IPF Research Programme 2006-2009

Risk Management in UK Property Portfolios: A Survey of Current Practice




Summary Report

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November 2007

This research was commissioned by the IPF Research Programme 2006 – 2009

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This 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 other financial markets, the wider business community and government on a range of complementary issues.

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RISK MANAGEMENT IN UK PROPERTY PORTFOLIOS: A SURVEY OF CURRENT PRACTICE

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EXECUTIVE SUMMARY

This report presents the results from a survey investigating the measurement and management of risk in UK commercial property portfolios.

It builds upon two previous IPF publications:

- In 2000, *The Assessment and Management of Risk in the Property Investment Industry* identified, for the first time, the long list of risk factors recognised by fund managers, but did not examine the processes used to manage risk.
- In 2002 *Risk Measurement and Management for Real Estate Investment Portfolios* set out the measures and methods applied to the management of risk in other asset classes which, the report suggested, set a rigorous standard to which property managers should aspire.

This new research aims to update the classification of risk factors from the 2000 report, and to discover how risk management techniques currently used in property portfolios match up to the rigorous approach recommended by the 2002 report.

For this study, face to face interviews were conducted with senior managers and researchers in 20 leading fund management businesses, together accounting for £145bn of assets under management. Below a summary of the survey results is followed by a discussion of the issues raised and likely developments in risk management processes they suggest.

Results: Risk at the portfolio level

All the organisations covered use some form of top-down monitoring of portfolio composition as a primary level of their risk measurement. The responses classified in the table below draw a distinction between the long list of portfolio characteristics which may be monitored, and the generally smaller set of characteristics for which quantified limits for risk exposure are set.

	Formal monitoring	Set quantified limit
Portfolio structure		
Type / Region segmentation	16	11
Property type	10	7
Regional location	6	4
Exposure to largest properties	15	12
Concentration of largest tenants	15	12
Security of income profile		
Timing of lease expiries	17	3
Timing of rent reviews	11	1
Minimum yield	10	4
Tenant risk		
Full credit rating	6	1
Other covenant strength indicators	5	1
Tenant business sectors	2	0
Exposure via indirect investments	18	13
Development exposure	6	1

SUMMARY

- The most common risk factors monitored are the property type/regional composition of the portfolio (typically split into nine to 13 market segments), the concentration of the portfolio in the largest properties and largest tenants, and the security of income.
- Security of income is most often measured by lease expiry profile, with around half of the organisations also taking into account the profile of rent reviews and minimum yield.
- Most respondents set quantified limits for risk exposure in terms of segment structure and concentration in the largest assets, but specific targets for security of income are set by only a quarter of organisations.

Results: Forecasting and portfolio cash flow forecasting

All respondents use economic and property market forecasts as an input to their assessment of future portfolio risk.

- Property market forecasts are produced in-house by 12 of the 20 organisations, and of the eight relying on external forecast providers only two do not adjust the forecasts to reflect a house view.
- For the majority (15 out of 20) the market forecasts are an input to portfolio level cash flow modelling, with the remaining organisations using forecasts only for asset level cash flow analysis.

Results: Asset level discounted cash flow forecasting

All respondents use discounted cash flow (DCF) analysis when evaluating individual assets, but with varying practice on the time period and degree of detail used in that analysis.

- Half of the organisations always run a 5-year DCF; the remainder used 3-year cash flows, or analysis periods matched to the next major 'lease event' or, in two cases, in-perpetuity cash flows were used as the standard.
- All respondents evaluate assets against required returns, or hurdle rates, which are specified at the all property level by half the respondents and at the sector/segment level by the other half.
- But there is wide divergence in risk adjustments in asset level appraisals: nine managers do not make quantified risk adjustments to cash flows on the grounds that risk factors are too difficult to quantify and risk is more appropriately dealt with by scenario testing, sensitivity analysis or qualitative judgements.
- The remaining 11 respondents consider a wide range of asset level risks as shown in the table below, with all of them factoring in the volatility of rental value growth and void risks and the majority also taking account of other factors such as tenant default and variation in exit yield.

	Adjust required return	Adjust expected cash flow	Either return or cash flow	Out of 11 respondents
Volatility of market rental growth	55%	27%	18%	100%
Lease events				
Void risk	36%	45%	18%	100%
Rent reviews	36%	36%	9%	82%
Break clauses	45%	36%	9%	91%
Tenant default	55%	18%	9%	82%
Depreciation	55%	9%	18%	82%
Refurbishment/Redevelopment potential	64%	18%	9%	91%
Potential contamination	55%	0%	9%	64%
Leasehold interest	64%	0%	0%	64%
Exit price	73%	18%	0%	91%

SUMMARY

- Among these respondents, practice varied on whether risks were reflected in adjustments to the hurdle rate (eg increasing the risk premium for riskier assets) or in the expected cash flows (eg decreasing cash flow for riskier assets).
- Of the 11 managers making quantified risk adjustments, five set no specific guidelines for the range or probability of different outcomes, five set guidelines based on general historic analysis, and only two used guidelines based on back-testing of their own properties.

Issues and conclusions

Overall, these results show that property fund managers follow a common broad approach to risk which is based on investment processes at both the portfolio and the asset level, operated within a general framework of market forecasts and discounted cash flow appraisal.

But within that general picture there are big differences in the details:

- Nine out of 20 managers are not using quantitative risk management techniques at both portfolio and asset levels, and even in organisations that do utilise such techniques they are often given less weight than scenario based asset appraisals.
- Only three fund managers are using advanced statistical methods (like Monte Carlo simulation) which would be regarded as standard practice in other asset classes.

The lack of adoption generally of more sophisticated methods does not reflect a lack of concern about risk, or a lack of knowledge about risk management methods. The barriers to more sophisticated risk management in property are perceived as:

- The lack of robust data to quantify the risk characteristics of property assets.
- Methodological problems in applying formal risk adjustments to property appraisals which are potentially influenced by many interlocking market, leasing, tenancy and physical factors.

Property managers may still stand accused, at the worst, of incorrectly assessing risk, or at the minimum of failing to address potential biases in their investment decisions introduced by implicit rather than explicit methods of dealing with risk. Organisations that do utilise quantitative risk adjustment techniques were often not producing guidelines, providing data analysis to calibrate the process or back testing the results to measure the success rate of the decision making process. It is not surprising that these organisations often referred to internal confusion regarding the correct use of the process and in particular how to populate each field to avoid 'double counting' for risk.

1. INTRODUCTION

In June of 2006 IPD were commissioned by the Investment Property Forum (IPF) to undertake a survey of large fund managers aimed at identifying how risk is currently measured and controlled in UK commercial property portfolios.

The structure of this report is as follows:

- The remainder of this introduction sets out the background to the research questions and the survey method used.
- Section 2 discusses from first principles the nature of risks in property portfolios and how they may be controlled.
- Section 3 summarises responses to the specific questions covered in the survey.
- Section 4 is a discussion of the results with conclusions on the current strengths and weaknesses of property risk management and the main lines for future development.

1.1 Research questions and background

This survey has two aims.

- To match the current practice of risk control against the characteristics of property as an asset class.
- Identify from the practice of leading industry practitioners the likely path of development of those investment processes going forward.

In principle the commercial property investment process should be like that used for any other asset class; the investor is seeking to make a return in a risk controlled manner. However, commercial property has particular characteristics that will influence the balance of techniques that need to be applied in the investment process.

This research follows on from two previous reports published by the IPF.

In 2000, *The Assessment and Management of Risk in the Property Investment Industry* found that risks in property investment were *"diverse", "painfully varied"* and *"in many respects unique"* and that these risks were *"being attacked through a highly restricted and perhaps inappropriate set of methods and techniques".* It concluded that there was a need for the *"development of more powerful risk assessment and control methods that start to match the complexity of the asset and the multi-level concept of property risk".*

In 2002, *Risk Measurement and Management for Real Estate Investment Portfolios* suggested that property risks could only be managed within an overall framework or risk management process: *"It is wise to use a number of complimentary approaches to risk assessment, all grounded in a rigorous and preferably quantitative framework. In other words a "risk process" should be developed rather than a single technique being applied. This is common in securities markets."* That investment process should, furthermore, be an eclectic mix of *"…quantitative statistical framework but also techniques such as stress testing and a rigorous analysis of subjective issues…".*

1.2 The survey method

The stages of the research programme were as follows:

- A survey form was designed aimed at identifying how risk is measured and controlled within an investment process.
- Interviews were organised with 20 institutional property investment houses drawn from a list of the 25 largest institutional property investment houses ranked by assets under management in the UK.

1. INTRODUCTION

The responses were analysed to:

- Review the current practice of risk control in large fund management organisations.
- Pin point the weaknesses within those investment processes.
- Identify the innovations utilised by a few organisations and the likely development of those investment processes going forward.

The survey focused solely on fund managers of own-account and third party property investment portfolios (listed in Appendix 1). Smaller investors, overseas investors and investors utilising debt or acquiring exposure to commercial real estate through listed securities or unlisted vehicles were all excluded. The 20 organisations were therefore not intended to be representative of all investors in UK real estate. However, the total UK funds under management of the 20 organisations represented are £145bn, a very significant proportion of the UK property fund management industry.

The representatives of the organisations interviewed were predominantly from the research and strategy sections of their businesses, which are typically responsible for the design of the property investment process but are usually not directly responsible for its implementation. The survey results will therefore identify the risk management approach developed by the more analytical sections of fund managers and not the day to day implementation of that approach.

The survey was conducted using a semi-structured questionnaire, with interviews conducted face to face by the IPD Research Director over a period from October to December 2006.

2. UNCERTAINTY AND RISK

This report aims to match the current practice of risk control with the characteristics of property as an asset class. This section outlines the characteristics of property and how the identification and characteristics of the key risk drivers should determine the balance between qualitative and quantitative techniques applied for risk control.

2.1 The choice between qualitative and quantitative risk control techniques

An investment in a property asset delivers a return in the form of an income stream, but that income stream is uncertain. There is uncertainty as to the possible events affecting the income stream and uncertainty as to the probability of the outcomes from these events.

Risk is the combination of this uncertainty over the probability of events and their consequences. If the range of possible events is known then risk can be identified and controlled by qualitative risk controls.

If the range of possible events is known and the probability distribution of the outcomes of these events can be estimated, then the risk can be managed using quantitative techniques.

So the balance between qualitative and quantitative techniques used in commercial property risk management should depend on whether the probability distribution of the outcomes of events can be estimated.

2.2 The sources of risk

The events that constitute the risks to the income stream from commercial property can be divided into three primary categories. Firstly, the events associated with the leasing process eg a lease renewal. Secondly, the events associated with the impact upon the functional usefulness of the asset eg a change in tenant aesthetic requirements. Thirdly, events associated with changing the physical fabric of the asset, ie refurbishment and redevelopment.

Table 1: Three sources of risk to the income stream from commercial property

Leasing process	Functional usefulness	Change to physical fabric
Rent reviews Breaks Lease expiries Tenant default	Legal, technological and aesthetic changes Infrastructure changes Physical deterioration	Refurbishment Redevelopment

Table 2: What determines events that are the source of commercial property risk?

Leasing process	Functional usefulness	Change to physical fabric
Mostly contractual, although tenant default determined by the wider economic environment and manager has discretion to alter eg re-gearing a lease	Mostly determined by the technological and organisational changes in the wider economy	Controlled by the manager – the decision to carry out and the nature of the project ie pre-let versus speculative

So the universe of possible events affecting the income stream from commercial property can be identified, but their timings are a combination of contractual, determined exogenously and also driven by the actions of the fund manager.

2.3 Measuring risk

The historical outcomes of the events that are the source of risk to the income stream from commercial property can be measured; the change in rent and the length of void periods, the degree of functional obsolescence and also the financial return of refurbishment and development for example.

Table 3: Measuring the outcomes from the sources of risk to the income stream from commercial property

Leasing process	Functional usefulness	Change to physical fabric
Change in rent at re-letting Length of void periods Etc.	Depreciation Change in rental value commanded by buildings in the location relative to other locations	Financial return from refurbishment and development

The outcomes of many events will vary due to the demand and supply conditions eg the rent achieved at letting. The demand side influences vary for different property types and regions, for instance consumer spending will drive demand for retail space and financial and business service growth will drive demand for offices. The supply variables also vary by property type and location, underpinned by planning restrictions and the substitutability of a property in one area for another.

The historical outcomes for City of London offices should not therefore be used to estimate the risks for unit shops in provincial towns, but it is appropriate to use the historic outcomes for assets of the same property type and region and their relationship to economic variables to estimate expected future outcomes.

However, outcomes are also known to vary according to the quality, or functional usefulness, of the asset. So the rental values and leasing terms have varied historically for brand new buildings versus older less attractive stock of the same type within the same area. In addition rental and leasing trends diverge for the best and least attractively located stock. A quality, or asset life cycle, dimension must therefore be incorporated into quantitative techniques used in the investment process – estimates based on new buildings should not be applied to older buildings.

Table 4: Sources of risk/influences on outcomes

Leasing process	Functional usefulness	Change to physical fabric
Mostly determined by the wider economic environment but actual impact is dependent on contractual leasing terms	Mostly determined by technological and organisational changes in the wider economy but results vary by asset's flexibility, physical quality and location quality	Determined by the wider economic environment and manager's decision as to the nature of project to be undertaken

So the risk management process in commercial property has to manage events that are associated with the lease, changing tenant requirements and refurbishment and redevelopment. These events can be managed qualitatively but to be managed quantitatively the techniques used have to adapt for a mix of events that are contractual, exogenously determined or in the control of the fund manager. The quantitative technique must also adapt for outcomes that vary due to economic factors, location quality and as the building moves through its life cycle from new to obsolete.

The data to power these models must be sourced. Its collection is complex, the observations few in number, infrequently measured and time series short.

3. SURVEY RESULTS

The quantitative risk management techniques must also cope with the physical nature of property assets. Individual commercial property assets are large and individual portfolios are constructed of individual assets. The portfolio outcomes of combining individual assets with known risk characteristics can only be measured if 'summing' the risks of individual assets of unequal size.

There are two distinct facets of the risk management process:

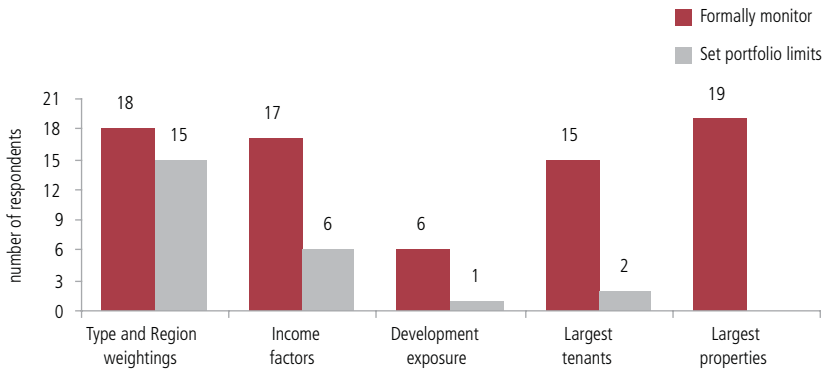
- Reduce risk at the portfolio level through a spread of assets.
- Accept risk at the asset level if the return delivered compensates for the risk.

This survey found that all organisations combined these two methods together to manage risk.

3.1 Portfolio level risk management

Respondents were asked about the portfolio risks formally reported to clients. If the organisation actively measured and reported on a facet of the portfolio then this is evidence that the risk is identified and can potentially be controlled. If these controls were in the form of portfolio limits then this is a form of qualitative risk control.

Figure 1: Portfolio level risk measures



The survey results show that most organisations recognised the risk reduction benefits of holding a portfolio of assets with a spread of assets across different types and in different regions. Surprisingly few formally monitored the development exposure.

A high number of organisations also set formal portfolio limits, or qualitative risk controls, for the portfolio weightings by type and region. Only one set a development exposure limit.

Most organisations recognised the risk reduction benefits of holding a portfolio of assets with a spread of contractual lease characteristics but only a small number set portfolio limits.

The high number of organisations that formally monitored portfolio exposure to the largest assets and tenants shows that most organisations recognised that risk reduction benefits are compromised by the specific risk from holding individual properties or tenancies rather than a fully diversified exposure to a sector.

The techniques for top-down quantitative risk controls utilised by institutional property investors were also mostly restricted to managing the risks that vary due to factors in the wider economy and not the risks that vary due to

the impact of the leasing contracts, as the building moves through its life cycle from new to obsolete or as the building moves from standing investment to development.

The difficulty of doing this in terms of Modern Portfolio Theory is that the risk characteristics of these features of property are not stationary over time. So although all assets in a sector are subject to the same economic influences on their risk profile the actual risk is also determined by the leasing terms and the functional usefulness of the asset.

However, a few organisations had either devised, or were in the process of trying to devise, methods of incorporating these non stationary influences at the portfolio level. The method used was 'risk adjusted cash flow modelling'. This term refers to the process of producing explicit cash flows for a portfolio built up from each asset. The cash flow drivers can be calibrated with a time dimension that also varies according to the asset's condition. So the re-letting assumption will be timed to the expiry of current lease contracts and the assumption varied according to the age of the asset at that time. The systematic impacts of development, leasing and depreciation on risk can therefore be measured at the portfolio level.

3.2 Asset level risk management

The area which showed the most divergence in approach to the management of uncertainty was in the accounting for risk at the individual asset level. Nine organisations did not explicitly adjust for risk at the asset level at all, although some were almost certainly in effect adjusting for risk by using 'conservative' assumptions in the projected asset return. However, the use of conservative assumptions rather than explicit risk adjustment potentially means that different assets will be appraised on different basis, making comparisons of expected returns for different assets problematic and historic testing of the appraisal impossible.

The explicit non-adjustment for risk at the asset level by some organisations was often a direct challenge to the notion that fine adjustments can be made to the expected or required return from an asset. As pointed out by several respondents, these adjustments would need to be highly refined and assumptions on future events were particularly hard to make as they would depend upon both the asset's changing physical condition, leasing terms and property market conditions.

The experience of those organisations that did adjust for risk continued the challenging theme; respondents noted heated internal debates over the validity of the approach, the risk of double counting and over the scale of the adjustments that should be made.

The significant gap in the requirement by many organisations for fine asset level adjustments and the provision of guidance as to the scale of adjustments required only emphasises the difficulty of making asset level risk adjustments. However, the proponents of asset level risk adjustment were equally insistent that adjustments must be made and many echoed the sentiment that it is more important to ensure that appraisers have considered all the relevant risk factors than the actual quantum of adjustment made.

The clear procedural result of the controversy over asset level risk adjustment is the widespread use of scenario testing by both proponents of risk adjusting the asset appraisal and those not risk adjusting.

4. DISCUSSION OF RESULTS

The survey found that the sources of risk in commercial property portfolios are not comprehensively identified and that the techniques adopted to manage these risks at the portfolio level were mainly qualitative.

The inability of the industry to even identify and measure the portfolio exposure to development is perhaps the greatest industry risk 'blind spot' identified. Perhaps this result is because organisations recognised that the answer is not as simple as measuring the capital value of developments currently under construction. The real exposure includes the development exposure of assets close to the end of their functional life or 'ripe' for profitable redevelopment and the choice of measurement variable is not straightforward – there is a choice of the current capital value, the projected future capital value and the anticipated total construction cost to name just three possibilities.

The use of qualitative rather than quantitative portfolio risk management techniques is due to both the lack of sufficient data to quantify the risk return characteristics of the asset class and a lack of a quantitative portfolio management technique that adjusts for the nature of property risk.

Previous studies have identified the deficiencies of property data but this has tended to focus on the time series available and the frequency of the data rather than the need for data that measures not only the impact of factors in the wider economy on risk but also the impact of changing contractual leases terms and redevelopment on risk. This presents both a risk measurement challenge and also a challenge to the design and implementation of a risk management technique.

At the asset level the survey found that quantitative risk management techniques are used in around half of organisations. However, even in organisations that do utilise such techniques they are often given less weight than scenario based asset appraisals.

Organisations that do not fully utilise quantitative risk adjustment techniques in the asset analysis process are at risk of incorrectly assessing risk and, as the assumptions used are all implicit, they are also unable to identify if bias has been introduced into the decision making process. Are such appraisals really subject to peer review and can the organisation really claim that all decisions are subject to a rigorously applied risk analysis framework?

Organisations that do utilise quantitative risk adjustment techniques were sometimes not producing guidelines, undertaking data analysis to calibrate the process or back testing the results to measure the success rate of the decision making process. It is not surprising that these organisations often referred to internal confusion regarding the correct use of the process and in particular how to populate each field to avoid 'double counting' for risk.

The widespread use of scenario testing by both organisations that did and did not utilise quantitative risk adjustment techniques demonstrates more confidence in the identification of the sources of asset risk than the quantification of those risks and how to account for them.

The clear danger was that investment decisions could be taken that did not meet every client's objective; that of effective risk management. In practice this can mean that the pursuit of a particular deal could become more important than the acquisition of an asset for a price that reflects the associated asset risks.

The industry has a simple challenge to improve the management of risk; improve risk measurement to correctly quantify the true uncertainty of property returns and develop techniques to utilise this data to accurately price risk.

4. DISCUSSION OF RESULTS

The benefit of a well specified risk management process will not only be better management of risk but also a better framework for devising and explaining how the fund strategy delivers superior risk adjusted returns – or alpha.

Two new techniques are front runners to deliver a quantitative risk management process: portfolio level cash flow modelling and option pricing.

Portfolio level cash flow modelling can explicitly measure the economic impacts on risk and the impact on portfolio risk of the existing leasing contracts, depreciation and redevelopment. Although this technique needs to be further developed to go on to then quantify the risk contribution of any one factor or asset to total portfolio risk.

Option pricing is a sophisticated version of scenario testing that applies a probability distribution to the outcome of all cash flow impacting events over the lifetime of an asset. This is a complicated approach because the list of options available is influenced by factors in the wider economy, the age of the asset and the actions of the property manager.

It is arguable that such is the complexity of property risk and the physical nature of property assets that risk is better managed with qualitative techniques. Accordingly, we should not be surprised by finding deficiencies in quantitative risk management techniques

Particular challenges to quantitative risk management are set by the acquisition process for commercial property which is by 'bidding' rather than screen based trading with prices provided by a market maker. Opportunities are also finite and diverse, so the exact portfolio fit of a particular property type, size and lease terms is never going to be available. All decisions are therefore based on compromise against the ideal asset to fit the portfolio. Finely tuned optimised allocations mean little within this acquisition environment.

Further challenges to quantitative techniques are set by high transaction costs (both transaction fees and the time taken to transact). These costs will outweigh the reduction in risk from rebalancing the portfolio for one asset's change in characteristics. The more likely response to a change in an asset's risk characteristics due to a tenant going bust or changing tenant requirements, is the management of the asset in terms of reducing the void period and making a profitable redevelopment.

A further barrier to the development of any quantitative risk management technique is the slow feedback on the sources of the success or failure of decisions. Acquisition prices are appraised infrequently after purchase and the prices of assets after sale cannot be known systematically. Assets are also bought for long hold periods – returning to an individual appraisal decision after five years will find that many changes in process and personnel have also occurred.

Indeed the industry itself may change to reflect the risk management challenges rather the techniques used. The move towards constructing portfolios from indirect assets is growing and specialist managers are controlling increasing proportions of many sectors of the property market. The larger the spread of assets the less the influence of contractual factors, depreciation and development and the more the risk depends upon economic impacts. With known acquisition prices for units in a pooled vehicle the portfolio risk management decision looks more like that of an equity fund manager.

So the future is intriguing: will quantitative risk management techniques adapt to cope with commercial property or will the structure of the commercial property industry itself adapt instead?

4. DISCUSSION OF RESULTS

4.1 Further work

Further work in the management of risk in property should focus on improving risk measurement techniques to correctly quantify the true uncertainty of property returns.

The survey identified two front runners: portfolio level cash flow modelling and option pricing.

Further work should evaluate the effectiveness of cash flow modelling and option pricing in incorporating the impact of the wider economy, existing leasing contracts, the age of the asset, depreciation and the actions of the property manager.

APPENDIX: SURVEY RESPONDENTS

Organisation name	Name of contributor(s)	Job title of contributor(s)
Arlington Property Investors	Andrew Smith	Deputy Managing Director
AXA Real Estate Investment Managers	Alan Mooney	Head of Strategy & UK Research
Blackrock	John Gellatly Catriona Allen, Jason Isaacs	Head of Indirect Property Investment Fund Analyst Fund Analyst
DTZ Investment Management	Chris Saunders	Head of Investment Strategy
F&C Property Asset Management plc	Ian McBryde Sue Bjorkegren	Director, Property Funds Head of Property Research
Henderson Global Investors	Ray Adderley	Head of Investment Analytics
Hermes	Paul Gowans	Real Estate Analyst
ING Real Estate Investment Management	James Crutcher Stephen Pyne	Researcher Chief Investment Officer
Invista Real Estate Investment Management Ltd	Mark Long	Director of Property Investment Strategy & Research
LaSalle Investment Management	Robin Goodchild	Head of European Strategy
Legal & General Property	Clara Westlake	Researcher
Morley Fund Management	Stuart Milford	Senior Property Analyst
Prudential Property Investment Managers	Ben Sanderson	Director of Property Research
RLAM	Henry Watkinson	Senior Fund Manager
RREEF Ltd	Nigel Bennett	Director, Investment Strategy
Schroder Property Investment Management	Paul Taylor	Head of Direct Investment
Scottish Widows Investment Partnership	Stewart Cowe Vicky Watson	Property Research Manager Senior Researcher
Standard Life Investments	Anne Breen	Head of Property Research
Threadneedle Property Investment Ltd	Chris Morrogh	Fund Manager, PUT
UBS Global Asset Management	Alan Patterson	Director, Pooled Property Funds & Research

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