



DECEMBER 2019

RESEARCH

# The Size and Structure of the UK Property Market: End-2018 Update



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COMMISSIONED BY THE IPF RESEARCH PROGRAMME

# The Size and Structure of the UK Property Market: End-2018 Update

This research was funded and commissioned through the IPF Research Programme 2015–2018.

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

The Programme is funded by a cross-section of businesses, representing key market participants. The IPF gratefully acknowledges the support of these contributing organisations:



# The Size and Structure of the UK Property Market: End-2018 Update

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## Report

**IPF Research Programme 2018-2021**

December 2019

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# The Size and Structure of the UK Property Market: End-2018 Update

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## EXECUTIVE SUMMARY

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This report provides an overview of the size and structure of the UK property market as at the end of 2018 and follows a series of reports, first produced in 2005 and updated annually since 2013. It uses various sources, public and private, to arrive at estimates of stock.

The report concentrates on broad aggregates at three levels of stock:

- The **total stock** of property in the UK;
- The **investible stock**, i.e. the total size of the market that is potentially investible, but may not be; and,
- The **invested stock**, i.e. that part of the UK property market that is currently owned for investment purposes.

The total value of the UK property stock was estimated by the Office for National Statistics (ONS) to be £8.2tn at the end of 2017 and £8.7bn by end of 2018<sup>1</sup>. The ONS data gives the best picture of property trends over the long term, and the role of property as a store of national wealth.

- The total value of the stock has risen at 6.0% p.a. over 30 years, close to double the rate of inflation; most of that gain, however, is due to a rise in residential values, (predominantly land values), which is estimated to have risen at 9.3% p.a. since 1995.
- The stock of commercial property, the main focus of this report, (the ONS Buildings Other than Dwellings) category has grown at the slower rate of 3.8% p.a, slightly ahead of inflation, and the product of modest capital growth (2.2% p.a. on the MSCI Annual Index) and small increase in the physical stock.

The total investible stock at end 2018 was estimated to be £2.1tn, comprising £0.95tn (up by 2% through the year) of commercial property and £1.2tn (up by 4%) of residential property.

- For commercial property, this is a second year of small rises, reaching a new historic high point, which stands 11% above that at the last cyclical peak of 2006, and a 58% recovery from the trough of 2009.
- From 2003 to 2018, the total value of commercial stock (including net physical additions) has risen at an annual rate of 3.3%, a fraction ahead of inflation at 3.0% – although fitted trends over the period suggest growth in stock value of 2.3% p.a. was below the rate of inflation.

The total invested stock of commercial property<sup>2</sup> was £512bn (2017 £509bn). This figure is 12% above the previous peak in 2007, and 53% above the cyclical low point of 2009.

2018 a year of large variation in the performance of different segments of the market:

- Around a market average of near-static capital values, the span in rates of capital growth – from 11% for Shopping Centres to 13.7% for Industrials in southern England – was among the largest on record.
- While on capital flows, the main feature of the Real Capital Analytics (RCA) transactions data, as for many years, was a little over £4bn net investment by overseas owners, balanced by net sales by UK owners – though transaction levels between those categories were well below the £7bn seen in 2017.
- This pattern is not so clear-cut when looked at by types of owner; the largest shifts were large net sales by UK private companies and overseas indirect funds, balanced by substantial net purchases spread across overseas listed companies, UK institutions, overseas listed companies and private investors.

<sup>1</sup> ONS restated numbers in October 2019. Details the improvements to capital stock methods and estimates updated as part of the Blue Book 2019 to align our approach with the international best practices. <https://www.ons.gov.uk/economy/nationalaccounts/uksectoraccounts/articles/nationalaccountsarticles/changestothecapitalstockestimationmethodsforbluebook2019>

<sup>2</sup> Not including alternative commercial stock.

## EXECUTIVE SUMMARY

**Table 1.1: Summary of Commercial and Residential Total and Invested Property**

	2015	2016	2017	2018
<b>COMMERCIAL PROPERTY UNIVERSE VALUE £bn</b>	£926	£883	£935	£951
% change on previous year	10%	-5%	6%	2%
<b>COMMERCIAL INVESTMENT UNIVERSE VALUE £bn</b>	£486	£486	£509	£512
% change	10%	0%	5%	1%
of which:				
UK investors £bn	£351	£347	£357	£356
Overseas £bn	£135	£139	152	£156
% overseas	28%	29%	9%	3%
<b>RESIDENTIAL TOTAL STOCK VALUE £bn</b>	£5,475	£5,914	£6,498	£6,759
% change	7%	8%	10%	4%
of which:				
Private rented sector £bn	£1,016	£1,110	£1,152	£1,205
Mainstream investors: residential £bn	£17	£23	£32	£35
Mainstream investors: student accommodation £bn	£11	£14	£17	£21
Mainstream investors: residential & student accommodation as % of the PRS	2.8%	3.4%	4.25%	4.65%



## 1. INTRODUCTION

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### 1.1 Objectives of the Report

For any asset class, market size is an inevitable requirement, for both practical applications in investment markets and broader market or research frameworks. For UK real estate investment, this report takes figures first produced in 2005, with subsequent updates each year from 2013 onward.

A detailed explanation of all sources and methods used to produce the end-2018 figures is provided in appendices to this report.

### 1.2 Definitions and Classifications

The report measures the UK property stock, in terms of current market values, at three primary levels:

- The **total stock** of built assets. This is used to track the general growth in values and indicates the role of property as a store of national wealth;
- The **investible stock**. This is defined as those property use types typically held in the portfolios of large-scale professionally-managed investors and investment vehicles, although this may include owner-occupied property; note this does not include additional criteria of building quality or lot size, which also shape the typical targets of such investors, and, therefore, stands as the broadest measure of the potential investment universe; and
- The **invested stock**. This is defined as that part of the stock currently held in large-scale, professionally-managed portfolios.

For the invested stock, the report provides breakdowns of owner types and property types aligned with those in general use in the industry:

- A primary distinction in owner type is between UK and overseas investors, which are defined by the headquarters domicile of the owner or investment vehicle; for investment vehicles (such as unlisted funds) it is not possible to split capital sources between UK and overseas end-investors, so the figures do not reflect the ultimate ownership of assets.
- The classification by owner type follows the usual categorisation of direct and indirect investment formats and, within indirect investments, through private or public market vehicles; the full classification is shown in Appendix B.
- The classification by property types follows the 11 market segments defined by MSCI and widely used in its market and portfolio analysis reports.

For the total stock and investible stock, the figures in the report are based directly on single sources from official statistics – respectively the Office for National Statistics (ONS) National Accounts and the Valuation Office Agency (VOA) Non-Domestic Rating Statistics.

For the invested stock, there are few primary data sources that offer a comprehensive coverage of particular types of investor or types of stock and the figures are based on compilations and cross-referencing from multiple sources, including MSCI, RCA, Property Funds Research (PFR), company accounts and industry reports.

## 1. INTRODUCTION

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### 1.3 Report Structure

The remainder of this report takes the following structure:

- Section 2 considers the total stock of property in the UK and the investible stock. It highlights broad growth and sector breakdown statistics for the stock of property in the UK;
- Section 3 estimates that part of the commercial real estate stock currently held by investors – the invested stock – split into categories showing types of investor and the property type and region segments commonly used in market analysis;
- Section 4 looks at Residential Investment; and
- The appendices provide additional Data (Appendix A), more detailed notes of sources and methodologies (B and C), as well as Recent Findings on Alternative Asset Classes (D), and Bibliography (E).



## 2. THE PROPERTY STOCK

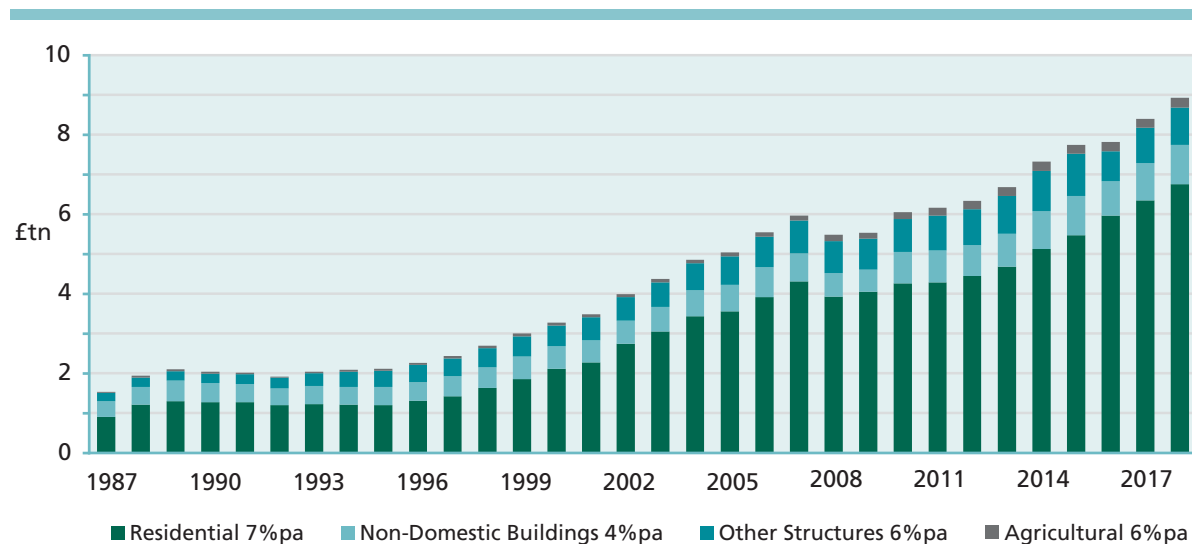
### 2.1 Real Estate Values

The ONS National Accounts ('Blue Book') gives the most comprehensive picture of the total UK property assets, and some indication of their importance as a store of national wealth. These figures, therefore, provide a broad frame for the detailed analysis of the investment stock that follows; they also offer a view of growth and change in the stock of property over a longer run of history than can be shown in the more detailed analyses from other sources in later sections.

The IPF Size & Structure end-2018 update used ONS figures published in Autumn 2019 showing results up to 2018<sup>3</sup>. The 2019 update of the total stock ONS figures has been conducted under a new improved methodology, resulting in a restatement of ONS numbers from 1995 onwards. In addition to previous publications, this report also splits total stock by broad types of owner, showing the dependence of those owner types on real estate as a store of wealth.

For end-2018, the Blue Book recorded a total of £8.7tn in property assets – structures and the land they sit on combined – split by the ONS into the four categories shown in Figure 2.1. Non-Domestic Buildings include the investible commercial property assets that are a main focus of this report plus dedicated facilities, such as steel and chemicals works, which fall outside the definition of 'investible' property typically owned and traded by mainstream investors. Later estimates (see Section 2.2) suggest that commercially investible assets account for 85% of the ONS £1tn value for Non-Domestic Buildings.

**Figure 2.1: Value of Property Assets, 1987-2018 (£tn)**



Source: ONS National Accounts, 2018. From 2016 on the split of ONS total land value across the categories is partly estimated.

<sup>3</sup> The ONS year-end 2019 has been published under a new methodology restating historic data.

## 2. THE PROPERTY STOCK

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- Overall, the total value of UK property has grown at an annual average rate of 6.1% over 30 years, close to double the rate of inflation – though most of that overall rate is driven by residential property, which accounts for nearly three-quarters of the total.
- At a little over twice the rate of inflation over the period since 1987, residential values have grown faster than any other property type, at 6.8% p.a.
- Non-Domestic property, the primary focus of this report, has seen a lower growth rate of 3.8% p.a., slightly above inflation, but 1.6% p.a. above the rate of capital growth in commercial property investments (as shown by MSCI's Annual Index): the difference may be attributed to a different mix of asset types within the two measures, and perhaps partly to growth in physical stock, which is excluded from the MSCI figures.

From 1995 onward, the ONS has split total values between structures and the underlying land; this offers some insights into the difference in growth rates between Residential and Non-Domestic values. Underlying land makes up 72% of the stock value for Residential against only 23% of stock value for Non-Domestic buildings and structures. Moreover, it is differences in land value growth that account for the disparity in the overall growth rates: over the last 22 years the value of Residential structures – a figure broadly derived from construction costs less estimated depreciation – has risen at 5.6% p.a., only marginally ahead of 5.3% p.a. for Non-Domestic and Other structures. Residential land values have risen by 9.3% p.a. over this period, nearly three times the 3.2% p.a. for the land underlying Non-Domestic and Other Structures.

This comparison suggests it is long-run land that accounts for the difference in value growth between Residential and other types of property, and supports the view (though little additional evidence is needed) that the excess growth of UK houses prices rests, in part, on an insufficient release and exploitation of land for development.

### 2.2 Real Estate and National Wealth

The wide coverage of asset types means the ONS data can be used to draw some wider conclusions about the role of real estate in the financial system:

- For end-2018, the gross value (i.e. the market price excluding any associated liabilities) of UK assets – ranging across tangible assets like land, buildings, plant and machinery and financial assets including cash, bonds and equities – stood at £42tn, split 25% in non-financial assets and 75% in financial assets.
- So, the £8.7tn property value makes up 87% of non-financial wealth, but only 21% of total wealth when financial assets are taken into account.

Since 1995, the value of total assets has grown at 7% p.a., largely as the product of appreciation across a range of financial asset categories (loans, debt and equity securities), which have all grown at around that rate. Thus, despite the high rate of appreciation in Residential property, and especially Residential land, the overall weighting of property in national wealth, at 21%, is the same as it was in 1995, and slightly below a peak of 25% recorded in 2003. Within the property total, residential assets have increased as a proportion of the total – from 43% to 62% as a share of non-financial assets, and from 18% to 20% relative to financial assets, but only from 13% to 15% of total assets.

## 2. THE PROPERTY STOCK

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These comparisons deal only with asset values: in the national accounts, the headline figures on UK national net worth – the most accurate measure of true “wealth” – are produced by deducting liabilities from asset values.

- The end-2018 UK net worth of £10.3tn is the balance between total non-financial assets (£10.5tn, of which 60% is property) plus financial assets of £31.2tn less financial liabilities of £31.5tn. The construction of the accounts does not identify the financial liabilities associated with property (most obviously residential mortgages and commercial property lending).
- Thus, it is not possible to give a fair comparison of the net contribution of property to the national net worth of £10.3tn from this source. The ONS itself has noted that the UK land value is equivalent to more than 50% of national net worth – well above other developed economies where the comparison is available, which run from around 25% (Germany) to 40% (Canada, France).
- On that comparison, UK land relative to net worth has risen from 42% in 1995 to 53% in 2018; UK land held by households has risen from the equivalent of 21% of net worth to 41%.

While these figures contribute to the common impression of the UK's high and rising dependence on land and property values, they do not give the full picture in economic terms: both the high level in comparison with other countries and the rising proportion of property as a fraction of net worth could be accounted for by a high and rising use of residential and commercial debt secured against property.

### 2.3 Real Estate and Owner Types

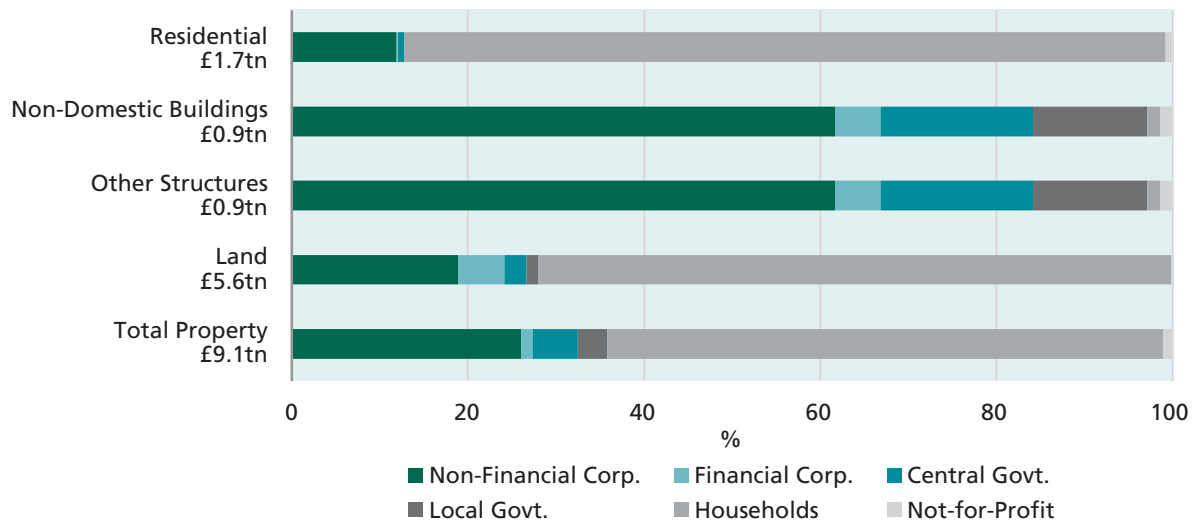
The ONS also provides splits of property assets by broad ownership categories – essentially businesses divided into Non-Financial and Financial corporates, Central and Local Government, Households and Not-for-Profit Institutions serving Households. The classification can be used to illuminate two questions: who are the owners of property? and which owners are most dependent on property as a store of total wealth? These measures show the value of buildings and structures held by each owner type, with the land underlying those structures grouped into a single figure for each owner type.

Figure 2.2 addresses the first question, which owner types hold the property stock?

- In the aggregate, the answer is predominantly Households, which account for 63% of total land ownership (overwhelmingly through residential owner-occupation) and 86% of the value of residential structures – the two largest use-types, which make up 80% of total property stock value.
- Non-Financial Corporations are the second largest owner type, with 26% of total property assets through their holdings in 62% of the value of non-residential structures and 19% of total land value.
- This leaves only 10% of total value in the remaining Non-Financial, Government and Not-for-Profit sectors: Central and Local Government are significant owners only for non-residential structures, where they account for around 15% of the total; the social housing stock, once mainly held by Local Authorities, has been shifted into the balance sheet of other owners through arms-length management companies and Housing Associations.

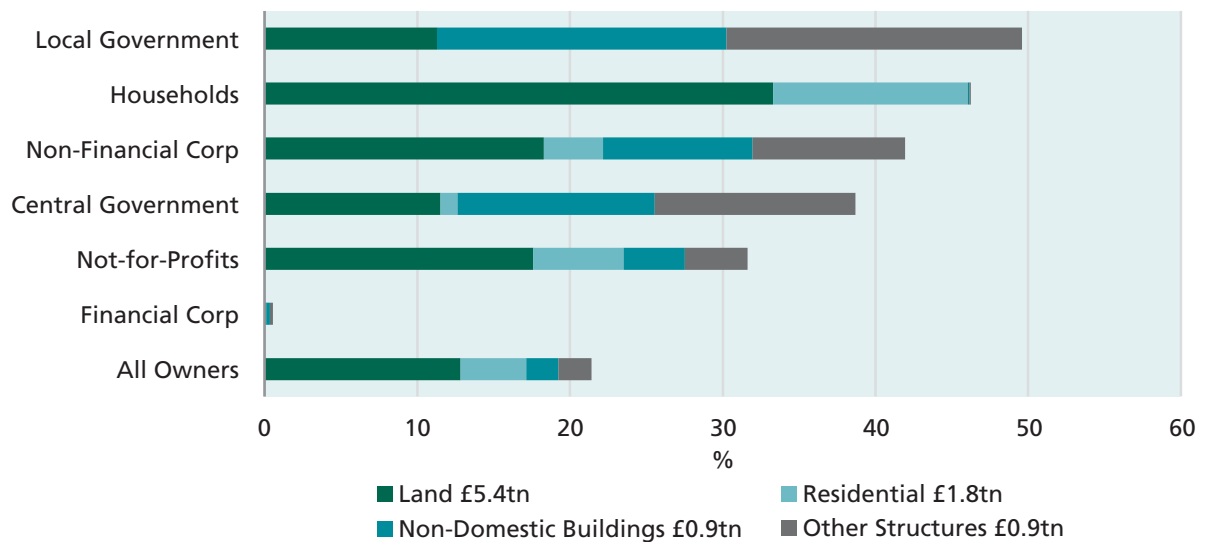
## 2. THE PROPERTY STOCK

Figure 2.2: Value of Property Assets held by Broad Owner Type, end-2018



Source: ONS

Figure 2.3: Property Assets as a Proportion of Total Assets by Broad Ownership Type, end-2018



Source: ONS

Figure 2.3 shows the dependence of owner-types on property, shown on the partial measure (i.e. not taking account of liabilities) as a fraction of their gross assets:

## 2. THE PROPERTY STOCK

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- Local Government appears as the most exposed: its holdings of land and non-residential structures are not large relative to other owners; its high dependence arises more from the low volume of financial assets in their balance sheets; the same considerations apply to Central Government's 39% exposure to property.
- Households hold 46% of gross assets in property, due mainly to their dominant, 76%, share in total land value: economically, this is the most significant of the figures shown, given the large size of Household balance sheets, and the potential impacts of changing household wealth on consumption.
- In terms of asset value, Financial Corporations have minimal property holdings – primarily their own operational assets – though their true exposure to property market risk arises from their role as lenders and, to an extent, asset managers.
- Finally, Not-for-Profit institutions, despite the social housing holdings of Housing Associations, figure as relatively small owners of property assets overall and less exposed to property as a fraction of gross assets.

Ideally, economic dependence on property as a store of wealth would be demonstrated by net wealth in property (less associated liabilities) as a fraction of overall net worth but such a metric cannot be derived from the ONS data. For Non-Financial Corporations and Central Government, the crude comparison of gross property assets with net worth is especially difficult to interpret since their net worth is negative (reflecting large liabilities in equity issuance and in borrowings). For those owner types with positive net worth, property (land and buildings combined) is equivalent to 34% of net worth for Financial Corporations, 70% for Local Government, 54% for Households and 49% for Not-for-Profits.

### 2.4 'Investible' Commercial Real Estate

This section measures the total stock of commercial real estate assets, excluding residential property, which is dealt with in Section 4. Two primary sources, estimated up to end-2018, are used to derive the figures:

- Rateable value – taken as a close proxy for market rental value – and floorspace data from the Valuation Office Agency (VOA) and Scottish Assessors Association, for selected property use types reflecting the bulk of the invested stock; and
- Estimates of total capital value generated by capitalising rateable values at a yield based on MSCI data, with an upward adjustment to reflect the more secondary nature of the total stock against that held in the investment portfolios covered by MSCI.

The classification of VOA use types into Retail, Office and Industrial is in line with the familiar types found in investment portfolios: the Other Commercial category covers a wide range of accommodation, automotive, sports and leisure types, but is dominated by hotels (43% of total rental value) and petrol stations and car showrooms (16%).

## 2. THE PROPERTY STOCK

**Table 2.1: Total Commercial Stock, end-2018**

	Retail	Offices	Industrial	Other	All Sectors
Capital value (£bn)	£321	£290	£257	£83	£951
Rental value (£bn)	£23	£19	£17	£5	£64
Floorspace (m sqm)	146	106	378	48	679
Rental value per sqm	£159	£176	£44	£100	£94
Reversionary yield	7.3%	6.5%	6.5%	5.7%	6.7%

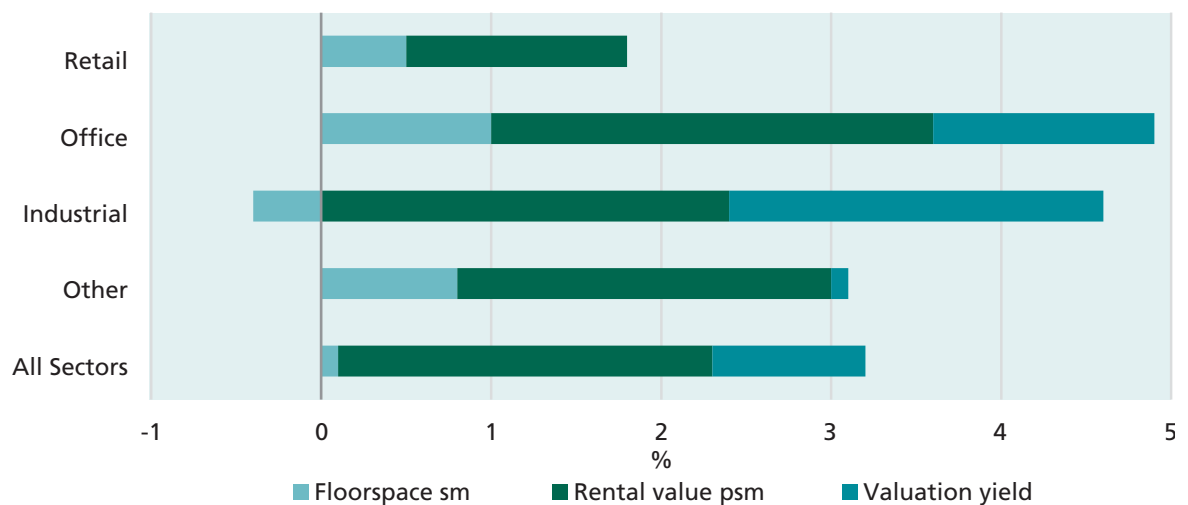
Source: Estimates based on Valuation Office Agency, Scottish Assessors Association, MSCI

Through 2018, the total value of commercial stock rose by 2%, to £951bn (Table 2.1), a second year of small rises reaching a new historic high point, which stands 11% above that at the last cyclical peak of 2006, and a 58% recovery from the trough of 2009.

- In terms of floor area, Industrial dominates with 56% of the total but, with rental values less than half the average for all commercial property and marginally higher yields, the sector accounts for only 27% of total value, against 34% for Retail and 30% for Offices.
- From 2003 to 2018, the total value of commercial stock (including net physical additions) has risen at an annual rate of 3.3%, ahead of inflation at 3.0% – although fitted trends over the period suggest growth in stock value of 2.3% p.a. is below the rate of inflation at 3.0% p.a.

As Figure 2.4 indicates, the overall value growth of 3.3% p.a. is made up of physical growth in floorspace – which has been minimal at 0.1% p.a. – with change in capital values, which are the joint product of long-term growth in rental value (at 2.2%) and changes in valuation yield (which have raised values by 0.9% p.a.).

**Figure 2.4: Total Commercial Stock, Components of Change in Value, 2003-2018**

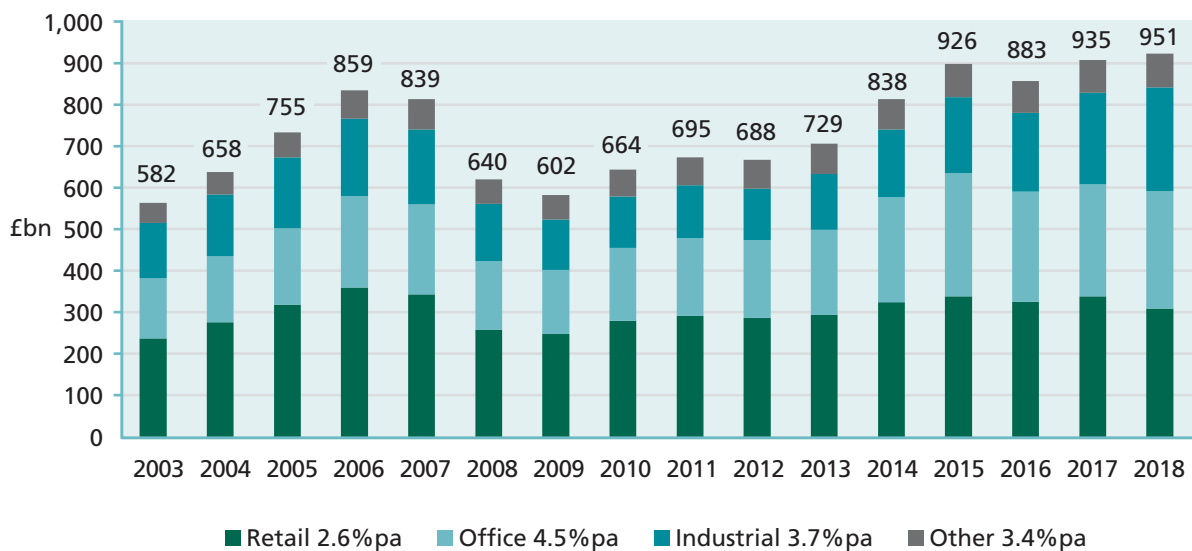


Sources: Estimates based on Valuation Office Agency, Scottish Assessors Association, MSCI

## 2. THE PROPERTY STOCK

- There have been modest gains in floorspace for Retail, Office and Industrial property, at 0.5% to 1% p.a., against a marginal shrinkage in the Industrial stock: over 15 years, Retail stock has grown by 10% and office stock by 14%, whereas Industrial stock has fallen by 5%.
- There has been little differentiation in long-run rental value growth across sectors, ranging from 1.3% p.a. for Retail to 2.6% p.a. for Offices – all below the rate of inflation.
- Relative shifts in yields have favoured Industrial, adding 2.2% p.a. to stock value, compared to no yield gain at all for Retail; the difference in yield trend mainly reflects shifts since 2012, which has seen a fall in Industrial yields of 3.9%, while Retail yields have risen by 0.26%.

**Figure 2.5: Total Commercial Stock, Capital Value by Sector, 2003-2018**



Sources: Estimates based on Valuation Office Agency, Scottish Assessors Association, MSCI

- The net result of these long-term trends is that the Office stock has shown fastest growth in value since 2003 at 4.5% p.a., closely followed by Industrial at 4.4% p.a., with Retail lagging at 1.8% p.a..
- The most marked disparity in value movements across sectors has come in 2018: for Retail stock, a rise in yield and fall in rental values both ran against modest positive shifts for other sectors, and were enough to knock 4% off the Retail share in total value in a single year.
- Over the whole period, the Retail share of total value fell from 42% to 34% by end-2018, with the offsetting gains split roughly equally between Offices (26% to 31%) and Industrials (23% to 27%).



### 3. COMMERCIAL REAL ESTATE INVESTMENT

This section estimates that part of the commercial real estate stock currently held by investors – the invested stock – split into categories showing types of investor and property and region segments commonly used in market analysis. The results are based on three primary sources:

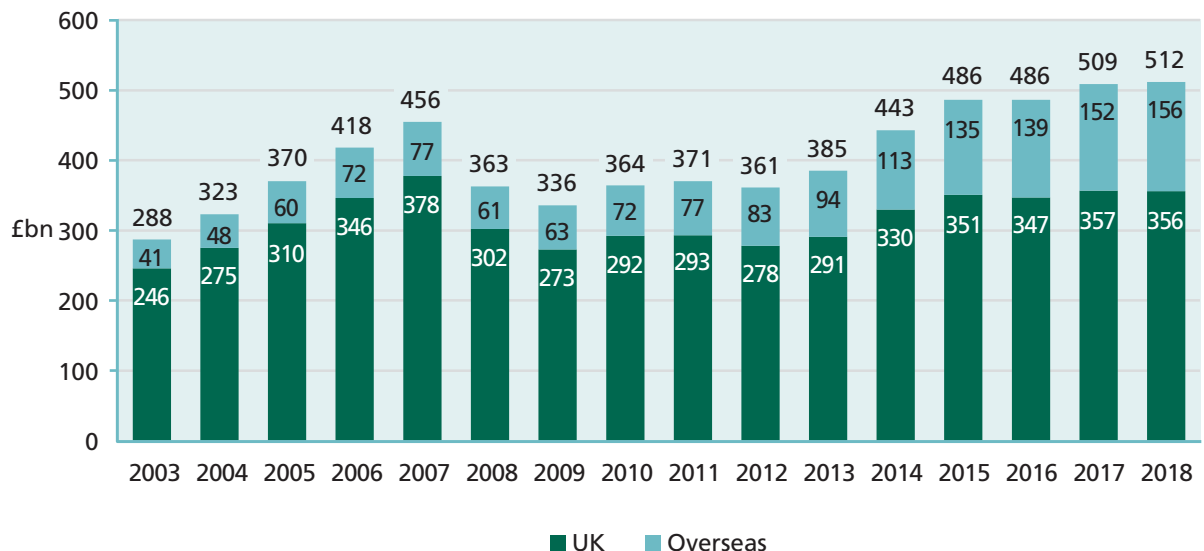
- Specially commissioned analysis from MSCI's databank of investment properties, which provides a full matrix of investor types and market segments totalling £249bn in assets at end-2018, amounting to 49% of the authors' estimate of total invested stock: MSCI covers a large proportion of portfolios for direct institutional investors, such as insurance and pension schemes, and indirect holdings through open-ended investment vehicles but lower proportions of other categories, such as unlisted property companies and overseas owners;
- RCA data, which track investment transactions (£51bn in 2018), can be accumulated over time to estimate current holdings for investor types that are lightly represented in the MSCI figures, and to show net capital flows in the market year by year; and
- PFR's register of unlisted investment funds, which extends beyond MSCI's coverage for some fund types and provides additional information on fund styles.

These base data are fleshed out by many supplementary sources from industry reports and individual company accounts.

Given the availability of data, the objective of the exercise is to classify 'ownership' by the form of investment vehicle in which it is held, not by final end-investors. Thus, the figures shown for insurance and pension funds are directly-held assets only and not their additional exposure to property through indirect holdings in unlisted funds or listed companies. The figures cover the gross asset value of equity investments and excludes the rising amount of direct and indirect investment in real estate loans.

#### 3.1 Trends and Changes in Invested Stock

**Figure 3.1: Invested Commercial Stock, Capital Value by Investor Origin, 2002-2018**



Source: Estimates based on data from MSCI, RCA and other sources

### 3. COMMERCIAL REAL ESTATE INVESTMENT

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Reflecting the modest rise in market rental values and fall in yields through 2018, the value of invested stock rose fractionally, from £509bn to £512bn, a figure 12% above the previous peak in 2007 and 53% above the cyclical low point of 2009 (Figure 3.1). The chart also shows the most marked shift in the investment market, i.e. the rise in the share of overseas owners; this will be highlighted after a discussion of trends in total stock.

- In 2018, the minimal (0.7%) rise in value of invested stock compares the net gain in capital value of 0.6% shown by the MSCI Annual Index – in turn the result of a 0.6% rise in overall rental values plus a 0.5% gain in values from a fall in yields, after adjustments for capital spending.
- The slightly slower growth in total invested stock than the 1.7% growth in total investible stock shown in Section 2 can be attributed to the relatively unfavourable weighting of segments in the invested stock, in particular a higher exposure to Shopping Centres, which showed the weakest capital growth in 2018, and a lower exposure to Industrials and other commercial property that had the fastest capital growth.
- Over the full period since 2003, the invested stock has grown at an annual rate of 3.9% against a 2.0% p.a. capital growth recorded by MSCI; the difference is attributable to both a growth in the total stock of space and a rise in the invested share of total stock, which, according to estimates based on different data sources from Section 2, has risen from 49% in 2003 to 54% in 2018.
- Within the total, the stock held by UK investors has fluctuated through the cycle, without any marked trend since 2007; at the end of 2018 their holdings were fractionally down on the previous year – a product of net disinvestment and near-zero capital growth, and still 6% below their peak value in 2007.
- Growth in invested stock over the last decade has come from a more than doubling of the value of assets held by overseas investors, whose share of the total rose from 14% in 2003 to 31% in 2018 – a proportion that has increased in all 15 years through the period apart from 2007 and 2008, and by close to 1 or 2 percentage points in each of the last 10 years.

#### 3.2 Invested Stock by Investor type

Table 3.1 shows the split of the invested stock by investor type, with changes in market share over the last year and over the full period of the analysis since 2003.

The invested stock is widely spread across a number of owner types and forms of vehicle, with no one category exceeding 15% of the total. The four largest categories – namely UK unlisted funds, listed and private property companies plus overseas unlisted funds – together make up 50% of the total market. Looking across both UK and overseas owners:

- The largest broad owner type category might be termed ‘direct private investors’ – private property companies, estates and charities, individual investors and sovereign wealth funds who together hold £148bn, representing 29% of the total market.
- Indirect investment vehicles in their unlisted form follow close behind with £132bn asset value, or 26% of the total market; indirect vehicles in the form of listed companies hold £90bn, 17% of the total.

### 3. COMMERCIAL REAL ESTATE INVESTMENT

**Table 3.1: Commercial Investment Stock by Owner Type, 2018**

UK Investors	Value (£bn)	Share 2018 (%)	Change in market share (%)	
			From 2017	From 2003
Insurance Direct & Funds	44	9	0.6	-11
Pension Funds	43	8	0.5	-2
Unlisted & Collective Schemes	84	16	0.4	7
Listed Companies & REITs	71	14	-0.1	0
Private Companies	55	11	-0.3	-6
Estates & Charities	23	4	-0.5	-1
Private Investors	14	3	-0.3	0
Other Owners	22	4	0.2	-1
<b>Sub-total</b>	<b>356</b>	<b>69</b>	<b>-0.7</b>	<b>-16</b>
<b>Overseas Investors</b>				
Unlisted & Collective Schemes	48	10	-0.6	..
SWF & Government	29	6	-0.3	..
Private Companies, Individuals	27	5	0.4	..
Listed Companies & REITs	18	4	0.6	..
Insurance & Pension Funds	13	3	0.6	..
Other Owners	20	4	-0.1	..
<b>Sub-total</b>	<b>156</b>	<b>31</b>	<b>0.7</b>	<b>16</b>
<b>Total</b>	<b>512</b>	<b>100</b>		

Sources: Estimates based on data from MSCI, RCA, PFR and other sources

- The direct portfolios of UK insurance and pension funds – once regarded as the bedrock of the market – at £88 bn, total 17% of the market, with overseas institutional funds adding a further 3%.

In the course of a year, changes in values by owner and in market shares arise predominantly through general movements in market value, modulated across owner types by their differences in portfolio structure, plus net capital flows between market participants. The impact of changing market values will shift market shares significantly in years when there are strong differences in capital growth for market segments where there are also large differences in portfolio weights – most obviously exposure to the larger and more volatile markets. 2018 was a year of large variation in the performance of different segments of the market:

### 3. COMMERCIAL REAL ESTATE INVESTMENT

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- Around a market average of near-static capital values, the span in rates of capital growth – ranging from 11% for Shopping Centres to 13.7% for Industrials in southern England – was among the largest on record.
- The main feature of the RCA transactions data, as for many years, was a little over £4bn net investment by overseas owners balanced by net sales by UK owners – although this represented transaction volumes between those categories well below the £7bn recorded in 2017.
- By type of owner, the greatest shifts were due to large net sales by UK private companies and overseas indirect funds, balanced by substantial net purchases spread across overseas listed companies, UK institutions, overseas listed companies and private investors.

Longer term shifts in ownership since 2003 (the final column of Table 3.1) are dominated by the doubling in the share of the market held by overseas investors. Unfortunately, it is not possible to measure the weights of investor types within the overseas total. Across other types:

- Insurance funds contributed most – 11% – to the shrinkage in the share of UK investors: moreover, this has been the only owner category to show a fall in the absolute value of assets held over the period, with a 24% fall, from £58bn to £44bn, attributable to the closure of with-profits life funds to new investment.
- The other substantial loss in market share has been from private companies, although in this case the 7% fall has been coupled with a gain of 10% in the value of assets held.
- Among UK investors, the major declines in share over the last 15 years have been due to a drop in the overall total held by institutional direct investors – insurers, pension funds and traditional estates – from 36% in 2003 to 22% in 2018, together with the drop in share of private companies and individuals, from 20% to 13%.
- These falls have been balanced by a tripling in the value of assets held in unlisted funds, which has taken their share of the total market from 9% to 16%. Despite the introduction of UK REITs in 2007, the share of listed companies/REITs has remained static at 14%.

### 3. COMMERCIAL REAL ESTATE INVESTMENT

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#### 3.3 Invested Stock and Market Segments

Table 3.2 splits the investment market into major market segments defined by a combination of location and property type. By far the most marked differentiation in portfolio structures across investor types is between UK and overseas-based investors, which are shown separately.

Offices remain, at 43% of the total, the largest element of investor portfolios, showing a marginal increase over the end-2017 figure of 42%. Changes in segment weights through 2018 were dominated, however, by the exceptional spread in market performance between the Retail and Industrial sectors:

- On MSCI Annual Index figures, capital values for Retail sector fell by 6% against an 11% rise for Industrials – the biggest range across the two sectors on record, resulting from falling rental values and rising yields in Retail against rising rental values and falling yields in Industrials.
- This gap in performance drove the main change in structure over the year – across all investors, a 2.4% fall in Retail weighting and a 1.5% rise in Industrial weights: since 2003 Retail weights have fallen from around one-half to less than one third of the total.
- Changes in the split of stock between UK and overseas owners is the result of net investment flows, which in 2018 reflected the long-established pattern of a net sale by UK investors (£3.0bn) and a large net purchase by overseas investors (£3.4bn) of Central London offices.
- Overall, UK investors were net sellers in all market segments, apart from marginal net purchase in Offices outside Central London and Industrials; conversely, overseas investors were net buyers in segments, apart from Offices outside London and southern Industrials, all Retail and Office segments except Rest of UK Offices, and net sellers of £700m in Industrial and £350m in Other Commercial assets.

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**Table 3.2: Invested Stock by Market Segment, end-2018**

	£bn by investor origin			% of total by investor origin		
	All	UK	Overseas	All	UK	Overseas
<b>Retail</b>	<b>163</b>	<b>141</b>	<b>23</b>	<b>32</b>	<b>40</b>	<b>15</b>
Standard Retail South East	50	41	9	10	11	6
Standard Retail Rest UK	20	19	1	4	5	1
Shopping Centre	51	43	7	10	12	5
Retail Warehouse	43	38	5	8	11	3
<b>Office</b>	<b>220</b>	<b>108</b>	<b>112</b>	<b>43</b>	<b>30</b>	<b>71</b>
City	66	19	47	13	5	30
West End, Mid Town	79	44	34	15	12	22
Rest South East	54	29	25	11	8	16
Rest UK	21	15	5	4	4	3
<b>Industrial</b>	<b>77</b>	<b>73</b>	<b>5</b>	<b>15</b>	<b>21</b>	<b>3</b>
South East	50	47	3	10	13	2
Rest UK	27	26	1	5	7	1
<b>Other Commercial</b>	<b>52</b>	<b>34</b>	<b>17</b>	<b>10</b>	<b>10</b>	<b>11</b>
<b>Total</b>	<b>512</b>	<b>356</b>	<b>156</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Estimates based on multiple sources including MSCI and RCA.

In summary, therefore, against 2017 the main shifts through the year were:

- A 2.4% fall in overall Retail weightings – a large shift by historic standards, driven mainly by weak market performance but also by net sales from both UK and overseas investors.
- This was offset mainly by a 1.5% rise in Industrial weight, driven by relatively strong market performance and, for UK investors, substantial net purchases through the year.
- For overseas investors, trading in 2018 fell in line with their long-established pattern of buying heavily in Central London offices, coupled with significant net purchases in provincial Retail and Industrial, in Shopping Centres and Retail Warehouses.
- UK investors capital flows also fell into a well-established pattern of trading out of Central London offices with flows tending to follow the direction of recent market performance, down-weighting in Retail segments and increasing weights in Industrials.

### 3. COMMERCIAL REAL ESTATE INVESTMENT

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Shifts through the year have further widened the large differences in the composition of UK and overseas investor portfolios:

- Overseas investors hold far higher weightings in London and South Eastern Office markets, accounting for 68% of their holdings against only 26% for UK investors;
- That concentration is balanced by Retail weights for overseas owners 25% below UK owners, and Industrial weights 18% lower than UK owners;
- Compared to 2013 (the earliest year for which consistent figures are available):
- Overall Retail weights have fallen by 9%, balanced by 4% gains for both the Office and Industrial sectors;
- UK owners have markedly cut exposure to provincial Retail, Shopping Centres and Retail Warehouses, together by 11%, switching toward industrials with a rise in weights of 8%, and Other Commercial with a rise in weights of 2%; and
- For overseas owners, weights in London and South East Offices have risen by 7%, and in South Eastern Retail by 2%, balanced by falls in Retail segments with the exception South Eastern Retail, with little change in their minimal Industrial exposure.



## 4. RESIDENTIAL PROPERTY

The total value of UK residential stock shown by the ONS (from Section 2.1) has been used to estimate investment in the rented sector and, within that, the value of residential property held in large-scale professionally managed portfolios.

### 4.1 Private Rented Sector (PRS)

From the £6.8tn total value of the residential stock at the end of 2018, the size and structure of the PRS has been evaluated.

The bulk of the PRS is owned by small-scale private rented 'Buy-to-Let' (BTL) investors. In 2018, individual landlords owned 83% of privately-rented properties, whereas companies owned just 13% of privately-rented properties; the remaining 4% of the stock is classified as 'other' (neither individuals nor part of a company). Only 3% of privately-rented properties are held in portfolios where the portfolio contains over 100 properties and only 1.8% of landlords own properties that are valued in total at over £5m.

The total value of the PRS is estimated to be £1.2tn at the end of 2018, up by 4.6% over 2017, much of this managed by individual landlords. The total size of the investible PRS market was estimated at £205bn at the end of 2018, up from £196bn at the end of 2017. Whilst the total number of PRS dwellings increased by only 1.1% over the year, the stock of dwellings in the BTR sector grew by 29% over the same period. The BTR sector now comprises 0.5% of the overall PRS, by number of dwellings, and continues to see rapid growth, albeit from a low base.

As a result, the authors estimate that approximately £6bn was invested in the PRS (BTR) sector at the end of 2018. This £6bn represents completed BTR units, when also allowing for the BTR units that are under construction or in planning this invested figure of £6bn rises to approximately £30bn, indicative of the scale of the pipeline compared to existing stock.

**Table 4.1: Private Rented Sector Summary**

	2017	2018	Growth (%)
Total value of residential stock	£6,344bn	£6,759bn	6.5
Total value of private rented dwellings	£1,152bn	£1,205bn	4.6
Invested PRS	£32bn	£35bn	9.4

Sources: ONS, British Property Federation, estimates based on LSL (England, Wales and Scotland) and Ulster University rental values and yields.

## 4. RESIDENTIAL PROPERTY

### 4.2 Purpose Built Student Accommodation (PBSA)

The total size of the investible PBSA market was estimated at £55bn at the end of 2018 up from £49bn at the end of 2017.

Table 4.2 shows a number of statistics for the PBSA market in the UK. During 2018, 25,000 bed spaces were added to the stock of rooms provided by the sector, an increase of 4.2% over 2017. Average room values increased by 6.5% from 2017 to 2018. Combined, this resulted in an increase of the value of the sector by 10.9% over 2017.

The private sector now provides almost half of the number of beds in the sector, 47% at the end of 2018, up from 43% at the end of 2017. The percentage of rooms delivered by the top-10 providers decreased a little in 2018 from 32% in 2017 to 31% in 2018, a decrease of 3%.

The specialist listed sector represented 4.3% of the total value of investible stock at the end of 2018, up from 3.9% at the end of 2017. In terms of rooms, the listed sector's representation of the total investible market was static over 2017/2018.

**Table 4.2: Investible Student Accommodation Universe**

	2017	2018	(%) Change*
Capital Value (£bn)	49	55	10.9
Number of rooms	602,000	627,000	4.2
Average value per room, £	82,000	87,500	6.5
Room provision by the private sector	43%	47%	9.3
Room provision by top-10 operators	32%	31%	-3.1
Capital value held by specialist listed companies (£bn)	3.9	4.3	10.3
Rooms provided by listed operators	10%	10%	0

Sources: Savills, CBRE, Cushman and Wakefield, Company Accounts.

\*Differences may arise due to rounding of underlying data.

## 4. RESIDENTIAL PROPERTY

In conclusion, an analysis of the commercial investment universe of institutional investors shows that the traditional sectors (of Retail, Office and Industrial) make up £868bn in commercial property value. New estimates have been provided for alternative sectors, previously covered under 'Other', of £83bn, further details of which appear in Appendix D.

**Table 4.3: Investible Commercial Property (£bn)**

	2017	2018	Growth (%)	Invested	% Invested
Office	277	290	5%	220	76%
Retail	351	321	-9%	163	51%
Industrials	226	257	14%	77	30%
PRS (BTR)	5	6	35%	6	100%
PBSA	57	61	6%	34	56%
Hotels	-	50	-	10	20%
Self-Storage	11	13	12%	7	54%
Healthcare (care homes only)	36	42	15%	13	31%
<b>Total universe</b>	<b>964</b>	<b>1040</b>	<b>8%</b>	<b>531</b>	<b>51%</b>

Sources: Various

## APPENDIX A: ADDITIONAL DATA

**Table A.1: Property Universe and Components by Sector, 2018**

All property	Rental Value £ psm	Floorspace m sq m	Rental Value £bn	Reversionary Yield %	Capital Value £bn	Capital Value £psm	Yield Impact
2003	£67.20	668.6	£45.40	7.80%	£582.10	£870.63	
2004	£69.50	671.6	£46.80	7.10%	£658.50	£980.49	10%
2005	£71.90	674.6	£48.40	6.40%	£755.00	£1,119.18	11%
2006	£74.60	673.8	£50.40	5.90%	£859.30	£1,275.30	8%
2007	£78.80	673.2	£53.30	6.40%	£838.60	£1,245.69	-8%
2008	£79.80	675.1	£53.60	8.40%	£639.40	£947.12	-24%
2009	£75.60	676.5	£50.80	8.40%	£601.60	£889.28	0%
2010	£76.90	671.9	£51.20	7.70%	£663.60	£987.65	9%
2011	£78.00	671.4	£52.30	7.50%	£694.80	£1,034.85	3%
2012	£78.30	665.0	£52.70	7.70%	£688.40	£1,035.19	-3%
2013	£79.90	670.7	£53.90	7.40%	£729.20	£1,087.22	4%
2014	£84.50	673.6	£57.10	6.80%	£838.10	£1,244.21	9%
2015	£89.10	674.7	£60.20	6.50%	£925.80	£1,372.17	5%
2016	£91.90	676.0	£62.40	7.10%	£882.60	£1,305.62	-8%
2017	£93.42	£677.31	£63.27	6.77%	£935.02	£1,380.49	5%
2018	£93.47	£679.02	£63.47	6.68%	£950.83	£1,400.29	1%
<b>Retail</b>							
2003	£130.20	133.3	£17.70	7.20%	£246.20	£1,846.96	
2004	£136.00	134.2	£18.60	6.50%	£286.10	£2,131.89	11%
2005	£141.20	135.8	£19.30	5.90%	£329.60	£2,427.10	10%
2006	£145.90	136.8	£20.10	5.40%	£373.00	£2,726.61	9%
2007	£150.30	136.7	£20.80	5.90%	£355.30	£2,599.12	-8%
2008	£151.90	137.5	£21.20	7.90%	£268.00	£1,949.09	-25%
2009	£144.90	138.7	£20.30	7.90%	£257.00	£1,852.92	0%
2010	£144.90	139.4	£20.40	7.00%	£290.40	£2,083.21	13%
2011	£146.50	140.2	£20.80	6.90%	£302.10	£2,154.78	1%
2012	£146.60	141.1	£20.90	7.00%	£297.50	£2,108.43	-1%
2013	£147.90	142.0	£21.20	7.00%	£304.90	£2,147.18	0%
2014	£152.80	142.7	£22.10	6.60%	£335.80	£2,353.19	6%
2015	£156.80	143.7	£22.80	6.50%	£350.60	£2,439.81	2%
2016	£160.30	144.6	£23.50	7.00%	£336.90	£2,329.88	-7%
2017	£163.78	145.5	£23.83	6.78%	£351.54	£2,415.98	3%
2018	£159.13	146.4	£23.30	7.26%	£320.94	£2,191.94	-7%

## APPENDIX A: ADDITIONAL DATA

Table A.1 (cont'd): Property Universe and Components by Sector, 2018

Offices	Rental Value £ psm	Floorspace m sq m	Rental Value £bn	Reversionary Yield %	Capital Value £bn	Capital Value psm	Yield Impact
93.6	£120.40	93.6	£11.60	7.80%	£149.90	£1,601.50	
95.1	£122.20	95.1	£12.00	7.30%	£164.30	£1,727.66	7%
96.7	£126.90	96.7	£12.40	6.60%	£189.20	£1,956.57	11%
97.8	£133.30	97.8	£13.20	5.80%	£225.90	£2,309.82	14%
97.9	£147.70	97.9	£14.80	6.60%	£223.10	£2,278.86	-12%
98.7	£145.60	98.7	£14.70	8.70%	£170.00	£1,722.39	-24%
100.0	£129.80	100.0	£13.30	8.30%	£159.00	£1,590.00	5%
101.0	£132.50	101.0	£13.70	7.60%	£180.60	£1,788.12	9%
102.1	£136.50	102.1	£14.30	7.40%	£193.30	£1,893.24	3%
103.4	£137.80	103.4	£14.50	7.50%	£192.00	£1,856.87	-1%
104.5	£142.20	104.5	£15.00	7.20%	£210.30	£2,012.44	4%
105.1	£157.00	105.1	£16.60	6.40%	£261.20	£2,485.25	13%
105.8	£170.80	105.8	£18.10	5.90%	£305.20	£2,884.69	8%
106.0	£176.70	106.0	£18.90	6.90%	£272.70	£2,572.64	-14%
106.2	£175.39	106.2	£18.63	6.73%	£276.66	£2,605.09	2%
106.4	£175.75	106.4	£18.70	6.45%	£289.92	£2,724.81	4%
<b>Industrial</b>							
2003	£32.50	399.2	£13.00	9.60%	£135.60	£339.68	
2004	£33.20	399.5	£13.20	8.60%	£152.20	£380.98	12%
2005	£34.00	399.1	£13.40	7.70%	£174.70	£437.73	12%
2006	£34.80	396.5	£13.70	7.20%	£190.70	£480.96	7%
2007	£35.90	395.1	£14.10	7.60%	£185.50	£469.50	-5%
2008	£36.30	394.6	£14.00	9.90%	£140.90	£357.07	-23%
2009	£35.10	393.0	£13.50	10.70%	£125.30	£318.83	-7%
2010	£35.10	386.4	£13.10	10.40%	£126.80	£328.16	3%
2011	£35.10	383.5	£13.20	10.20%	£129.80	£338.46	2%
2012	£35.00	374.3	£13.30	10.40%	£127.30	£340.10	-2%
2013	£35.50	377.4	£13.40	9.70%	£138.40	£366.72	7%
2014	£37.00	379.1	£14.00	8.40%	£166.30	£438.67	15%
2015	£38.90	378.6	£14.70	7.80%	£187.00	£493.92	8%
2016	£40.40	378.5	£15.20	7.80%	£195.10	£515.46	0%
2017	£42.58	378.4	£16.11	7.13%	£225.93	£597.05	9%
2018	£44.14	378.3	£16.70	6.50%	£256.92	£679.15	10%

## APPENDIX A: ADDITIONAL DATA

Table A.1 (cont'd): Property Universe and Components by Sector, 2018

Other	Rental Value £ psm	Floorspace m sq m	Rental Value £bn	Reversionary Yield %	Capital Value £bn	Capital Value £psm	Yield Impact
2003	£70.80	42.5	£3.00	6.00%	£50.40	£1,185.88	
2004	£72.30	42.7	£3.10	5.50%	£55.80	£1,306.79	9%
2005	£74.60	43.0	£3.20	5.30%	£61.50	£1,430.23	4%
2006	£77.40	42.7	£3.40	4.90%	£69.70	£1,632.32	8%
2007	£80.60	43.5	£3.60	4.80%	£74.80	£1,719.54	2%
2008	£82.00	44.3	£3.70	6.10%	£60.60	£1,367.95	-21%
2009	£81.70	44.8	£3.70	6.20%	£60.40	£1,348.21	-2%
2010	£83.90	45.1	£3.90	5.90%	£65.80	£1,458.98	5%
2011	£85.10	45.7	£4.00	5.70%	£69.70	£1,525.16	4%
2012	£87.10	46.2	£4.10	5.70%	£71.60	£1,549.78	0%
2013	£88.90	46.8	£4.10	5.50%	£75.50	£1,613.25	4%
2014	£93.40	46.7	£4.40	5.90%	£74.80	£1,601.71	-7%
2015	£97.00	46.6	£4.60	5.50%	£82.90	£1,778.97	7%
2016	£99.40	46.9	£4.70	6.10%	£77.90	£1,660.98	-10%
2017	£99.61	47.2	£4.70	5.81%	£80.89	£1,713.78	5%
2018	£99.58	47.9	£4.77	5.74%	£83.04	£1,733.68	1%

Table A.2: Yield Impact

	Retail	Office	Industrial	Other Commercial	Total
2003					
2004	11%	7%	12%	9%	10%
2005	10%	11%	12%	4%	11%
2006	9%	14%	7%	8%	8%
2007	-8%	-12%	-5%	2%	-8%
2008	-25%	-24%	-23%	-21%	-24%
2009	0%	5%	-7%	-2%	0%
2010	13%	9%	3%	5%	9%
2011	1%	3%	2%	4%	3%
2012	-1%	-1%	-2%	0%	-3%
2013	0%	4%	7%	4%	4%
2014	6%	13%	15%	-7%	9%
2015	2%	8%	8%	7%	5%
2016	-7%	-14%	0%	-10%	-8%
2017	3%	2%	9%	5%	5%
2018	-7%	4%	10%	1%	1%

## APPENDIX B: SUMMARY OF DEFINITIONS AND SOURCES FOR OWNERSHIP TYPES

**Table B.1: Summary of Definitions and Sources for Owner Types**

Investor type	Description of type	Sources and approach
UK insurance funds	Insurance company long term funds, unit-linked life & pension company funds, managed property funds.	ONS's MQ5: Investment by Insurance Companies, Pension Funds and Trusts. 2018 data not available at time of writing, so updated to end-2018 by MSCI capital growth since end 2015 and MQ5 2018 net investment.
UK segregated pension funds	Own-account property portfolios of funded pension schemes managed either internally or by 3rd parties.	
UK & Channel Island domiciled collective investment schemes	Authorised and unauthorised property unit trusts and similar, limited partnerships, etc., domiciled in the UK and Channel Islands. Includes the Channel Islands property investment companies but excludes the insurance company managed property funds.	Primarily based on individual fund estimates generously supplied by PFR; excludes funds not directly investing in completed UK buildings, and funds' indirect holdings. Supplemented with long term transactions data from RCA/PD.
UK REITs & listed property companies	Companies listed on the main market of the London Stock Exchange and incorporated in the UK under the REIT and "Real Estate Holding & Development" categories.	Derived company-by-company from their latest balance sheet accounts, adjusted to end-2018 on the basis of MSCI capital growth. Excludes non-UK investments and any fund or JV exposures counted as a collective investment scheme; also excludes land and developments.
UK private property companies	Other companies undertaking activities classified under the 2007 SIC either as "the development of building projects", "the buying and selling of own real estate", or "the renting and operating of own real estate".	Large investors derived from their accounts (where available), otherwise based on mid-2013 estimate updated to end-2018 on the basis of MSCI capital growth and net transactions from RCA.
UK traditional estates & charities	Charities & traditional landed estates.	Based on mid-2013 estimate updated to end-2018 on the basis of MSCI capital growth and net transactions from RCA/PD.
UK private investors	Individuals, family trusts, HNW syndicates.	Based on mid-2013 estimate updated to end-2018 on the basis of MSCI capital growth and net transactions from RCA.
UK other	Mainly local authorities and pub owners.	End-2018 estimated updated with MSCI capital growth and RCA net transactions data.
Overseas	All those domiciled outside the UK and Channel Islands, excluding those foreign owned fund managers, insurance companies and pension funds investing UK sourced capital.	Based on mid-2013 estimate updated to end-2018 on the basis of MSCI capital growth and net transactions from RCA.



## APPENDIX C: TOTAL PROPERTY STOCK – SOURCES AND METHODS

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ONS publishes annual estimates of ‘non-residential’ buildings in its Blue Book publication; these estimates form part of the national balance sheet.

The ONS provides a perspective on the ownership on non-residential buildings, in particular the four ‘institutional’ sectors widely used in national accounts: – financial corporations, non-financial corporations, government and ‘households and non-profit institutions serving households’.

However, financial corporations’ relating only to banks and building societies, whilst other financial institutions, such as insurance companies and pension funds are included with ‘non-financial corporates’ in ‘non-financial corporations’. The ‘households and non-profit institutions serving households’ relates mainly to the ownerships of charities, museums and galleries, etc., and excludes the holdings of private individuals. The central and local government owned non-residential property, which is derived from their respective balance sheets. The immediate use of ONS sources to determine the commercial investible stock is limited, it serves merely as the representation of national wealth and the importance of real estate stock as part of national wealth.

### C.1 Commercial Property Stock: Sources and methods

This section uses established methods to estimate the floorspace, rental value and capital value of all UK space from official statistics (National Accounts, VOA Non-Domestic Rating lists) with some additional inputs (primarily yields) based on MSCI. The estimation uses the rateable value the assessment of the VOA in England & Wales (and its Scottish counterpart) of the annual rent a non-domestic property would command if it were let on the open-market at a particular point of time (the “antecedent date”). These rateable values are usually re-set every five years to reflect market changes in the rental values, which underpin the assessments of rateable values. The most recent revaluation used for this report is from 2016.

Estimations for 2017 and 2018 are made from rateable values capitalised by a yield to form the basis of this research’s estimates of commercial property’s rental value (and, after being capitalised by a yield, also its capital value). To ensure that these periodically-determined rateable values reflect contemporaneous conditions, this research adjusts these values by IPD rental growth for the period following the latest antecedent date.

IPD’s UK indices are based on the rental and capital valuations (undertaken by professional valuers) of over 20,000 investment-grade properties. IPD rental growth reflects changes in the open market rental value of these properties. In theory, there should be a correspondence between the change in rateable values between antecedent dates and IPD rental growth over the corresponding period.

A distinction of investor types has been made by using primarily transaction data from RCA and PFR fund data. RCA compiles statistics on commercial property transactions in the UK and globally. The data has been used in a number of ways to support various estimates of the investment universe; its main uses have been to estimate the stock held by private property companies, overseas and private investors and the characteristics of such investors.

## APPENDIX C: TOTAL PROPERTY STOCK – SOURCES AND METHODS

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An extensive set of information is provided for each property and transaction, including the transaction price, yield, floorspace, address, sub-sector, etc.; the name(s) of the buyer and seller are listed, together with their nationalities and RCA's classification of their type.

RCA's categorisation of buyers and sellers, however, does not correspond to the types adopted by this research. Furthermore, multi-national organisations, such as Aegon, AXA REIM, ING REIM (as was), LaSalle Investment Management, etc., are typically classified according to the nationality of their parent, even though the transactions may relate to their UK-domiciled subsidiaries and funds drawing on UK sourced capital. The methodology of this research, however, is to define them as UK investors. A number of the organisations in the RCA data were re-coded, therefore, to match the investor types used in this research, with a judgement made (sometimes using information privately supplied by the investor) on whether or not a multi-national organisation classified by RCA as 'overseas' was primarily transacting as a UK domiciled investor. RCA sector information has been matched to standard MSCI sectors for further breakdown by asset types and geography.

### C.2 Alternative Sectors: Sources and Methods

Market estimations for alternative markets have been made using a number of different sources, not all of which are available on an annual basis.

This compendium of sources is not intended to be exhaustive or to constitute a recommendation or quality review. There are many other useful one-off reports, market reviews or discontinued data series. The purpose of this list is to provide a collection of on-going data provision sources, significant industry research or useful organisations within a sector. Sources include raw data providers and secondary reported information. Table C.1 provides an overview of mostly regularly available sources used to provide estimates for Sections 2 and 3.

Residential investments market estimates were derived using the ONS dataset as a base and further breakdowns for PRS by other government sources.

Estimates for the PBSA, hotel, healthcare and self-storage sectors rely primarily on private agent information such as JLL, CBRE, Knight Frank, BDO, etc. A fuller list is provided in Table C.1.

## APPENDIX C: TOTAL PROPERTY STOCK – SOURCES AND METHODS

Table C.1: Sources of Data

Real Estate Sector	Source	Title	Availability	Content
Public Estate	Whole of Government Accounts (WGA), HMT	Whole of Government Accounts	Annual	Consolidated financial statements for the UK public sector. The WGA replaces the discontinued National Asset Register (NAR) but provides only an overall asset value and broad segmentation of infrastructure and land and buildings.
Public Estate	Chartered Institute of Public Finance and Accountancy (CIPFA)	Local Authority Assets Statistics	Annual	A publication analysing Local Authority balance sheets including information on operational, non-operational and investment assets. The publication is available as a spreadsheet.
Charities	Charity Commission	Charity Database	Annual and Quarterly data and reporting.	The Charity Commission provide overview data on their website that includes operational and investment assets. A prototype database allows a search of individual charities, providing the same overview data and a link to financial reports in which more detail regarding held assets can be extracted.
Residential	Ministry of Housing, Communities and Local Government	Live tables on dwelling stock	Data is provided annually, update dates differ depending on the country source.	Number of dwellings by tenure, provided in tables for GB and constituent countries. UK and Northern Ireland tables are discontinued.
Residential	Department for Communities (Northern Ireland)	Northern Ireland Housing Statistics	Annual (2017-2018 data was released in Dec 2018)	Number of dwellings by tenure. Median weekly rent for private and social rent. Also for rest of UK by region and country
Residential	Department for Work and Pensions	Family Resources Survey	Annual (2017-2018 data was released in March 2019)	Housing tenure for the UK, by country and region. Median weekly rent/mortgage by tenure for the UK, by country and region.
Residential	MSCI	IPD UK Annual Residential Property Index	Annual	Annual index of residential property returns. Segmentation is provided by 'residential market lets', 'residential non-market lets' and 'residential unattributable'.
PRS	ONS	Index of Private Housing Rental Prices, UK	Monthly	Index of private rents and private rental growth in UK, by country and region.

## APPENDIX C: TOTAL PROPERTY STOCK – SOURCES AND METHODS

Table C.1 (cont'd): Sources of Data

Real Estate Sector	Source	Title	Availability	Content
PRS	ONS	Private Rental Growth Measures, a UK Comparison	Quarterly	A publication comparing the ONS figures from the Index of Private Housing Rental Prices, owner occupation figures and privately produced rental data.
BTR	BPF	BTR Map of the UK	Quarterly	Map and data tables detailing BTR in the UK with London and Region segments. Segmentation also provided for pipeline details, type of deliverer. Main categories of data are completed BTR schemes, schemes under construction and schemes in planning.
PBSA	Cushman and Wakefield	UK Student Accommodation Report	Annual	Statistics and commentary provide information on demand, supply and investment market. Data is segmented by region, type of room, and by private/university provider. Rent and yield data are provided.
PBSA	JLL	UK Student Housing Quarterly Bulletin	Quarterly	Investment volumes, yield forecast.
PBSA	JLL	Student Housing, University Partnerships in the UK	Annual, since 2016	Completed and pipeline partnership beds. Growth of Design, Build, Finance and Operate (DBFO), PBSA and direct let beds.
Healthcare	Laing Buisson	Care Homes For Older People UK Market Report	Annual	Data and information on care services and number of care home beds. Profiles of major providers, government policy and legislation, operational metrics, demand and supply.
Healthcare	MSCI	MSCI UK Healthcare Annual Property Index	Annual	Annual index of healthcare property returns. Some segmentation provided for prime (with a broad regional split) and secondary assets.
Healthcare	Department of Health	Department of Health Annual Report	Annual	Annual report that provides the value of the Department of Health buildings.

## APPENDIX C: TOTAL PROPERTY STOCK – SOURCES AND METHODS

Table C.1 (cont'd): Sources of Data

Real Estate Sector	Source	Title	Availability	Content
Hotels	Institute of Hospitality	Spotlight on Hospitality	Annual	A professional organisation requiring membership that provides continuing professional development, market intelligence and market reports. 'Spotlight on Hospitality' provides data on market size.
Hotels	UK Hospitality	The Economic Contribution of the UK Hospitality Industry	Annual	Measures of economic impact, GVA, employment, industry comparisons and growth scenarios.
Hotels	Knight Frank	UK Hotel Trading Performance Review	Annual, launched in 2017	Hotel revenue, cost and profitability. London and regional segmentation provided.
Hotels	Horwath	European Hotels and Chain Report	Annual, launched in 2017	A report examining the same data metrics across twelve European countries including the UK. As well as assessing the number of hotel rooms, the report assesses the number of rooms attributable to chain hotels and provides chain penetration for each country, including segmentation for the top 10 chains and domestic and international brands.
Hotels	BDO	Hotel Britain	Annual	UK hotel operational performance statistics with London, regional and hotel category segmentation. Economic overview and tourism outlook are discussed with development trends and pipeline assessed.
Hotels	BDO	Hotel Quarters	Quarterly	Quarterly hotel operational performance with regional segmentation.
Hotels	HVS	European Hotel Valuation Index	Annual	An annual valuation index (2009 to 2018) covering 33 European cities.
Hotels	HVS	UK Hotel Market Tracker	Quarterly	Summary information on operational performance, supply and transactions.
Hotels	MSCI	IPD Pan Europe Annual Hotel Index	Annual	The index covers 17 European countries and compares the hotel sector to commercial property sectors. There is no country segmentation.

## APPENDIX C: TOTAL PROPERTY STOCK – SOURCES AND METHODS

Table C.1 (cont'd): Sources of Data

Real Estate Sector	Source	Title	Availability	Content
Self Storage	Self Storage Association UK (SSAUK) / Cushman and Wakefield	Annual Industry Report	Annual	The Self Storage Association UK annual Industry report. The report includes market metrics such as number of units, occupancy, room rents, turnover, size of stores, operating costs, top 10 operators and an economic overview. The report includes an investor, customer and public survey.
Self Storage	FEDESSA (European Self Storage Association)	European Self Storage Annual Survey	Annual	Complied for FEDESSA by JLL. The report surveys operators in 14 European countries; for the UK the report incorporates findings from the SSAUK annual report. Metrics include number of facilities, floor space, average rents, occupancy and operational metrics provided with country segmentation.
Self Storage	JLL	Self Storage Market Update	Various	Quarterly and annual based reports providing analysis on the listed self storage sector.
General	JLL	Alternatives Investor Survey	Annual	Information is provided on sector maturity, deals volume, sector allocations and performance outlook.

## APPENDIX D: RECENT FINDINGS ON ALTERNATIVE ASSET CLASSES

### D.1 Hotels

The total value of the UK hotel stock is difficult to estimate due to uncertainties in definition, and a lack of comprehensive data. The estimate for the total value of the UK stock is therefore expressed as a range - from £70 to £80 billion at the end of 2018 – rather than a point estimate. The estimate is based on the fullest available record of the stock of hotel buildings, produced by Melvyn Gold Consulting (MGC), coupled with indicators of values per room (from the agents Savills and Knight Frank) and values per property (from MSCI, RCA and CoStar).

Measured by number of units (either rooms or properties) a large fraction of the total stock lies outside the criteria set by typical investors. The main point of interest for the purposes of this report, the value of the investible stock, is fortunately easier to define in terms of property sizes and qualities. From the same sources as above, the value of investible hotel stock is estimated at £50 billion.

There are, perhaps surprisingly, no official statistics on the size of the UK hotel stock: the available recent estimates range from 874,000 bedrooms (in “hotels and similar accommodation” from Eurostat) through 769,000 (in “serviced accommodation” from MGC) to 559,00 (from the specialist hospitality consultants STR). The differences are likely to arise primarily in definition – how far the figures extend to smaller guest and boarding houses, and accommodation in properties such as pubs.

Estimates have been calculated from MGC figures as they provide the most widely available and fullest breakdown of the stock by size and type, shown in Table C.1 (the end-2017 data are the latest available), which facilitate the distinction between total stock and stock likely to be of investible quality.

**Table D.1: UK Hotel Stock, end-2017**

Bedrooms per Property	Number of Hotels (000s)	Number of Rooms (thousands)		
		All Hotels	Branded Hotels	Consortia/ Independent Hotels
250+	393	122,080	107,621	14,459
101-250	1,281	176,251	143,145	33,106
51-100	2,034	147,518	85,891	61,627
25-50	2,334	85,356	18,608	66,748
11-25	6,081	96,447	1,520	94,927
<11	29,445	140,898	126	140,772
<b>Total</b>	<b>41,568</b>	<b>768,550</b>	<b>356,911</b>	<b>411,639</b>

Sources: Melvyn Gold Consulting cited in Spotlight on Hospitality 2019, Institute of Hospitality.

- Branded hotels covers full-service, mid-market and budget hotels operated by a fairly concentrated group of national chains: the top ten hotel operators account for around 80% of the total rooms of this type.
- The branded segment of the market is strongly distinguished from the consortia and independent operators: in branded chains, 94% of rooms are in hotels with over 50 bedrooms; for the consortia/independent sector, 73% of rooms are in hotels with 50 or fewer bedrooms.



## APPENDIX D: RECENT FINDINGS ON ALTERNATIVE ASSET CLASSES

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The most accessible measure of hotel values is expressed as value per room (known in the trade as value per key). The figures are taken from hotel transactions and vary widely with hotel quality and location. Hotel transactions recorded by RCA in 2018, for example, showed values per room running from £94,000 (a De Vere portfolio) to £321,000 (a Principal Hotel portfolio). An average figure for any period, therefore, will be prone to vary with the mix of higher and lower value hotels traded. From figures quoted by Savills and Knight Frank, a representative UK average for the value per room of hotels traded in 2018 has been taken as £160,000.

£160,000 per room represents higher quality hotels traded in the investment market through major agents. MSCI shows an average value of £19.5m for the 364 hotels held by the investors they cover at the end of 2018; this concurs quite closely with an average value of 937 hotel trades shown by CoStar over recent years at £20.4 million. At an assumed £160,000 per room, the average size of investment-grade hotels is around 120 rooms, far above the 18 rooms per hotel for the total stock shown by MGC. There is also a clearly a large difference in stock quality between the largely chain hotels traded in the investment market and the average stock quality of the 768,550 rooms covered by the MGC survey, which extends to lower-grade hotels and boarding house.

To estimate the value of the total hotel stock, the £160,000 average per room in investment grade hotels has been applied to the total number of rooms shown in Table C.1 but with down-ratings to reflect the lower average value of the stock, running from 80% of the investment grade for hotels with over 100 rooms to 30% of investment grade for hotels with fewer than 11 rooms. To reflect the uncertainty in these quality adjustments, the resulting estimate is shown at a range from £70bn to £80bn, at an average value per room of around £100,000.

To estimate the investible stock, a base population has been taken of the 356,911 rooms in the branded hotels, 95% of which are in hotels with more than 50 rooms. To reflect a slightly lower average quality in the overall investible stock, an assumption has been taken of 90% of the average value per room of the £160,000 figure for hotels recently traded. This gives a figure for the investible stock of (in round terms) £50 billion, at an average value per room of £145,000.

From MGC data running back to 2010, there has been only modest recent growth in the total hotel stock, with the number of rooms rising at less than 1% pa. There has, however, been a substantial shift in the stock toward the branded chains and away from independent hotels: the number of rooms in branded hotels – and by inference in the investible stock – has risen at 3% p.a. from 2010 to 2017. Over the same period, the capital value of hotels record by MSCI has risen at 6% p.a.. Taken together, it would seem the value of the investible hotel stock has been rising at around 10% p.a..

## APPENDIX D: RECENT FINDINGS ON ALTERNATIVE ASSET CLASSES

### D.2 Self Storage

The total size of the investible self-storage market was estimated at £12.5bn at the end of 2018. This was calculated by combining three listed and the top seven unlisted companies' data on investment values taken from those companies' accounts and grossing this up based upon (non-container) floorspace. By applying an average yield to the average net room rate (allowing for vacancy), a value per square foot was calculated and multiplied up by the total floorspace.

Table D.2 shows overall statistics for the self-storage market in the UK. Further data are available beyond these and the reader is referred to Appendix C.

**Table D.2: Summary of Self-Storage Market, end-2018**

	2017	2018	Growth, %
Value (£bn)	11.2	12.5	12.1
Number of sites	1,505	1,582	5.1
Number of non-container sites	1,160	1,201	3.5
Total floorspace (m sq.ft.)	44.6	45.6	2.2
*Average Net Room Rate (£ psf)	23.08	23.11	0.0
*Occupancy (%)	76.1%	77.2%	1.6

Sources: Self Storage Association UK, Annual Reports: 2018, 2017; \* based on survey responses, own estimates.

### D.3 Healthcare

The total size of the UK healthcare built environment has been estimated by Laing Buisson at £180bn at the end of 2017. CBRE estimated the market size of the sector at £60bn at 12 months later. The difference between these two estimates shows the extent of the difficulty in analysing the size of this market, which is still in its infancy, not well defined (and in need of definition), hard to disentangle (in terms of services and real estate) and disparate regarding what is included in current working definition. Data references are largely circular with the veracity of these becoming questionable.

However, there are some solid figures to give a starting point. At the end of 2018, the five specialist listed and top-seven unlisted companies within the sector held investment assets valued at £10.4bn, up from £9.9bn in 2017. MSCI recorded £6.7bn of healthcare real estate at the end of 2018, covering 1,306 properties in 44 portfolios, up from £5.9bn at the end of 2017, covering 1,233 properties in 42 portfolios.

## APPENDIX D: RECENT FINDINGS ON ALTERNATIVE ASSET CLASSES

Furthermore, the investible size of the UK care homes market is estimated to be around £42bn at the end of 2018, by grossing up average values per bed in the listed sector, using the total number of registered beds, but without any potential quality adjustment.

For the purposes of this report, the investible market is confined to care homes only, at an estimated size of the investible market of £42bn. It should be noted that this market is in its infancy and that what is considered, and may be defined as, investible is fluid and that further data may become available regarding the size of the medical centre market, for instance.

Table D.3 shows overall statistics for the healthcare market in the UK. Further data are available beyond these - see Appendix C under Sources.

The sector can be seen to be one with high growth rates as the sector emerges. For instance, whilst the number of registered care home beds has only increased by 1.4% from 2017 to 2018, the value per bed has increased by around 13% over the same period.

**Table D.3: Summary Statistics – Healthcare**

	2017	2018	Change (%)
Estimated market size (Care homes only), £bn	36.4	41.9	15.1
Value per bed (Listed providers), £	77,910	88,400	13.5
Total number of registered care-home beds	466,823	473,461	1.4
Listed & unlisted (top 7) invested market (specialists only), £bn	9.9	10.4	5.1
Listed specialist providers, £bn	3.7	4.6	24.3
Listed – medical centres, £bn	3.3	3.9	18.2
Listed – care homes, £bn	0.4	0.6	29.5
MSCI measured market value, £bn	5.9	6.7	13.6

Sources: MSCI; Knight Frank; Company Accounts

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