structure & Ownership of Invested Property end 2003 – Percentage of Invested Stock by Investor Type

	Insurance & Pension Funds	Pooled Funds	Limited Partnerships	Listed Property Companies	Property Companies	Unlisted Private Investors	Other Funds	Overseas Investors	Total
Standard Shops	35	11	3	12	12	5	15	6	100
Central London	29	4	6	17	18	1	20	6	100
Rest of London	40	15	1	10	10	2	15	6	100
Rest of South	37	14	1	9	9	10	13	6	100
Rest of UK	38	14	2	10	10	6	13	6	100
Shopping Centres	24	2	15	22	23	0	9	5	100
Retail Warehouses	33	17	8	10	11	2	13	6	100
All Other Retail	30	6	1	25	26	0	6	6	100
Standard Office	22	5	2	15	15	5	6	30	100
City	12	3	2	19	20	4	5	34	100
Mid-Town	24	3	1	11	12	3	6	39	100
West End	21	3	1	21	22	3	6	23	100
Central London Fringe	14	3	0	5	5	1	5	67	100
Rest of London	24	7	3	10	10	4	4	38	100
Inner South East	45	11	3	4	4	6	8	20	100
Outer South East	32	13	12	3	3	10	9	19	100
Top 6 Provincial Cities	47	9	2	1	1	15	5	18	100
Rest of UK	29	11	3	8	8	14	10	17	100
Office Parks	42	7	0	11	11	4	6	19	100
Standard Industrials	38	15	16	4	4	4	14	4	100
Distribution Warehouses	53	10	7	3	3	5	14	5	100
All Property	**29**	**8**	**7**	**14**	**15**	**3**	**10**	**15**	**100**
Retail	29	9	10	17	17	2	12	6	100
Office	24	5	2	14	15	4	6	29	100
Industrial	41	14	14	4	4	4	14	4	100

Source: as Table 6

3. The Size of the Investment Market

Table 9 is a summary of the main features of investor portfolios. UK insurance and pension direct portfolios funds are the most widely diversified investors, with a substantial ownership in all segments of the market, and a major under-weighting only in London offices. All other investor types show a large measure of specialisation.

The strongest of those specialisations is the massive over-weighting of overseas investors in offices, above all in London offices. In the Central London office segments, they are the largest single category of owner, although in the City and West End their market share is a little behind the combined total for UK listed and unlisted property companies.

Outside London, it is UK institutional vehicles which are the dominant owners of office investments: insurance and pension funds, pooled funds and Limited Partnerships together holding from 40% to 60% of the invested stock.

For property companies, the primary biases are a high weighting in shopping centres and London offices at the expense of the industrial sector and provincial offices. UK indirect vehicles – pooled funds and Limited Partnerships – share a strong tilt away from London offices with, in the case of pooled funds, a bias toward retail warehousing and industrial, and in the case of Limited Partnerships a heavy concentration at both the high value and low value ends of the market in shopping centres and industrials respectively.

Finally, private investors have portfolios, unsurprisingly, tilted away from the large high value lot sizes in shopping centres and retail warehouses and toward the standard shops and provincial offices segments.

3.5 The Retail Market Segments

For some of the most important segments of the market, separate figures from other sources are available to cast a little further light on the structure of the invested stock, and also to act as a cross-check on our calculations.

For shopping centres and retail warehouses, plus leisure parks and factory outlets a listing of all schemes with floorspace and names of owners has been supplied by TW Research. Our own classification of these segments by type of owner is shown in Table 12. Since many schemes outside pooled or LP vehicles are in joint ownerships, which account for close to 20% by floor area, ownership has often been classified by one of several investors, and is not precise. Capital values for each type of property have been estimated by applying IPD values per sq metre to the floorspace figures. The estimated value of shopping centre and retail warehouse stock held by identifiable investors compares reasonably with those shown in Table 8.

3. The Size of the Investment Market

Table 12: The Shopping Centres and Retail Parks Stock

	Shopping Centre	Retail Warehouse	Leisure Centres & Leisure/ Shopping	Factory Outlet	Total
	Floorspace – 000 sq meters 2004				
Pooled / Limited Partnership	2,790	2,358	275	157	5,580
Insurance Fund	2,132	2,270	230	60	4,692
Listed Property Company	2,483	1,392	269	27	4,171
Pension Fund	1,220	2,050	126	34	3,430
Unlisted Property Company	2,013	1,178	43	52	3,286
Owner Occupied	519	1,686	118	2	2,324
Other Investors	1,591	888	250	133	2,861
Not Known	1,507	1,964	194	128	3,794
Total	14,255	13,786	1,505	592	30,139
	Capital Value £m End 2003				
Pooled / Limited Partnership	10,710	6,449	511	429	18,098
Insurance Fund	8,184	6,210	427	164	14,984
Listed Property Company	9,530	3,808	499	74	13,911
Pension Fund	4,681	5,608	233	93	10,615
Unlisted Property Company	7,725	3,223	79	144	11,171
Owner Occupied	1,993	4,611	218	4	6,827
Other Investors	6,105	2,429	463	363	9,359
Not Known	5,784	5,374	360	350	11,868
Total	54,712	37,712	2,790	1,620	96,834

Source: TW Research, own classification by owner type

These major retail segments total 30 million sq meters of floorspace. They account for a quarter of the total UK retail floorspace shown by the VOA, but almost half our estimated total capital value of the retail stock. Ownership of the stock is widely spread, but led by pooled funds and limited partnerships. The latter have, in only a few years of their existence gathered up 13% of the shopping centre market, and 4% of the retail warehouse market. Large scale, and mostly domestic, investors clearly dominate ownership in these market segments. Private investors hold only 2% of the market, and identified overseas investors only 12%. There is very limited scope for further transfer of stock from owner-occupiers, who hold only 7% of the total, a large part of that accounted for by £3.3 billion of owner-occupied off-park retail warehouses.

Subtracting the market segments shown in Table 12 from our estimates of total retail stock gives a floor area for the rest of the retail stock – standard shops, stores and supermarkets - of some 96 million square meters, and capital value of £105 billion. Since our calculation of the total value floor area and value of the invested market in the rest of the retail stock are 9 million and £36 billion respectively, the invested share of these retail segments is only one-third of total value.

3.6 Property versus other assets

The estimates of total stock and invested stock can be used to set property alongside other forms of tangible asset in the UK national balance sheet (Column 2 of Table 14), and against the market portfolio of UK financial assets (Column 4).

Measured against tangible assets, commercial buildings make up 12% of UK total asset value. Their value is slightly higher than the national stock of infrastructure, and 20% above the total value of plant and machinery and vehicles. All other categories are dwarfed by the £3 trillion value of the residential stock, accounting for over 60% of the country's physical wealth.

Set against the main investment markets, the £265 billion value of the existing investment market in commercial property accounts for 12% of total UK financial assets, equivalent to one-fifth of the total value of equities, and nearly a half of the total value of fixed income investments. A "market weighted" portfolio on 2003 market capitalisations of UK assets would therefore contain a mix of 63% equities, 25% fixed income, and 12% property.

For equities and fixed income, the percentage weights indicated by the market portfolio are quite close to the actual end-2003 mix of long-term assets of UK pension funds which (including overseas investments but excluding cash) was 69% equities, 23% fixed income, 6% property and 2% other assets. However, the property weight is only half that indicated by the investible universe.

For insurance funds, the asset mix is tilted toward fixed-income, with a 41% weight in equities against fixed income at 46%, property at 7% and other investments at 7%, again showing a property exposure below that indicated by the capitalisation of the investible markets.

Anecdotal evidence, however, suggests that the average weighting of property in the portfolios of the largest institutional investors often in the range 10% to 15%, and more in line with that indicated by the split of the investible market.

Table 14: **Total UK Assets and Investment Market Capitalisations end-2003 £billion**

Tangible Assets	£billion	Investment Markets	£billion
Residential	3,045	LSE Equities Market Value (UK Companies)	1,356
All Commercial Buildings	611	UK Government Bonds (Market Value)	353
Retail, Office, Industrial Buildings	490	UK Corporate Bonds	179
Civil Engineering Works	578		
Plant, Machinery, Vehicles	499	Invested Commercial & Other Buildings	265
Stocks & Other	207		
Agricultural	55		
Total Tangible Assets	**4,996**	**Total Investment Assets**	**2,513**

Sources: ONS Blue Book 2004, London Stock Exchange (Equities), Debt Management Office (Government Bonds), Merril Lynch (Corporate Bonds)

It might, however, be argued that this comparison overstates the indicated property weight because the asset value shown for property is gross of the debt carried by many investors, while financial assets will almost always be held as equity investments with no debt.

Adjusting the estimate of property investment for the estimated gearing ratios of different categories of investor (running from zero gearing for direct institutional portfolios through to 70% for private investors) would cut the total investible property on a net asset value basis to around £180 billion. This would cut the indicated property weighting in the market portfolio to just under 10%.

Since the invested market currently makes up little more than half the total value of the commercial stock, a maximum expansion of the invested market to take in all retail, office and industrial property – though that should not be taken as a realistic proposition – would put the property weight at up to 19% of the market weighted portfolio. Even less realistically, adding all commercial property to the investible universe would take the property weighting up to 22% of the market portfolio.

3.7 Section Summary

- Figures on the property stock owned by investors have to be pieced together from a large number of sources, in many cases with a substantial element of guesswork. The results should be taken as the best indicators currently available. They are subject to a range of uncertainty and should not be taken as definitive.
- We estimate the total value of invested property at end-2003 was £265 billion, of which £254 billion is in the core retail, office and industrial sectors.
- The investment market accounts for a little more than half the total value of the retail, office and industrial stock – just over 60% in the retail and office sectors, and a little less than 25% in the industrial sector.

3. The Size of the Investment Market

- Because buildings outside the investment market are much lower in average value per square metre, investors own a much smaller fraction of the total floorspace in each sector – less than one-third of the retail and office sectors, and only 12% in the industrial sector.
- Direct investment by UK insurance and pension funds remains the largest single element of the investment market, accounting for £73 billion (29%) of the £254 billion core commercial total. They are followed by overseas investors, listed property companies, and unlisted property companies each with £36-37 billion portfolios (14% each of the total market).
- The structure of the market has been highly fluid. Over the last five years, overseas investors, pooled funds and limited partnerships and private investors have all seen very high growth in their portfolios. Direct institutional portfolios have grown in size but fallen as a fraction of the total market. Listed property companies have seen an absolute decline in their holdings.
- Retail property investment is fairly evenly spread across the country, accounting for 50% to 70% of total value of the stock in each region. Office and industrial investment is, however, very strongly biased toward London and the South East, where the share of total stock held by investors is double the average for other regions.
- The investment market is also heavily concentrated in high value properties in a small number of key markets: taken together 8,000 buildings in shopping centres, retail warehouses, London offices and Central London shops account for 40% of the total number of properties in the investment market, but 70% of its total value.
- There are substantial differences between the weights by capital value of the total market and the weights shown by IPD. London offices make up 27% of the total market against 20% in the IPD, which is relatively highly weighted in all other market segments except shopping centres and other property.
- There are even more striking differences in portfolio mix across types of investor, mostly arising from varying exposure to London offices. London offices account for over 60% of the portfolios of overseas investors, compared with 30% for property companies, and only 17% in the direct portfolios of UK institutions.
- Against other assets, the value of total commercial property investment at £265 billion compares with a total market capitalisation of UK equities market at £1.4 billion, and of fixed income investments of £540 billion. On that basis a market weighted portfolio would include 12% property on a gross asset value basis, but just under 10% adjusted for debt financing of the investment stock.

4. The Owner Occupied Stock of Property

The remainder of the report turns to the owner-occupied stock of commercial property. Out of £490 billion total UK value of core commercial properties, a little under half in terms of value (£225 billion) and 80% in terms of floor area (530,000 sq meters) remains outside the invested market, in the hands of owner-occupiers. Industrial property accounts for the largest part of the owner-occupied stock - £95 billion against £80 billion in retails, and £50 billion in offices. Beyond the core commercial sectors, moreover, nearly a quarter of the UK's rental value (based on VOA rateable values) resides in other types of property – from pubs and hotels through to schools and hospitals - which may be tentatively valued at around £122 billion.

It seems there remains considerable scope for expansion of the invested property market, both through increased penetration of the core commercial sectors, and extending the range of properties held in investment portfolios. Converting 10% of the owner-occupied stock in core commercial sectors, for example, would expand the invested market by more than £20 billion, or 9% of its current value. Outside the core commercial market there are property types such as pubs, hotels, and garages which are already on the fringes of the mainstream investment market, and others like hospitals, universities and infrastructure which might be accessed through PFI arrangements.

This section, accordingly, examines the composition and ownership of the stock which might potentially be added to the invested market. The sources that have been used to track down in more detail the nature and ownership of the major blocks of property held by owner occupiers assets are:

- For private corporations, Companies House balance sheet information captured by the FAME database also used to assess unlisted property companies in Section 3.
- For the public sector, the Central Government's National Asset Register, and the Chartered Institute of Finance & Accountancy Statistics for Local Authorities.

4.1 The Characteristics of Owner-Occupied Stock

This section compares the characteristics of the stock in the investment market with that in the owner-occupied market, and quantifies the major differences between the two in average quality of stock.

Table 15 gives an overall framework showing estimates of the total commercial market and investment market measured by floorspace, rental and capital value, and values per square metre. Floorspace and rental value for the invested market has been taken from IPD on the assumption that it accurately represents the average for the invested stock. Figures for the owner-occupied stock are then calculated as the VOA total stock minus invested stock. This full analysis can be done only for the core commercial markets, since the VOA does not publish floorspace figures for other property types.

4. The Owner Occupied Stock of Property

Table 15: **The Characteristics of the Stock and Invested Stock, End-2003**

	Retail	Office	Industrial	All Core Commercial
The Total Stock				
Floorspace 000,000 sq meters	126.0	110.7	422.2	658.9
Rental Value £ billion	15.4	13.2	13.0	41.6
Capital Value £ billion	202.3	159.1	127.5	488.9
Rental Value £ sq metre	122	119	31	63
Capital Value £ sq metre	1,606	1,437	302	742
Reversionary Yield %	7.59	8.28	10.22	8.50
Total Invested Market				
Floorspace 000,000 sq meters	37.0	37.2	48.9	123.1
Rental Value £ billion	8.6	7.7	2.5	18.8
Capital Value £ billion	124.2	98.9	30.4	253.5
Rental Value £ sq metre	232	207	52	153
Capital Value £ sq metre	3,357	2,661	621	2,060
Reversionary Yield %	6.90	7.80	8.38	7.43
Total Owner Occupied Market				
Floorspace 000,000 sq meters	89.0	73.5	373.3	535.8
Rental Value £ billion	6.8	5.5	10.5	22.7
Capital Value £ billion	78.1	60.2	97.1	235.4
Rental Value £ sq metre	76	74	28	42
Capital Value £ sq metre	878	818	260	439
Reversionary Yield %	8.68	9.07	10.80	9.65
Invested as % Total Market				
Floorspace	29%	34%	12%	19%
Rental Value	56%	59%	20%	45%
Capital Value	61%	62%	24%	52%

Source: own calculations from IPD, VOA data

4. The Owner Occupied Stock of Property

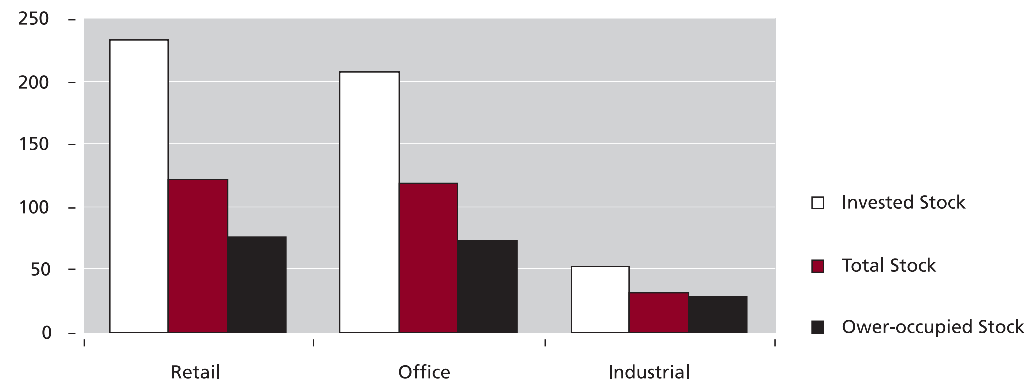
The core commercial stock has a total floor area of 659 million sq meters, a rental value of £42 billion, and capital value of £489 billion, at an average reversionary yield of 8.5%. As would be expected, the invested stock is made up of buildings of a higher quality than the averages for the total stock. Their rental value per sq metre is 1.7 – 1.9 times the average for the whole of the stock, and a capital value close to double the average for the whole of the stock.

These value differences mean that the invested market accounts for half of total rental value, and over half of total capital value while making up only one-fifth of total floorspace. In the office and retail sectors, the invested market controls around one-third of total floorspace, but close to two-thirds of capital value. In the industrial sector, the invested stock is only 12% of floorspace, but nearly one-third of capital value.

The gap in stock quality between the investment market and the average means, of course that the stock quality of that part of the stock held by owner-occupiers is on average far below that of the invested market – because invested stock is concentrated in higher value regions, and higher value properties within each region.

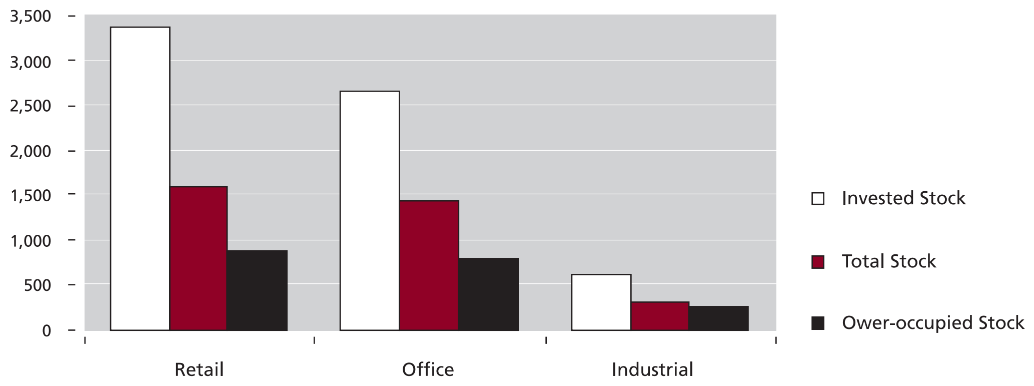
4. The Owner Occupied Stock of Property

Figure 18: **Average Rental Value £ per square metre end-2003**



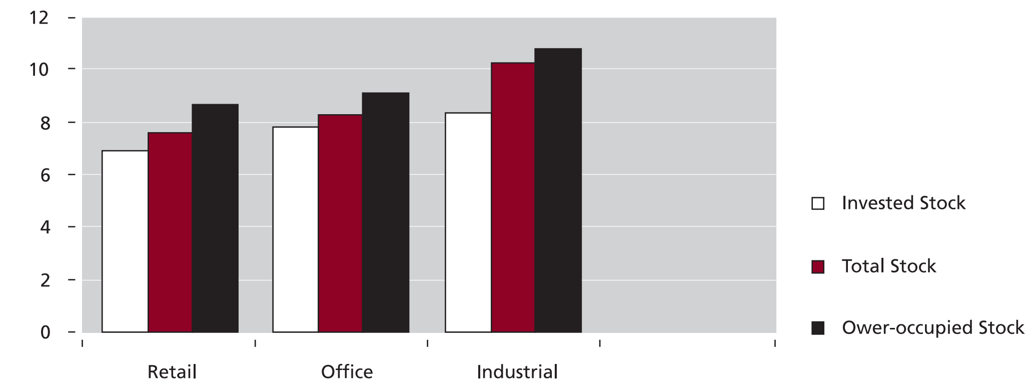
Source: IPD, VOA

Figure 19: **Average Capital Value £ per square metre end-2003**



Source: IPD, VOA

Figure 20: **Average Reversionary Yield % end-2003**



Source: IPD, VOA

4. The Owner Occupied Stock of Property

For the retail and office markets, rental values per sq metre in the owner-occupied stock are only one-third of those in the investment market, and capital values are under a quarter of those in the investment market. For industrials, owner-occupied rental and capital values are a little over 40% of those in the investment market.

Some of these differences in national average values are a product of the regional biases in the investment stock noted in the last section, in particular the very high concentration of invested office and industrial stock in the high-value South East and London markets. After adjustment for differences in regional mix, overall capital values for the owner-occupied stock are still only 30% of those in the invested stock for retail, 40% of those in the invested stock for offices, and half those in the invested stock for offices.

4.2 Corporate occupiers

The FAME database, drawing on Companies House filings covers 1.8 million UK registered corporate entities. That source can be used to extract balance sheet holdings of land and buildings, alongside a large number of other profit / loss and balance sheet measures shown in reports and accounts. Due to late filings of accounts, end-2002 is the latest year for which the records were most complete, and is used as the base year throughout this section.

There are, as noted in Section 3, many problems in using the balance sheet information, the most notable being duplicated entries, double-counting of subsidiary and parent companies, valuations which are out of date, or not performed on an open-market basis. At an overall level of analysis, it has not been possible to adjust for these factors for all companies. As the analysis is narrowed down below, we have undertaken more extensive checking for duplication.

Across all companies covered by FAME, filtering by the scale of property ownership cuts down the sample size very rapidly. In round terms, there are only 50,000 companies reporting land and buildings assets in excess of £5,000, and half that number holding land and buildings assets over £1 million. Excluding the real estate and construction sectors, the companies with real estate assets over £5,000 showed a total of £277 billion property assets at end-2002.

Table 16 splits the ownership of this corporate stock by main industry groupings, and also gives some indicators of the intensity of use of property within each industry. Manufacturing, wholesale and retail distribution, hotels bars and restaurants, and financial & business services each account for more than 10% of the total corporate stock.

Averaged across all industries, UK corporates own £37,000 worth of property per employee, use £0.32 worth of property to generate every £1 of turnover, and property accounts for 65% of their total tangible assets. The most property-intensive business measured by property value per employee are, surprisingly, in sectors such as utilities, and miscellaneous services (which includes recreation, culture & sport). This is likely to be because the specialised nature of the assets means these industries are more heavily owner-occupied than those which use standard retail, office or industrial buildings. In the service sectors, including retail, property accounts for upwards of 60% of corporate tangible assets, against less than 50% in manufacturing, utilities and transport.

4. The Owner Occupied Stock of Property

Table 16: **Corporate Ownership of Property by Industry, end-2002**

	Land & Buildings Assets £ billion	% of total	Land & Building Assets: £ 000 per employee	£ per £ of Turnover	% of Tangible Assets
Manufacturing	61.6	22.8	15.7	0.11	0.41
Wholesale & Retail Distribution	56.4	20.9	20.6	0.13	0.68
Hotels, Bars and Restaurants	42.8	15.4	40.7	1.14	0.84
Financial & Business Services	38.8	14.3	26.1	0.28	0.60
Miscellaneous Services & Unclassified	22.8	8.4	59.2	0.47	0.83
Transport & Communication	22.0	8.1	24.8	0.28	0.44
Utilities	15.0	5.6	166.2	0.53	0.43
Public Services	11.7	4.3	27.1	0.81	0.73
Mining, Quarrying	4.1	1.5	46.0	0.41	0.48
Agriculture, Forestry, Fishing	1.8	0.7	5.6	0.34	0.75
Total	**277.0**	**100.0**	**37.0**	**0.32**	**0.65**

Source: FAME companies database

Note: Excludes the real estate and construction sectors

The £277 billion total property assets across all industries and 50,000 firms includes a great deal of specialised space which would not be regarded as investible. To narrow down on businesses which are the primary occupiers of large blocks of retail, office and industrial space, the records have been filtered in three further steps:

- First, the threshold of property ownership was raised to £20 million, to focus on companies which are firstly of a size likely to occupy higher quality space and be regarded as high quality covenants, and also occupy property in lot sizes attractive to investors.
- Second, we screened out those companies classified to industries whose land and building assets are unlikely to be in commercial property, or likely to comprise highly specialised plant or works which are occupier-specific and outside the investible stock.
- Third, since these filters reduced the number of records to a manageable volume, full checks were undertaken to take out double-counting of assets in parents and subsidiaries.

On the second criterion, all companies classified to agriculture, mining, quarrying were removed as sectors where asset value will consist mostly of land. The building materials industry, chemicals, metal and vehicle manufacture, utilities, water and air transport, sporting clubs (such as football league and rugby clubs), private education and health services companies were stripped out as primarily occupiers of facilities outside the core commercial sector.

After these further screenings, the major corporate owners of core commercial property were cut down to a list of 800 companies, with total property assets of £160 billion, just under 60% of the original total of £277 billion property assets held by corporates outside the real estate and construction industries.

4. The Owner Occupied Stock of Property

The ownership of this "most investible" stock is highly concentrated in a few industries, and usually a small number of companies in each industry (Table 17). Less than 400 companies in the retailing, hotels, pubs & restaurants, financial & business service industries together held over £100 billion in property assets.

In the retail sector, eight supermarket and retail chains with property holdings over £1billion account for three-quarters of total assets. Similarly, four owners with over £1 billion holdings account for a third of the £17 billion financial services total; and in the hotels sector nine hotel and pub chains with over £1 billion holdings account for 60% of the £34 billion total.

Table 17: Corporate Ownership of Land and Buildings - Selected Industries end-2002

Industry	No of Companies	Land & Buildings Assets £billion 2002
Light Manufacturing	192	24
Brewing	18	9
Tobacco	4	1
Car sales, repair, petrol stations	36	2
Wholesale Distribution	45	5
Retail Sales	68	38
Hotels, Bars, Restaurants	118	34
Bars	22	16
Hotels	73	13
Catering	14	4
Caravan Parks & other	9	1
Land Transport & Transport Services	31	4
Storage & Warehousing	6	6
Telecommunications	12	5
Financial Services	45	17
Business & Professional Services	164	19
Holding Companies & HQs	76	8
"Other" Business Services	69	5
Cinemas, Entertainment & Other Services	38	4
Total Major Owners	755	159

Source: FAME companies database

The analysis by industry does not map simply onto a corresponding breakdown of the corporate occupied stock by property type. Retailers' properties of course include office and distribution buildings as well as shops. A large block of property classified under business and professional services, moreover, belongs to holding companies or "other" companies clearly with their main activities in other industries – headed by the Ford Motor Company and General Electric, and including some hotel and retail chains.

It is, nonetheless, possible to make some broad comparisons with the totals for owner-occupied stock calculated as the difference between the total stock and invested stock in Section 5. That calculation suggested an owner-occupied retail stock of around £80 billion, an office stock of £50 billion and an industrial stock of £95 billion.

Table 17 suggests that 82 owners in the retail and catering industries account for half the estimated owner-occupied stock in the retail sector, and 64 financial & business services companies (excluding the diverse holding companies and "other" categories) account for almost half the owner occupied office stock. And for industrials, taking together light manufacturing, wholesaling, transport, and storage, 274 occupiers account for one-third of the owner-occupied industrial stock.

4.3 The public sector

According to the ONS Blue Book, the public sector – central and local government, public corporations – have commercial, industrial and other building assets worth £180 billion, as well as infrastructure assets worth £312 billion. Those estimates are based upon the asset registers now maintained by all public bodies. We have used the same source to break down that stock as far as possible into different types of property assets.

For investors, the main point of interest in the public sector stock is how much of it might be drawn into the investment market through PFI or other forms of outsourcing arrangement. A register from the Treasury shows over 600 PFI contracts have been signed since 1987, involving capital assets of £40 billion. PFI's based on commercial property, however, have been relatively small – a total of 23 schemes with a total capital value of £2.2 billion, nearly £1 billion of that in the Department of Work & Pensions PRIME scheme.

4. The Owner Occupied Stock of Property

Table 18: **Central Government Land & Buildings Assets**

	Asset Value £ million	% of Total
National Road Network	88,466	40.8
Other	59,119	27.3
Health care	27,459	12.7
Ministry of Defence (MoD)	10,431	4.8
Transport and vehicle related sites	6,825	3.1
Prisons and secure units	4,879	2.3
Offices	4,522	2.1
Education & Training	3,150	1.5
Residential (mod)	2,415	1.1
Industrial	2,264	1.0
Libraries, Museums, Galleries	2,114	1.0
Justice service (ex prisons)	1,502	0.7
Farms & Forests	1,258	0.6
International	981	0.5
Research & Scientific	829	0.4
Land	529	0.2
Marine and coastal	16	0.0
Retail	4	0.0
Total	**216,762**	**100.0**

Source: drawn from Departmental Asset Registers

A full scan of the National Asset Register has been conducted to estimate the value and, as far as possible, the mix of freehold assets held by central government and the bodies for which it is responsible – including executive agencies, public corporations and the NHS.

The published National Asset Register shows total land and building assets of £217 billion. These can be roughly classified by property type only by a detailed scan of the full asset lists shown in the registers published by each Department. This is a far from exact exercise, as the registers are not always clear on the nature of assets: as Table 18 shows, large components of the stock cannot be allocated to property types, partly because only assets valued over £1 million are separately identified, and have to be left as "other" or "Ministry of Defence".

A final problem in interpreting the National Asset Registers is a lack of clarity on the basis or date of valuation. Although the general rule is that values are as at 31sth March 2000, it appears from the individual Departmental listings that valuations reflect a range of dates, and the mix between open market valuations, valuations at cost or net book cost is also not fully stated.

Overall, therefore, the Asset Registers afford no more than a fuzzy picture of Government ownership of the commercial stock. By far the largest single element of total land and buildings is accounted for by the national road network, followed by hospitals and medical centres, and Ministry of Defence facilities. Only £2.3 billion is explicitly identifiable as industrial stock, and a tiny £4 million as retail stock. The registers typically do not identify administrative offices as a separate class of buildings category, so they have to be speculatively taken as the residual between the total and all other identified uses, which puts them at a value of £4.5 billion.

Tentatively, we may therefore set Central Government ownership of core commercial stock at around £7 billion. The ultimate scope for expansion of the investment market through PFI's on hospitals and prisons, with a value in excess of £30 billion, or roads with a value of £88 billion, is clearly far larger than in core commercial property.

For local authorities, the Chartered Institute of Public Finance & Accountancy's Local Government Statistics (available only for England) provide figures for land and building assets with a broad split by type of use which shows the main holdings as residential (£76 billion) and educational (£41 billion) properties. Operational commercial properties – which will include administrative offices – are not separately identified, but grouped into an "other land and buildings" heading, with a total value of £26 billion. Assuming that town halls and administrative offices will make up half this total, and grossing up a little for Scotland and Wales, we have put a round figure on the value of local authority commercial stock at £15 billion.

Public sector property assets are not always recorded at current open market values, and in the case of Central Government appear to be based on values in 2000. The available figures may therefore tend to underestimate the value of the public sector commercial stock. Overall, however, we estimate the public sector total owner-occupied assets in the core commercial sectors at £20 to £25 billion –slightly over 10% of both the value of both invested property, and the value of corporate commercial property. The long-term potential additions to the invested market from the public sector lie perhaps in the infrastructure sector, with a total public sector value of over £100 billion, and in healthcare with a total value of around £30 billion.

4.4 Section Summary

- Around £235 billion of retail, office and industrial property remains outside the investment market in the hands of owner-occupiers, close to £100 billion of that in industrial property, £80 billion in retail, and £60 billion in offices.
- On average, the owner-occupied stock is far lower in value than that held in the investment market: for retails and offices rental values per square metre are around one-third of those for invested property, and capital values per square metre a little lower again. For industrials, rental values per square metre are half those in the invested market, and capital values 40% of those in the invested market.
- Average values suggest a very large element of the owner-occupied stock is below the quality currently considered investible. But there are clearly large blocks of property still owned by large corporates or the public sector which in terms of building quality and tenant quality would meet the criteria set by investors.

4. The Owner Occupied Stock of Property

- For the corporate sector, extensive searches and filtering from a Companies House database show a total of 755 companies with more than £20 million of property in their balance sheets and also in industries most likely to occupy investible commercial properties (i.e. light manufacturing, wholesale and retail distribution, hotels bars and restaurants, office-based services).
- Collectively, these large corporate occupiers hold around £160 billion of property assets, with a high concentration of that ownership in very large companies: 68 retail companies, for example, hold £38 billion of property assets.
- Property held by public sector organisations has been identified as far as possible from Government statistics. Public sector property assets are very large - £217 billion in Central Government bodies and £130 (check – 160 in 2002) billion in Local Authorities – but are overwhelmingly made up of infrastructure and public service buildings such as schools and hospitals.
- A best estimate of total retail, office and industrial property held by the public sector is £20 - £25 billion, around £70 billion in Central Government – should be 7bn I think, and £15 billion in Local Authorities, with most of that stock in the office sector..

5. Overview and Recommendations

The study has been an exercise in compilation, primarily aimed at providing the facts and figures reported above. This section does not recapitulate the detailed findings summarised at the end of each section, but attempts to draw together the strands of the analysis into an overall impression of the investment market and its potential growth, with recommendations for further development of the work.

5.1 The Current and Potential Investment Market

Our results give a snapshot of a rapidly evolving and diverse investment market. UK institutional direct portfolios, pooled funds and listed property companies, which up to the late 1980s were by far the dominant players in the market, now account for only half its total value. Investors who were at most minor participants even a decade ago – overseas, Limited Partnerships and private individuals – together account for a quarter of the total market, but have probably doubled that share in the last five years.

For much of that period, the total market has been expanding a little faster than the rate of new development (which may add around £3 billion to the investment stock in a good year) by a substantial transfer of stock from owner occupation. On Property Data's figures, occupiers have been selling into the investment market at a rate of more than £2 billion per year. Within that growing total, a large shift in the share of the market held by new types of investor has been facilitated by low demand for direct investments from UK institutions, and by the run down of the portfolios of listed companies. With the help of those lubricating flows, the market absorbed a large volume of new money with, until 2004, only a marginal fall in yields.

If, as widely reported, institutional allocations to property have been revised upward to 10% or more, and as widely expected a UK REIT both creates an expanded demand from private investors and breathes new life into listed vehicles, those balancing flows in the market may come to an end. Indeed, the large increase in net investment by UK institutions in 2004, and the energetic re-shaping of the portfolios of several large listed companies over the last year, may mark a switch to concurrent heavy demand from all types of investor.

Overall, recent developments in the structure of the market have to be taken as healthy. A broader investor base goes alongside a wider range of investor strategies and motivations. Investors with varying appetite for risk, and varying use of leverage, will respond differently to economic factors, and increase market liquidity through the cycle. Again, that benefit has perhaps already been apparent in profit-taking sales by private equity investors through the last year, feeding renewed demand from institutions.

But that structure also raises the possibility of all major types of investor seeking stock at the same, a possibility which is perhaps already close to reality. It would seem to be almost a certainty if the successful introduction of a UK REIT was achieved against a background of low interest rates and fitful equity markets.

It is, therefore, the potential for expansion of the stock which creates most current interest in the size and structure of the commercial property stock. At first sight, that potential does not look very tightly constrained. Around 40% by value of the retail and office stock – more like 70% by floor area – is still outside the investment market. Adding the full range of near-commercial property types – hotels, pubs, leisure, petrol stations – to the portfolios of mainstream investors might add around 15% to the value of their investible universe, against a current weighting (on IPD figures) no more than 1%.

But our results show very clearly that the possibility for rapid expansion by transfer from the owner occupied stock is at its lowest in the markets which have been most popular with investors. Both shopping centres and retail warehouses, the investments of choice for UK institutions, are almost fully invested already, and for retail warehouses at least tighter planning is restricting growth in the stock. London offices, the investment of choice for overseas buyers, and South East offices are the next most heavily invested sectors, although in those cases not constrained by planning.

Within the core commercial markets, therefore, the low hanging fruit for investors ought to be in the provincial office and industrial markets where there is a much higher proportion of owner occupied stock. For direct investors, those segments may be unattractive because local market risk is too high, lot sizes too small, and liquidity too patchy. They may be best accessed through collective investment vehicles, whether listed or unlisted, which could spread risks and reduce overheads across large specialised portfolios.

The under-invested core commercial markets and near-commercial property types provide targets for future expansion. Transfers from corporate occupiers and the public sector provide a mechanism through which that expansion may be achieved. Our results – and indeed what now seems to be a continuous flow of large sale and leaseback deals – do not indicate that the well is empty.

It is true that the average quality of owner-occupied stock – so far as that is measured by rental price – seems well below the thresholds conventionally set by investors. But on the other hand it is not difficult to identify large corporate occupiers with very large property holdings which in terms of both building and tenant quality would be likely to meet current investor criteria. As the report shows, it is fairly easy to identify roughly £40 billion of retail property, £34 billion of hotel, pub and restaurant property, and £30 billion of office property in the ownership of firms each holding more than £20 million in property assets. The public sector may add another £20-£25 billion of core commercial assets to the potential pot.

All these ways of deepening or widening at the boundaries of the current investment market, however, look small beer when compared against the obvious huge potential of the residential market or, with a somewhat larger leap, the total value of assets represented by public service buildings (notably schools and hospitals) or still further out the value of infrastructure. In the very long term, since the growth in the market capitalisation in equities must run ahead of the potential growth rate of the property stock, it is only by colonising these very large potential markets that weightings in property can be sustained.

5.2 Recommendations

There are very many points on which our knowledge of the property stock falls far short of the ideal. It is tempting to recommend that an ultimate solution would be to follow the Swedish model of property taxation based on estimated capital values rather than rental values, categorised by property type and owner and open to all. Given that system, complete and accurate answers to all the questions this report has attempted to answer would be continuously available.

It would also be possible to set out a long list of specific areas on which current information is poorest – such as the value of portfolios of traditional estates – which might be of interest to the completist without changing much of significance in the overall picture. To build on the basis of this report, and to improve information on key aspects of the property market we believe that the following steps would be most productive.

5. Overview and Recommendations

At the aggregate level, the greatest point of uncertainty in the relationship between the investment market and the total stock of space is the large measure of uncertainty surrounding Government statistics on the value of that total stock. We recommend that ways of improving the method of calculation and form of presentation of those statistics are discussed with ONS. This is a specific instance of more general problems with official statistics on property investment (another being the tracking of investment flows), which could usefully be considered by an industry working group for discussion with Government.

To measure and track the investment market, the report has drawn heavily on the databases of IPD, DTZ and Property Data. We recommend that these organisations should be encouraged to produce on an annual basis updated reports on the value and composition of the investment flows covered by their respective services.

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