IPF Research Programme
2011–2015

SUMMARY

Individual Property Risk

This research was commissioned by the IPF Research Programme 2011–2015

JULY 2015

This research was funded and commissioned through the IPF Research Programme 2011–2015.

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:

Summary Report

IPF Research Programme 2011–2015

July 2015

Researcher

Paul Mitchell, *Paul Mitchell Real Estate Consultancy*

Project Steering Group

Rob Martin, *Legal & General Property*
Steven Devaney, *University of Reading*
Malcolm Frodsham, *Real Estate Strategies*
Simon Marx, *LaSalle Investment Management*
Edward Trevillion, *Heriot-Watt University*
Pam Craddock, *IPF*

Acknowledgement

The author would like to thank the eight (unnamed) investors for agreeing to participate in this research and provide a substantial volume of data and other information.

Disclaimer

CONTENTS

Individual Property Risk

1. INTRODUCTION AND OBJECTIVES OF RESEARCH

- This report documents research into the measurement and explanation of levels of investment risk at the individual property level in the UK commercial market.
- The research analysed the performance records, property characteristics and tenancy records of over 1,000 commercial properties held over the period 2002-2013. It also drew on detailed case studies of investment risk in 88 commercial properties.
- Risks need to be priced to ensure that the commensurate returns are delivered. The report considers, therefore, the implications of the research findings for pricing individual properties. It also reviews if, relative to other properties, the risks faced by individual properties and different types of property have been rewarded over the last 10 years, and in doing this, identifies areas where there has been mis-pricing.
- Similar considerations apply to the risk in portfolios made up of individual properties. The report both updates earlier IPF research on portfolio risk and diversification and extends this by examining the relationship between risk in individual properties and at the portfolio level. This provides insights into how to best structure commercial property portfolios and control risk within them.
- The Investment Property Forum has a rich history of analysing commercial property risk, pioneered by its 2000 report *The Assessment and Management of Risk in the Property Investment Industry,* which identified '57 varieties' of risk. In general, previous research into investment risk in commercial property (including, for example, the IPF's *Risk Web 2.0: An Investigation into the Causes of Portfolio Risk*) has tended to draw conclusions from analyses of portfolios of aggregated properties.
- This research differs because it seeks insights from individual properties that otherwise might have been hidden in aggregated analyses, and it does this through a unique combination of statistical analysis and qualitative case study.
- The report also aims for a more parsimonious representation of risk that can be easily applied to investment management and research processes.
- Section 2 characterises individual property risk and, in particular, the fundamental distinction between systematic and specific risk. Some important insights into the characteristics of some types of property in the sample are outlined in Section 3.
- Section 4 quantifies levels of total risk in individual properties and, in doing so, updates earlier IPF research. Sections 5 and 6 respectively quantify and explain levels of specific and systematic risk in individual properties.
- Sections 7 and 8 respectively consider the implications for pricing risk individual properties and for portfolio risk and construction. The conclusions and key implications for investors are summarised in Section 9.
- Extensive details of the analysis and conclusions are presented in the Full Report.

2. THE APPROACH - CHARACTERISING PROPERTY RISK

- Central to the approach is a distinction between specific (or idiosyncratic) risk and systematic risk. Specific risk is that which is unique to the asset and is independent from one property to another. As it can be diversified by combining properties each with their own idiosyncrasies, the primary concern of the investor is to ensure that enough assets are held and that they are sufficiently different to ensure that these property-specific risks are diversified away.
- Systematic risk reflects the tendency of assets to move together and to be exposed to the risk of the drivers behind this correlation. The main driver is commonly recognised to be the 'market' (such as the IPD All Property or an IPD segment), but there may also be characteristics of an asset – for example, its size or yield - that lead it and similar assets to have a further dimension to their cycle of performance and, hence, their risk. These are termed 'factors' in financial jargon.
- Market and other systematic risks are part and parcel of investing in the asset class, being inescapable, and, when borne, justify compensation in the form of a premium return. These risks also directly feed through to portfolio risk.
- It is important, therefore, to distinguish those risks that are inescapable, and thus should be priced and rewarded through premium returns, and those that are idiosyncratic and can be diversified away and, hence, do not justify a premium return.
- In this report, systematic risk in individual property returns is primarily measured by the sensitivity of the property's return to movements in market returns, as represented by IPD segment indices. This measurement is done through the use of standard regression techniques. Specific risk is the residual that is unexplained by these market movements. Further details of the approaches behind the measurement of risk are given in the Full Report.

3. INSIGHTS INTO THE CHARACTERISTICS OF INDIVIDUAL PROPERTIES

- Type-casting a property in terms of its yield may be misleading. Only half of the sample's properties in the high- or low-yield quartile in 2004 appeared in the same quartile 10 years later. Furthermore, only half of the difference in yields across properties is associated with wide-spread characteristics, such as unexpired term, quality, lot size and so on; the remainder reflects aspects specific to the asset. Yield, therefore, may not be a sound basis for segmenting property to analyse and price risk.
- There are also other characteristics to individual properties that can change over time, potentially affecting their risk profile. Most obviously, these include unexpired term and lease events but the research also finds that changes over time in tenant covenants can be significant; the risk profile of individual properties can also change as a result of actions taken by investors, for example, asset management.
- Multi-let properties, which account for almost two-thirds of the properties in the analysis, have a distinct set of characteristics. While less income is at stake when a lease ends than for a single-let property, the multi-lets in the sample were exposed much more frequently to the letting market. Hence, for those multi-lets with a small number of units, the proportion of income at stake can still be substantial. Multi-lets are also subject to higher levels (and sometimes more frequent) refurbishment expenditure than their single-let counterparts and, generally, are more asset management intensive. These characteristics affect multi-lets' risk profiles.

4. THE MAGNITUDE OF RISK IN INDIVIDUAL PROPERTIES

- Over the 10 years to 2013, the average standard deviation in total return across 859 properties was 17.5%. As can be seen from Table 4.1, this compares with 11.0% over the 10 years to 2004, as stated in the previous IPF report, *Risk Reduction and Diversification in Property Portfolios*. This increase reflects the exceptional volatility in the market as a whole during the second half of the 2000s.
- The differences in average 10-year standard deviations between the segments have, as the table shows, become greater than the fairly uniform pattern revealed in the previous research; in particular, West End & Midtown offices and Other Commercial are substantially above average. It is not known whether or not these changes are indicative of all properties or just reflect the smaller sample of properties in the current research. In line with the earlier research, individual shopping centres, on average, continue to show the lowest standard deviations.

Table 4.1: Volatility in individual property returns

	Average standard deviation in individual property returns	
	2004-2013	**1995-2004 - previous IPF research**
Standard Retail - Central London	*19.5%*	
Standard Retail - South Eastern excluding Central London	*16.4%*	
Standard Retail - South Eastern	17.2%	10.2%
Standard Retail - Rest of UK	16.6%	11.8%
Shopping Centre	14.8%	10.1%
Retail Warehouse	17.6%	11.0%
Office City	18.1%	10.0%
Office West End & Mid Town	22.1%	9.8%
Office Rest of South Eastern	16.9%	10.6%
Office Rest of UK	19.0%	12.8%
Industrial South Eastern	16.2%	11.7%
Industrial Rest of UK	14.5%	11.0%
Leisure	19.1%	11.2%
Other Commercial	22.8%	
ALL PROPERTIES	**17.5%**	**11.0%**

Source: Investors' data; Table 3.4 of *Risk Reduction and Diversification in Property Portfolios*.

- Higher correlations in returns between individual assets and with their market segments are indicative of a greater contribution by the market to risk in individual properties. Figure 4.1 highlights how correlations became substantially higher during the second half of the 2000s but have since loosened.

4. THE MAGNITUDE OF RISK IN INDIVIDUAL PROPERTIES

Figure 4.1: Rolling 10- and 5-year average correlations between individual properties

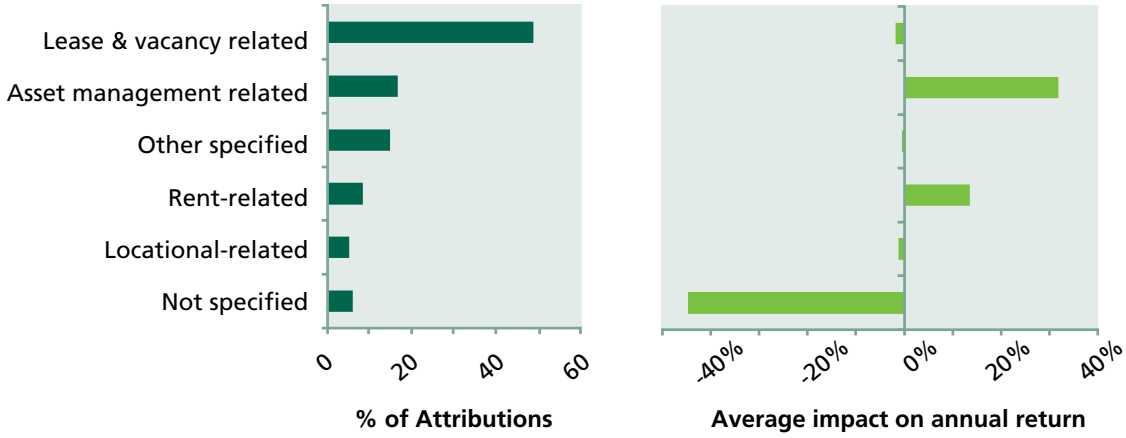
Source: Investors' data; 10-year data to 2010 and 5-year data to 2005 relates to the smaller sample of properties used in the original Nick Tyrrell Memorial Seminar research undertaken by Paul Mitchell Real Estate Consultancy Ltd.

- Part of the increased correlation is associated with the sharp property market downturn in 2008, when property performances were more likely than usual to fall sharply together. By contrast, in the following year, there was an unusually wide pattern of performance across assets, as large lot sizes and properties with strong income profiles performed better than expected.
- The market represented the predominant source of risk in most individual properties during the 10 years to 2013; in almost half of the properties (excluding ground rent investments), the asset's market segment explained more than 70% of the variation in its returns. However, asset specific sources were dominant in a quarter of properties. The average level of specific sources of risk in these properties, at 16%, was twice that of other properties.
- Specific risk, according to the statistical analysis, tends to be greater for: properties with fewer tenants; relatively high yielding properties; properties that had a new lease at some point during the 10-year horizon; and those that have experienced relatively high levels of refurbishment expenditure. Section 5 further explores the sources of high specific risk.

5. SPECIFIC RISK IN INDIVIDUAL PROPERTIES

- The distinction between systematic risk and specific risk is fundamental to how investors deal with risk. The former is inescapable because it reflects the underlying volatilities of the market and, hence, requires a premium return to justify an exposure; as specific risk can be diminished, and virtually eliminated through diversification, the challenge is to ensure that there are adequate assets within the portfolio and that these are sufficiently different to ensure diversification.
- For the majority of properties, specific risk is low and mostly 'truly' idiosyncratic to the property. Such assets are best identified as those that are slightly better than average in terms of the sharpness of their yield, the number of tenants (with more being better), and (with less being better) the frequency of their exposure to the letting market and need for asset management. Because the specific risks in these types are so different from property to property, diversification can be achieved very rapidly in these 'low risk' assets.
- For a minority of properties, specific risk is high and represents the predominant source of their total risk. Such properties are characterised by relatively small lot sizes, higher yields (but not higher rents), fewer tenants and greater exposure to the leasing market and to capital expenditure.
- The case studies – as Figure 5.1 illustrates – indicate that lease-related and, to a lesser extent, asset management-related factors are the predominant drivers of high specific risk in individual properties. Box 5.1 gives a general flavour of some of the 88 case studies.

Figure 5.1: Reasons attributed to large divergences in, and average impact on, annual total returns

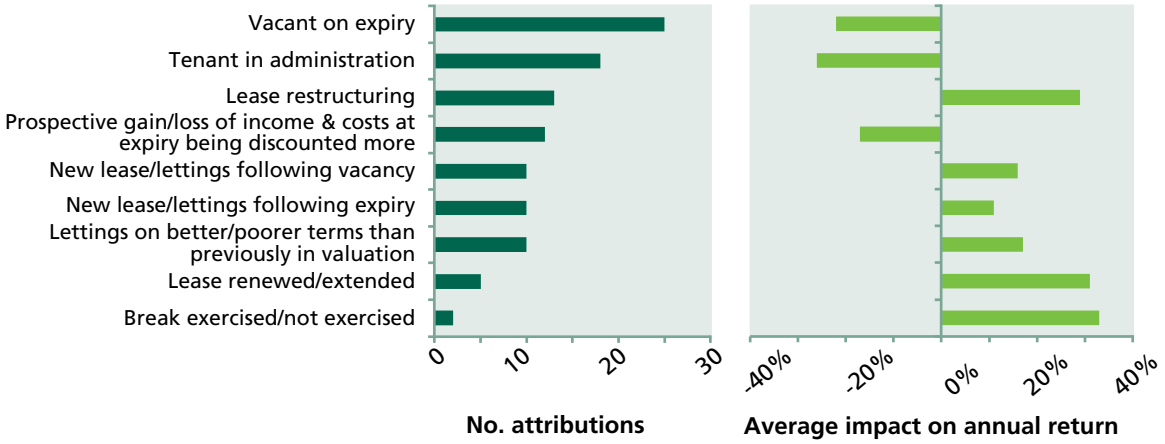


Source: 80 investor case studies

- Superficially, the loss of income, through tenant administration and vacancy following lease expiry, is the major source of lease-related risk, as Figure 5.2 illustrates. There is a further dynamic inducing volatility, however - expectations ahead of a lease event tend to be downbeat, depressing performance beyond the direct impact; subsequent outcomes can surprise on the upside.

5. SPECIFIC RISK IN INDIVIDUAL PROPERTIES

Figure 5.2: Lease-related reasons attributed to large divergences in and average impact on annual total returns



Source: 80 investor case studies

- A similar dynamic applies to costly asset management, which is initially heavily discounted in valuations but, on average, involves outcomes that tend to be valued very positively.
- These dynamics affect individual properties at different times and tend to cancel each other out from year to year and, hence, represent specific risk. A single exposure would be highly risky – and best avoided in a small portfolio – but the exposure to this dynamic could be diversified away by holding a number of such assets.
- For some assets – best characterised as relatively small, multi-lets frequently exposed to the letting market and in need of asset management – the above dynamic is accentuated by the market cycle. This element is a form of systematic risk that is discussed further in Section 6.
- Further analysis reveals that the effect of tenant administration in some properties was diluted through having a mix of tenants with different covenant ratings; in other properties, the impact was limited by having a diversified mix of similarly risky tenants. The properties most affected by tenant default tended to have fewer tenants. The risk of default had not been priced previously in their yields.

5. SPECIFIC RISK IN INDIVIDUAL PROPERTIES

Box 5.1: Synopsis of Selected Case Studies

Case study property 1: Standard retail with two units and now with residential above; lot size <£2m, ERV psf relatively low and yield around average.

10-year standard deviation of total return: 31%

Year	Investors' explanation	Return relative to segment
2008	Permission granted to convert vacant upper floors to residential	75%
2009	Residential completed; value substantially in excess of valuation	84%
2010	Expenditure on converting basement	-30%
2013	Basement let in excess of valuation	31%

Case study property 2: Single unit standard retail; lot size £8-10m with a low yield. Tenant covenants currently good.

10-year standard deviation of total return: 22%

Year	Explanation	Return relative to segment
2009	Strong rental growth in town	20%
2010	Strong rental growth in town	19%
2011	Tenant failed at end of year	-17%
2012	Unit void and ERV psf reduced	-26%
2013	Re-letting	20%

Case study property 3: Retail warehouse/park with eight units; lot size £12-14m with average ERV psf and yield. Mixture of tenant covenants.

10-year standard deviation of total return: 23%

Year	Explanation	Return relative to segment
2009	One tenant vacated on expiry and another failed	-42%
2010	Two units amalgamated and let to new tenant	17%
2011	Amalgamated unit trading well	17%

Case study property 4: Retail warehouse/park with two units; small lot size £0-2m with low ERV psf and high yield. Poor tenant covenant. Property subject to significant refurbishment expenditure over 10-year horizon.

10-year standard deviation of total return: 21%

Year	Explanation	Return relative to segment
2006	Tenant went through a CVA and remained in unit	-13%
2009	Tenant failed again	-23%
2010	Unit split and re-let	20%
2012	One tenant failed and unit became void	-25%
2013	Second tenant went into administration	-41%

5. SPECIFIC RISK IN INDIVIDUAL PROPERTIES

Box 5.1: Synopsis of Selected Case Studies, continued

Case study property 5: Multi-let West End & Midtown office with two tenants; lot size £14-16m, relatively high ERV psf and low yield.

10-year standard deviation of total return: 18%

Year	Investors' explanation	Return relative to segment
2005	Lease expired and tenant did not renew	-35%
2006	Part re-let, more quickly and at higher ERV than assumed in valuation	12%
2007	Property fully re-let; rent frees expired	11%
2010	Significant capital expenditure	-17%
2013	Upcoming expiry and void risk discounted in valuation	-13%

Case study property 6: Multi-let West End & Midtown office with seven units; lot size £6-8m, with average yield but a mix of tenants with significant proportion of income associated with 'at risk' tenants.

10-year standard deviation of total return: 27%

Year	Explanation	Return relative to segment
2008	Became largely vacant	-16%
2009	Underwent substantial refurbishment, improving quality	-29%
2010	Let more favourably than assumed in valuation; yield tightened	31%

Case study property 7: Single-let South East UK office; lot size range £4-6m, average ERV psf but with a relatively high average yield and a high risk tenant covenant. Property subject to comparatively high refurbishment expenditure.

10-year standard deviation of total return: 22%

Year	Explanation	Return relative to segment
2009	Property became vacant after tenant exercised lease break	-29%
2010	Substantial refurbishment expenditure	-25%
2011	Property re-let above ERV previously in valuation	16%

Case study property 8: Multi-let Rest UK office with seven tenants; lot size range £2-4m, relatively low ERV psf and high yield, mixed tenant covenants. The town is substantially over-supplied.

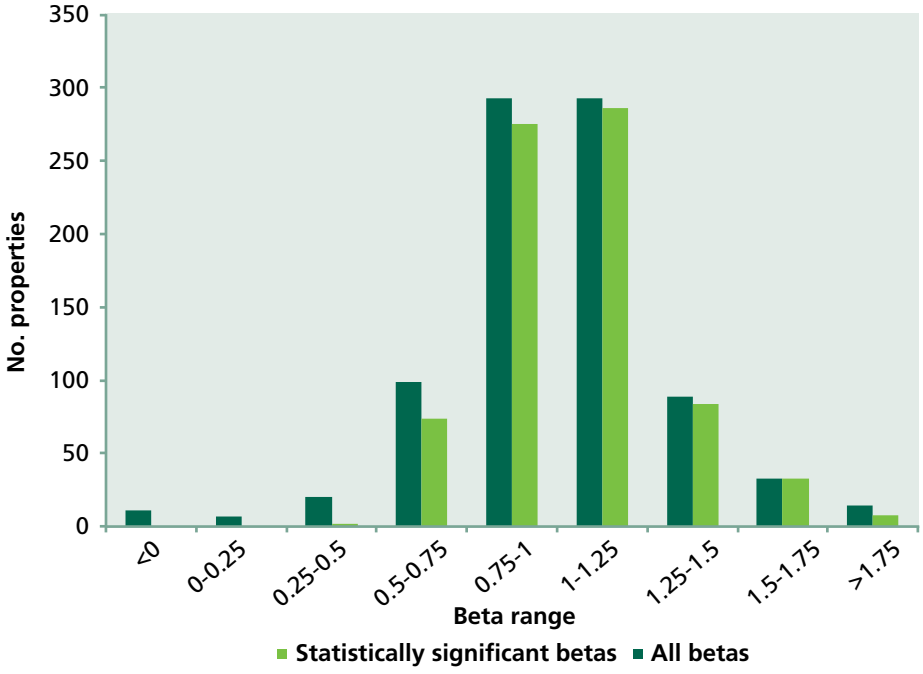
10-year standard deviation of total return: 25%

Year	Explanation	Return relative to segment
2011	One-fifth of income became void; ERV psf reduced substantially	-31%
2012	Small re-letting, further substantial reduction in ERV psf. Valuation assumed significant voids on lease expiry and that tenant breaks would be exercised	-47%
2013	New lettings and re-lettings on more favourable terms than assumed in valuation; ERV psf significantly improved	14%

6. MARKET AND OTHER SYSTEMATIC RISK IN INDIVIDUAL PROPERTIES

- A challenge in assessing the balance between systematic risk and specific risk is how to best represent the individual property's market benchmark. This is important because specific risk is the residual of total risk (as quantified in Table 4.1) and the systematic, market element. Benchmarking a City office property, for example, on the basis of less 'risky' MSCI/IPD All Property would most likely lead to greater specific risk than benchmarking it against the more volatile City office market segment.
- In this research, IPD's PAS market segments were used as the benchmark by which market risk in individual properties was calibrated. This was because such segments tended to explain more of the variation in the property's return than the return for the IPD All Property index. However, on average, the advantage was marginal and, for a significant minority of properties, the All Property would have represented a superior benchmark.
- Properties differ in their sensitivity to movements in the returns of their market segments. A significant minority of assets have above or below average sensitivities to such movements, i.e. they are high or low 'beta', as Figure 6.1 shows. For the vast majority of assets, sensitivities are clustered around the market average and in statistical terms are equal to 1, i.e., in line with their segment and the average property[1].
- Whether heightened by high beta, dampened by low beta, or just in line with their market, the market is the predominant risk in most properties.

Figure 6.1: Market sensitivities (betas), 2004-2013



[1]It should be noted that, at the overall market level, some segments have been relatively sensitive to changes in the All Property return (for example, the Retail Warehouse segment) and that others have been less sensitive (for example, Standard Retail). Judged against the All Property, these variations are also manifested in the sensitivities of individual properties, for example, individual retail warehouse properties on average are more sensitive to changes in the All Property return than Standard Retail individual properties. This means that individual retail warehouse properties should generally be priced with a higher risk premium/hurdle rate than the average property in IPD (and vice versa for properties in segments with relatively low market sensitivities, for example, Standard Retail).

6. MARKET AND OTHER SYSTEMATIC RISK IN INDIVIDUAL PROPERTIES

Source: Investors' data (859 properties)

- The research (as Table 6.1 shows) found little wide-spread evidence that other dimensions – such as yield, lot size, and also, some macro-economic factors – systematically affect the performances and risk of individual properties.

Table 6.1: Proportion of properties with statistically significant factor coefficients, 2004-2013

Property factor	% of properties affected	Macro-economic factor	% of properties affected
Large/small size (sq metre)	15%	Rental growth surprises (segment level)*	7%
Low/high equivalent yield	15%	Total return surprises (all properties level)*	16%
Long/short unexpired term	17%	GDP growth surprises*	16%
Single vs. multi-tenanted	5%	Inflation surprises*	6%
High/low ERV per sqm (quality indicator)	7%	Gilt total return (lagged)	8%
Good/poor tenant covenant quality	20%		

Source: Analysis of investors' data

Notes: Excludes ground rent investments. See Full Report for explanation of approach.

* Surprises are measured by the difference between the outcome and the forecast one year earlier. One-year GDP and inflation forecasts are sourced from the February 2015 version of HM Treasury's Forecasts for the UK economy; one-year rental growth and total return forecasts are derived from the February 2015 version of the IPF's UK Consensus Forecast. Rental growth surprises are analysed at the segment level; total return surprises relate to all properties.

- There is some indication that a number of the above factors assert themselves on individual properties only in certain environments. In particular, there is evidence that lot size and a strong income profile (and perhaps, more generally, a flight to quality) were extremely influential in 2009 (which was the height of the economic recession).
- Evidence is also found, in further statistical analysis, that that the return of an individual property declines at an increasingly faster rate as lease expiry approaches, and that properties with long unexpired terms are particularly sensitive to changes in returns/yields in the gilt market. There are also some indications, discussed later, of a lease events factor.
- The inference from the conclusions above is that properties with particular characteristics – for example, high-yielding properties, large lot sizes, etc. – do not behave like their type, which is intuitively surprising.
- In explaining this, the time frame of the analysis may not be sufficiently long to identify such influences, although extending the analysis back a further two years does not change the picture.
- A more fundamental reason is that the idiosyncrasies of individual properties are much more influential and, as a result, overwhelm any systematic effects associated with the factors. The analysis indicates that large numbers of properties are required to gain an exposure to any such factors and to construct a portfolio that tracks their performance and risk.

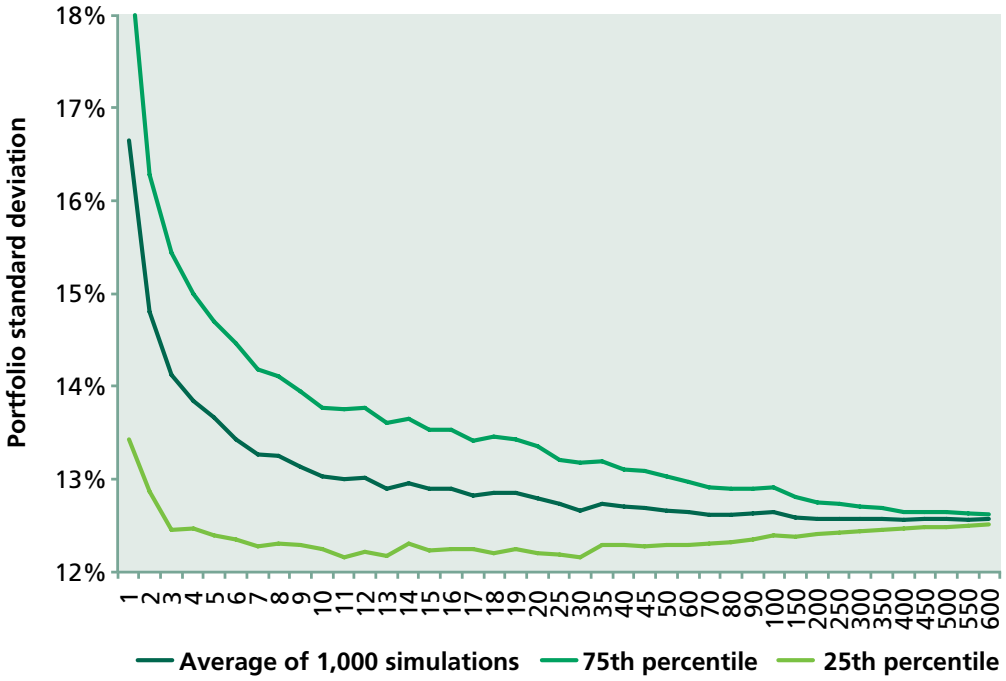
7. IMPLICATIONS FOR ASSET PRICING

- Systematic risk in individual properties, therefore, is best represented through market sensitivity, i.e. beta. Low beta (i.e. less than 1) is associated with relatively low lot sizes and yields and with larger numbers of units; conversely, high beta (greater than 1) is associated with relatively high yields, high capital expenditure, and fewer tenancies.
- Further analysis points to 'asset management intensive' properties as a powerful representation of a type affected by high market sensitivity. Such properties are characterised by frequent and relatively high refurbishment expenditure, above average yields, below average lot sizes, fewer tenants, relatively short unexpired terms and are frequently exposed to the leasing market.
- This form of 'defensive' asset management contrasts with the more opportunistic kind, for example, associated with re-gearing leases, re-configuration of units, engineering change of use, etc., where the research provided evidence of more positive outcomes.
- A lot of the variation in market sensitivities, however, is property specific – and, hence, will require corresponding judgement in assessing the asset's risk and setting the appropriate risk premium or hurdle rate for it.
- To ensure returns are commensurate with the property's risk, financial theory indicates that the risk premia and hurdle rates attached to assets should, as a rule, be proportionate to their market sensitivities – high beta requiring an above average risk premia and vice-versa. The historic sensitivities attached to the sample properties suggest, that in most cases, any additional premia above the market average risk premium (of, say 2.5%) is unlikely to be any greater than 70bps and that, for low-risk properties, any discount below the average no greater than 60bps.
- Returns over the last 10 years in a number of respects have not been commensurate with the systematic risks identified in the research. 'Asset management intensive' properties have delivered returns that are poor both relative to other properties and even more so relative to their greater risk; their 'alpha' (return after accounting for systematic risk) on average has been around -3% per annum.
- Possibly related to this, returns have systematically declined as lease expiry has closed in and, hence, have not been commensurate with such assets' greater risk. It is arguable that this is a risk that should be priced.
- There is also evidence of under-performance in properties with tenants that entered administration. Notably, the covenant ratings of the properties most impacted by tenant default were no different to the market average whilst, on average, their yields were on the low side. As the research also finds no general relationship between the performance of a property and the strength of its tenant covenants, the suggestion is that the risk of tenant default was not priced.

8. IMPLICATIONS FOR PORTFOLIO CONSTRUCTION AND RISK CONTROL

- Total risk in property portfolios, irrespective of portfolio size, has been substantially higher over the 10 years to 2013 than reported in the previous IPF report covering the 10 years to 2004. This reflects the exceptional market volatility of the last 10 years.
- Diversification – i.e., the reduction of specific risk in the portfolio – however, has been achievable at a faster rate than before. A portfolio with 20 properties would, on average, have recorded a standard deviation close to that of the overall market, as can be seen from Figure 8.1.

Figure 8.1: 10-year standard deviations of simulated portfolios, 2004-2013

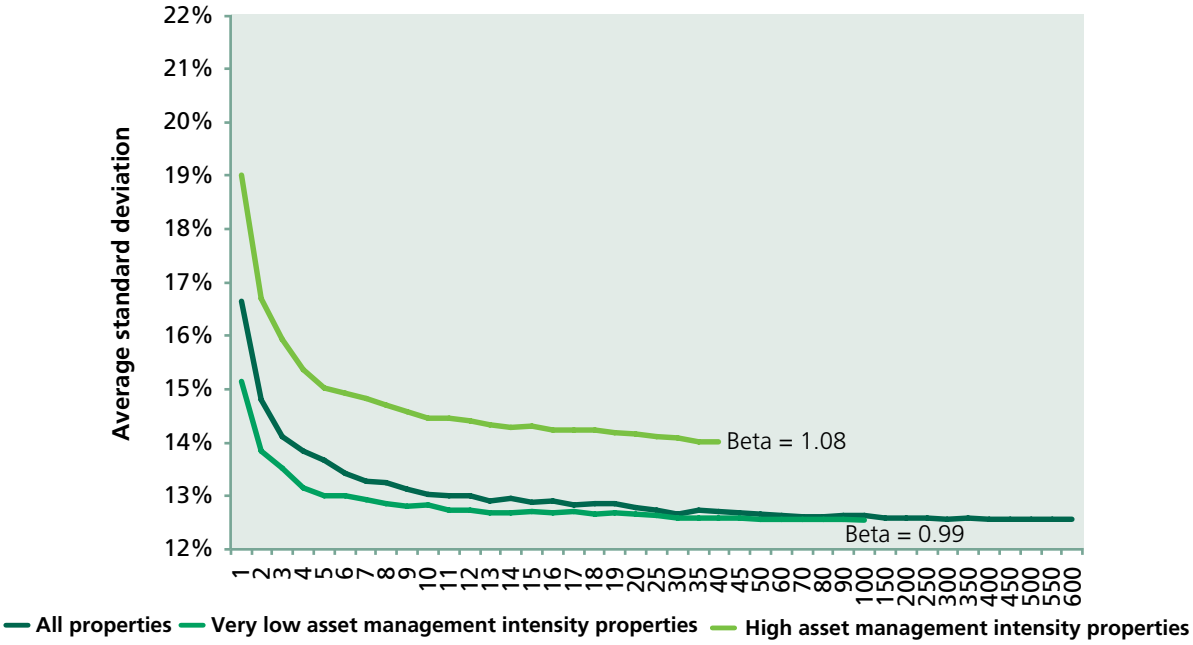


Source: 1,000 simulations using investors' data.
Notes: Results derived from 1,000 simulations. Simulations and sample average returns exclude 75 ground rent investments.

- There are potentially wide variations in risk amongst portfolios of the same size. In small portfolios, these reflect variations in both idiosyncratic and systematic risk in the constituent properties. Exposure to, asset management intensive, properties is influential in both respects, as Figure 8.2 shows.

8. IMPLICATIONS FOR PORTFOLIO CONSTRUCTION AND RISK CONTROL

Figure 8.2: 10-year standard deviations of simulated portfolios, 2004-2013: by 'asset management intensity'



Source: 1,000 simulations using investors' data.
Notes: Results based on averages of 1,000 simulations. Simulations and sample average returns exclude 75 ground rent investments

- In large portfolios, specific risk is mainly diversified away, with the remaining risk predominantly related to the market. In particular, differences in total portfolio risk and tracking error in these portfolios primarily reflect differences in the market sensitivities (betas) in the constituent properties.
- 'Asset management intensity' is particularly influential as a driver of high systematic risk. It represents a systematic risk factor in commercial property, and a powerful criterion by which to structure portfolios. Table 8.1 shows that the distinction between high and low 'asset management intensity' is associated with larger differences in portfolio risk than other characteristics (for example, size).

8. IMPLICATIONS FOR PORTFOLIO CONSTRUCTION AND RISK CONTROL

Table 8.1: 10-year standard deviations of simulated portfolios, 2004-2013, by type of asset

	Number of properties in portfolio				
	2	**5**	**10**	**20**	**40**
ALL PROPERTIES	14.8%	13.7%	13.0%	12.8%	12.7%
By asset management intensity					
High asset management intensity properties	16.7%	15.0%	14.5%	14.2%	14.0%
Very low asset management intensity properties	13.8%	13.0%	12.8%	12.7%	12.6%
Difference	*2.9%*	*2.0%*	*1.6%*	*1.5%*	*1.4%*
By 2004 yield (relative to segment)					
High yield	15.2%	13.8%	13.3%	13.0%	12.8%
Low yield	14.3%	13.3%	13.0%	12.8%	12.7%
Difference	*0.8%*	*0.5%*	*0.3%*	*0.2%*	*0.1%*
By lot size (relative to segment)					
Small lot size	14.8%	13.4%	12.8%	12.5%	12.4%
Large lot size	14.1%	13.0%	12.7%	12.6%	12.5%
Difference	*0.7%*	*0.4%*	*0.1%*	*-0.1%*	*-0.1%*
By 10-year average unexpired term					
0-5 years	14.9%	13.5%	12.9%	12.6%	12.5%
15+ years	13.4%	12.6%	12.3%	12.1%	12.1%
Difference	*1.5%*	*0.9%*	*0.6%*	*0.5%*	*0.4%*

Source: 1,000 simulations for each portfolio size using investors' data.
Note: Simulations and sample average returns exclude 75 ground rent investments

9. CONCLUSIONS AND KEY IMPLICATIONS FOR INVESTORS

- Sensitivity to changes in the market's return is the predominant systematic risk in most properties. These sensitivities vary across properties, with some being more sensitive and others less sensitive than average.
- In most properties, the deviation in these sensitivities from the market average is not large, with exposure to the leasing market and short unexpired terms increasing sensitivity, whilst relatively small lot sizes and tenant diversification reduce it. Investors should require a correspondingly higher or lower risk premium from such properties.
- A small proportion of properties face accentuated systematic risks. These are best represented as, asset management intensive, properties (defined as those with consistently short leases and high capital expenditure needs). Relative to other, less risky types of property, the research finds that they have recorded poor returns over the last 10 years. Looking forward, their risks should be priced through higher yields.
- The importance of market timing and hold periods is well-established for properties in volatile segments (such as City offices) but the research implies that this applies equally to properties that are consistently asset management intensive.
- Tenant administration has been associated with higher risk but relatively poor returns. Properties with high risk tenants should, therefore, be priced, ex-ante, to deliver relatively high returns; this is particularly the case for single-tenant assets and those with few tenants. The fact that both tenant covenant ratings and yields in such properties were no higher than average indicates the need for a better understanding of tenant risk.
- As a general conclusion, in pricing risk in individual properties, investors and researchers need to focus more heavily on the risks related to tenant default, lease events and asset management.
- The risk profile of assets changes over time as a result of external events, as well as the actions taken by managers and aspects such as declining unexpired term. Risks may also only assert themselves in particular environments, for example, in 2009, when properties with poor income profiles suffered most and those with stronger income and larger lot sizes did well. Investors need to recognise this by continually reassessing the risk profile of individual assets and portfolios as a whole.
- There are a number of market factors, with distinct cycles of performance, which might be expected to differentiate performance within individual assets (for example, yield, size, etc.). This is not supported by the analysis. Investors need exposure to a large number of these types of assets to track the performance and risk of such assets. Investment strategies based on such styles may therefore be difficult to implement. The exception might be a style linked to 'asset management intensity'.
- Specific risk represents a substantial source of risk in a minority of properties. Lease events and asset management generate the highest levels of specific risk in individual properties. Such specific risk can be diversified away but larger numbers of properties are required to do this compared to the specific risk-associated characteristics, such as small lot sizes and numbers of tenants.
- Investment strategies and portfolio risk control processes have traditionally been defined on the basis of sector and geography but the research highlights the need for a much broader set of metrics. The research in particular identifies 'asset management intensity' as a key factor.

NOTES

IPF Research Programme 2011–2015

Investment Property Forum
New Broad Street House
35 New Broad Street
London EC2M 1NH

Telephone: 020 7194 7920
Fax: 020 7194 7921
Email: ipfoffice@ipf.org.uk
Web: www.ipf.org.uk

Printed on recycled paper