Real Estate Stock Selection and Attribute Preferences

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Abstract

The majority of studies that explore property portfolio construction and management strategies utilise highly aggregated ex-post data, but stock selection is known to be a significant determinant of portfolio performance. Thus, here we look at stock selection, focusing on the choices faced by investors, necessitating the collection and analysis of primary data, carried out utilising conjoint analysis. This represents a new step in property research, with the data collection undertaken using a simulation exercise. This enables fund managers to make hypothetical purchase decisions, viewing properties comprising a realistic bundle of attributes and making complex contemporaneous trade-offs between attributes, subject to their stated market and economic forecasts and sector specialism. In total 51 fund managers were surveyed, producing 918 purchase decisions for analysis, with additional data collected regarding fund and personal characteristics. The results reveal that 'fixed' property characteristics (location and obsolescence) are dominant in the decision-making process, over and above 'manageable' tenant and lease characteristics which can be explicitly included within models of probabilities of income variation. This reveals investors are making ex-ante risk judgements and are considering post acquisition risk management strategies. The study also reveals that behavioural factors affect acquisition decisions.

1. Introduction

Stock selection is a significant determinant of portfolio performance (Lee, 2006) and active portfolio managers need to be good at both stock selection and tactical asset allocation to successfully manage their funds (Key *et al.*, 1996). While the importance of stock selection has long been acknowledged in UK real estate investment strategies, it has, nevertheless, traditionally remained largely overlooked in empirical studies. The predominant focus of research into the development of optimal strategies for direct and securitized real estate portfolios has been top-down, thus utilising aggregated ex-post data. More recently, studies have emerged that investigate the components of risk and, thus, implicitly the risk judgments made by investors. Common objectives in these studies include a desire to explicitly unravel the components of risk to improve risk transparency (Adair and Hutchison, 2005; Hutchison *et al*., 2005) and, thus, to enable a forward looking approach to risk management that moves away from reliance on the analysis of past data (Devaney and Lizieri, 2005).

Behavioural influences have also come to be recognised as important features of the investment decision-making process. In an early paper, Wofford and Preddy (1978) explored investor perceptions at the asset class level, recognising the importance of cognitive processes, such as preferences, attitudes and perception, in their decisions. They explain that part of the investment decision comes from perceptions, in turn derived from performance data and psychological fact. The reliance placed upon "investor sentiment" has more recently been found in real estate investment decisions (Gallimore and Gray, 2002). Further evidence of the role of behavioural factors within the real estate investment decision-making process include the application of subjective personal judgment to augment econometric forecasting models (Gallimore and McAllister, 2005). The behaviour of a range of professionals involved in the acquisition process has been explored and described by Gallimore *et al*., 2006. There is also evidence in other financial markets to suggest that investors display behavioural traits, such as herding, overconfidence, framing and anchoring (Mullainathan and Thaler, 2000), and some of these biases have been found to be present in the real estate market in valuation, lending and

rent review processes (Diaz, 1999). Further evidence suggests that fund managers' behaviour will be influenced by training and qualifications, age, gender and experience, for example (for example, see Willman *et al*., 2006).

Despite these recent advances, no systematic studies have been published that examine the implicit ex-ante risk judgements made by individual investors or the influence of behavioural factors in stock selection decisions. Our understanding of how the heterogeneous nature of real estate influences the stock selection process remains severely constrained. The aim of this study is to explore the bundle of property attributes underpinning investment risk and to gauge their relative importance within purchasing investment decision-making. Thus, this paper explores whether disaggregated ex-ante data could inform future investment decisions, reveal implicit ex-ante risk judgements and future risk management strategies employed by the investor and, in addition, whether behavioural influences in the stock selection decision-making process are revealed. In doing so, the study seeks to deliver a better understanding of fund managers' perceptions of direct real estate and their preferences for different attributes and, subsequently, stock. This provides an essential step forward towards enabling the comprehensive assessment of real estate investment strategies. Further, it will shed light on how pricing models are operationalised within practice as the risk premium employed in the valuation process should reflect the perceived impact of these attributes.

The remainder of the paper is structured around three research objectives. The first is to develop a conceptual model specifying and contextualising the real estate attributes that drive the risks and returns attached to individual stock. Secondly, to undertake an analysis of micro-level real estate attributes to reveal the relative preferences held by fund managers for different real estate asset characteristics. The last objective explores the commonalities in preferences across investor groups.

2. Developing a conceptual model

2.1 Investment risk

As we know, real estate investment returns comprise rental income and capital growth, determined by the interaction between users (demand driven in turn by stock, rent and economic conditions) and investors (demand driven in turn by rental levels and future rental and growth expectations, captured in the capitalisation rate). The capitalisation rate varies depending on, inter alia, the risk premium which will reflect the risk perceived to be attached to the investment returns, derived from the attributes of the property (see below).

However, the user and investor markets are not in equilibrium, as explored by Colwell (2002), with investment performance indicators seen to move cyclically in their search for equilibrium. Underlying this is that the relative importance of market fundamentals varies over a cycle (Blundell *et al*., 2005). Further, as market fluctuations occur, so does the magnitude and importance of specific risks across different sectors and locations. Causes of risk can be classed as contributing either to specific risk or to market risk, including investor sentiment and movement in investment flows as investors search for the best opportunity, as examined by Gallimore and Gray (2002), McAllister (1999) and Cauchie and Hoesli (2006). Factors contributing to specific risk can include real estate attributes such as age, location, layout and design. The mixture of specific risks, which vary in magnitude and balance over time and space, results in a complex web of interaction that, arguably, must be fully understood if variations in returns and, thus, risk, are to be examined comprehensively and controlled effectively. Hence, here we are interested in the constituent elements of specific risk, as determined by attributes specific to individual real estate assets, including how investor preferences may vary under different market conditions. Thus, this study seeks to examine how non-market risks attached to total returns, impacting for example on tenant default and void periods, are managed through the stock selection process.

2.2 Property attributes and performance management

An assessment of real estate attributes can be essential in the pro-active management of investment risk, as identified by Blundell *et al*. (2005), who seek to identify factors causing volatility in real estate returns, rather than measuring the historic product. In a similar vein, Devaney and Lizieri (2005) search for systematic drivers of return, with the rare benefit of having access to individual stock data. However, they find no compelling evidence of real estate characteristics systematically contributing to patterns of return.

In seeking to define real estate attributes underlying investment risk in a systematic analytical framework, we draw on the model of volatility decomposition, set out by Blundell *et al*. (2005). Thus, we, too, systematically explore the causes of risk, but focus our analysis on factors specific to individual real estate assets, contextualised for sector and wider economic factors. These factors affect risk over time and between locations via both changes in income and capital growth. In turn, we propose, changes in income and capital growth are a function of four broad categories of tenant covenant, income structure, yield shift and ERV change. We use these categories to structure the following narrative on attribute identification. The complex nature of relationships in investment markets means that changes in income and capital growth can often be driven by the same underlying factors or attributes.

2.2.1 Tenant covenant

The security of the rental income stream generated by an individual investment is directly influenced by the strength of the tenant covenant, as typically assessed by their credit worthiness. Issues of credit worthiness and the importance of the security of the income stream to the investor have been explored by, for example, Blundell *et al*. (2005), IPD (2000) and Adair and Hutchison (2005). Of course, default risk can be diversified through investment in multi-let properties, as acknowledged by IPD (2000) and found by Devaney and Lizieri (2005) but is also linked to location or use restrictions as these factors can make an empty property difficult to relet.

2.2.2 Income structure

The structure of the rental income is determined by the frequency and timing of the income flows and the opportunities for realising any changes in market rental levels, which in turn are determined by lease terms, location, credit worthiness of the tenant and number of tenants. We suggest that the key lease terms affecting the structure of the investor's income stream are the review clause, the period to expiry and/or break and the user/assignment clauses. Clearly, the location of individual properties determines the likelihood and length of a void occurring. Location further shapes investment decision strategies as confining investments to a discrete patch minimises the distance and local knowledge required to effectively manage an active fund. In practice what we find is that funds tend to target major urban centres (Byrne and Lee, 2006) and concentrate their activities on properties within specific micro-locations.

2.2.3 Yield shifts

Real estate yields should capture all the risks associated with real estate investments, including any variables that influence the income stream, expected rental income growth and tenant covenant. Therefore, the range of factors affecting the yield is partly common to the tenant covenant and income structure (above) and rental change (below). These include lease terms and location, and subsequent changes in these variables and in the market's perception of these risks gives rise to yield variations between locations and yield shifts over time.

Two further attributes, obsolescence and the environmental performance of buildings, are important determinants of risk premia and yield movements, and worthy of discussion. Firstly, the sustainability and environmental performance of buildings is generating increasing concern for real estate investors since energy labelling, growing experiences of rises in fuel cost and the monitoring of carbon emissions from buildings occupied by large private and public organisations are now encouraging occupiers to opt for more energy efficient space. In time, this should feed into the market with valuation surveyors incorporating falling demand for properties with poor energy scores into their valuations.

Obsolescence, distinct from depreciation, can be broken down into functional, economic, technological and locational categories (see Dixon *et al*., 1999). The latter two categories are not considered here, as technological obsolescence relates to inefficient internal services and is generally curable (and the costs factored into the investment appraisal), while locational obsolescence relates to shifting urban structures and fashions and is either known (and can, therefore, be factored into the investment appraisal) or unknown. However, functional and economic obsolescence relate to the design and quality characteristics of the space, directly influencing the functional performance of the real estate asset and the specific risk associated with a building and the potential for yield movements as demand and supply flows adapt to changing user requirements in the market. The approach we adopt in recognising the role of obsolescence in investment risk is similar to the one taken by IPD (2000), which focuses on obsolescence and flexibility. It represents an attempt to simplify a very complex issue and focus on concrete attributes that are significant to individual properties. However, it differs from Adair and Hutchison (2005), who present a range of factors contributing to an aggregate category of depreciation and obsolescence for each commercial sector. At the portfolio level, Blundell *et al.* (2005) found this attribute difficult to measure in a meaningful way.

2.2.4 ERV change

Expected rental value growth is fundamentally linked to demand and supply conditions, which in turn are driven by the location of the real estate, its physical condition and the degree of flexibility it has to accommodate different potential users, as explored above.

2.3 A conceptual model

Our conceptual model is presented in Figure 1. It shows that total returns can vary (cross-sectionally and temporally) representing risk to investment capital. These variations are a function of the investment income stream (in turn derived from tenant covenant and income structure) and capital growth (a function of changing yields and rental levels). Underpinning

tenant covenant and income structure, and driving yield shifts and rental change is a set of real estate stock attributes, introduced above. The attributes are shown in the model to vary, both between properties and over time and, thus, these variations drive fluctuations in total returns. The model depicts the importance of sector and economic conditions in this process. This paper seeks to identify how fund managers anticipate minimising such (downside) variation in returns through their ex ante risk management strategies at the time of purchase.

The conceptual model is developed to reflect a comprehensive set of attributes, grouped into a workable number of categories. The attributes found in individual stock will vary in character, or level, as depicted, and are intended to reflect the complex decision-making process although, of course, an almost inexhaustible number of real estate attributes could be seen to exist. The relationships between these attributes and the mechanisms underpinning income and capital growth are often common, as presented in Figure 1. The commonality of links between attributes, mechanisms and investment return is evident, due to the complex nature of relationships in real estate and investment markets. Previous commentators have also noted this phenomenon (Wofford and Preddy, 1978). Finally, the relative importance of the attribute level to investment risk will vary across real estate sector and different economic conditions, again, as depicted.

Thus, by exploring investor preferences for stock attributes, insights will be possible into managers' investment performance management strategies. For example, selection of attributes such as a short period to expiry of the lease for a single-tenanted unit, may indicate intention to actively manage the property through refurbishment or redevelopment. Preference for a multi-tenanted property may reflect fund managers' intentions to add value through tenant realignment. Conversely, selection of single-tenanted properties, with good tenant covenant, location, environmental performance and obsolescence ratings are more likely to be made by those with risk-averse, core strategies seeking market performance. These scenarios begin to

illustrate examples of implicit ex-ante risk judgements and future risk management strategies employed by the investor.

3. Data Collection Process and Analytical Techniques

3.1 Research method

The study is novel in that it is a behavioural study that seeks to adapt a survey method known as conjoint analysis to elicit fund managers' preferences and determine the relative importance of attributes associated with real estate. Up until now, demand modelling in the real estate market has been based on revealed preference analysis and indirectly examining choices and decisions that have already been made in the marketplace. An example of this is hedonic analysis used to reveal the price of housing attributes. However, while hedonic models can be used to reveal the implicit "risk premia" that the market associates with stock attributes, the purpose of this study is to examine investment choices made, not across the market, but by individual fund managers. This provides a strong base for understanding the factors that shape the preferences and decisions of fund managers and the specific worth placed by an individual on individual attributes.

Conjoint analysis is one of many stated preference techniques available to researchers to measure attributes or construct importance. Choice-based conjoint (CBC) analysis, primarily used in this study, is unique in that it enables respondents to compare and choose between alternative bundles of product characteristics and is extremely useful when very different attributes matter in the decision process. It does not ask respondents to select their preferences by rating or ranking, like most stated preference methods. Nor does the traditional full profile approach used in this study separate the attributes, like the pair-wise comparison underpinning the Analytical Hierarchy Process (AHP) used by Hutchison *et al*. (2005) to estimate the impact of specific factors on current real estate investment risk perceptions, or the triadic comparison involved in Personal Construction Theory and Repertory Grid techniques (for example, these methods were used by Timmermans *et al.* (1982) and Preston and Taylor (1981) to examine the

decision-making preferences of shoppers and residential home buyers, respectively). Instead, CBC analysis enables the respondent to consider multiple attributes simultaneously and in a conjoint way, as investors do in the marketplace. It is a method that can help examine the process by which a purchasing decision is made when a buyer is faced with a number of different properties, each comprising a combination of different attributes (lease clauses, unexpired term, covenant strength, for example) and different levels of those attributes (levels of restriction in user clause, lengths of unexpired term, various tenant covenant strength, and so on). Thus, it offers a greater degree of realism than other techniques because it enables respondents to compare potentially similar but complex alternatives, while also giving them the option to walk away. This avoids the low discrimination answers common when respondents are asked to rate or rank the importance they place on individual attributes, and reveals the true value they place on attributes as it forces them to make realistic trade-offs. It also has the additional benefit of enabling simulation models to be constructed that enable researchers to predict the probable buying behaviour of individuals or groups of individuals.

3.2 Survey design

The robust application of conjoint analysis requires a series of key stages to be undertaken, as suggested by Churchill (1995). The first stage in the analysis is to define a set of appropriate measurable attributes, as we set out in the conceptual model (Figure 1), and attribute levels, as presented in Table 1. These variables then form the basis of an interactive computer based questionnaire specifically designed to investigate the preferences of fund managers. The questionnaire contains three elements. The first element collects data on the personal profile of the respondent. The second section examines the details of the actual investment behaviour and characteristics of the funds managed by the respondents. The last, but main section, uses conjoint analysis to examine the preferences of fund managers for the attributes, using a number of approaches to cross check responses. Whereas direct questioning methods used in previous studies have asked investors to specify how important each attribute is, the conjoint

analysis used here forces respondents to make difficult contemporaneous tradeoffs, replicating real purchase decisions.

The attribute levels set out in Table 1 are defined using either established measures or more descriptive indicators. For example, Blundell *et al*. (2005), IPD (2000) and Adair *et al*. (2005) all highlight the importance of tenant credit rating and, following Blundell *et al*., we utilise the D&B Rating to measure tenant credit worthiness. As set out by Adair *et al*., the D&B Rating is available for all UK businesses, providing the largest coverage for a predictive indicator for assessing company risk and business failure. Similarly, in terms of market coverage, the BREEAM rating is the UK industry standard for measuring sustainable design and is used to assess buildings' environmental performance. The levels for rent review clause, economic and functional obsolescence, location and user clauses are more descriptive to reflect recognisably distinctive attribute levels, with the period to expiry/break reflecting the trends towards shortening holding periods.

The attributes and the attribute levels, identified in Table 1, are selected and defined to be unambiguous and independent, while mitigating the occurrence of impractical attribute combinations in the simulation exercise. This was tested and no significant two-way or three-way interactions were detected, removing the need to impose prohibitions on combinations. Finally, the attribute levels are identified to ensure that, first, the number of choices do not overwhelm the respondent and, secondly, to balance the number of levels across attributes to avoid the *Number of Levels Effect* which can result in bias in the results.

A Choice-Based Conjoint (CBC) method illicits attribute preferences by presenting respondents with different real estate investment opportunities, each comprising a combination of different levels of the eight attributes. There are twenty tasks as recommended by Johnson and Orne (1996) to optimise the precision of the results without compromising data quality. Each task contains three mutually exclusive randomized investment choices, with one choice always

included where the respondent can recommend investing in neither of the remaining two opportunities. Respondents select one of the three choices as an addition to their selected fund, based on the assumption that the assets are correctly priced and subject to their (stated) perceptions of current economic and financial conditions[1]. A complete enumeration design strategy is adopted in the preparation of this traditional full profile CBC design to achieve high quality and nearly orthogonal design for each respondent, in terms of the main effects[2]. Although the randomized design is widely regarded as slightly less efficient than a fixed orthogonal design plan it has the offsetting advantage of being easy to implement, is robust in character, and is considered a feasible strategy because minimal attribute interactions are predicted with no clear case to prohibit any combinations of attributes and attribute levels.

Further survey questions collect data on gender, age, experience, qualifications, fund size, type of fund, vehicle style and return objectives, as well as their short term expectations for the economy and real estate investment market.

Survey design efficiency tests were undertaken before and after the fieldwork, with positive results. A total of 1,020 observations were collected on the CBC choice based tasks but, to remove initial respondent errors as they become familiar with the requirements of the exercise, the first two choice tasks from each respondent were excluded from the analysis to give 918 observations.

3.3 Modelling and analytical technique

[1] This experimental approach arguably oversimplifies the decision-making process as the existing holdings of the fund and the desired structure may influence the fund manager's decision and future work in this area should try to capture these complexities.

[2] *Complete enumeration CBC* has the additional benefit that it allows researchers to differentiate main effects associated with attributes and their levels and interactions between attribute levels, and test for the significance of 2-way and 3-way interactions. It also allows prohibited level combinations to be imposed, although this feature was not used in this survey.

Hierarchical Bayes (HB) estimation is the preferred method for data analysis. It is more sophisticated than count and multinominial logit (ML) analysis[3] and, in tests, has proven to be more stable, yield more robust results and generate more accurate choice predictions (Orme, 2000). HB is used to estimate the part-worths for individual respondents based on the assumption they have a multivariate normal distribution. It does this in two stages. At the top level, all the respondents are considered to be drawn from a population of similar individuals, and the part-worths for each respondent are estimated by "borrowing" information from the other individuals within the population, with the result that estimation accuracy is usually enhanced.

At the bottom level, the probabilities of an individual selecting a real estate investment with particular attributes are governed by a ML model. Based on an individual's part-worths calculated at the top level, the probability of a real estate asset being preferred is a function of its attributes and the attributes of the available alternatives. So, the probability of the *i*th investor choosing the *k*th real estate investment (p_{ik}) would be calculated using the following real estate investment choice model:

Equation 3.1

$$p_{ik} = \frac{e^{x_k' \beta_i}}{\sum_{t=1}^{T} e^{x_t' \beta_i}}$$

where β_i represents individual *i*th's part-worths for the attribute levels of the *k*th alternative and x_k' is a vector of estimated values describing the *k*th alternative in that choice task. The exponential of the alternative investment utility ($e^{x_k' \beta_i}$) is divided by the sum of the

[3] Initial exploration of the data was undertaken using count and multinomial logit (ML) analyses, with consistency in results across methods. The preliminary count analysis revealed that 2-way and 3-way interactions were insignificant between all combinations of attribute levels but yielded mains effects significant at 1% and 5% confidence levels. This implied that further analysis should concentrate on main effects.

exponential utilities for all the other investments option ($\sum_{t=1}^{T} e^{x_t' \beta_i}$). The utilities for all the investments are calculated by multiplying the individual's part-worths for the attribute levels of all the other investments (β_i), used by a Monte Carlo Markov Chain[4]., by the vectors of descriptors for all the investment alternatives (x_t).

The individual part-worths estimates can then be used to examine the preferences of *a priori* groups of respondents or can be segmented into homogeneous groups using cluster analysis. Further, the aggregate and individual part-worths generated in the estimation stages of the analysis can be used to simulate acquisition behaviour for different real estate investments. Three investment concepts are derived: concept number one represents a top grade investment with the best attribute levels, concept number two represents a secondary quality investment while the third concept represents poor investment quality with the least preferred attribute levels. These simulations allow the preference and behaviour of different groups of investors to be examined.

3.4 Data collection, representation of sample and temporal stability

Following a pilot, the main data collection stage was undertaken in two phases, with the respondents randomly selected from a list of fund managers drawn from a variety of sources. These include UK Investors Property Investors Directory (Property Data, 2004), company websites and EGi's Who's Who listing service. 51 respondents took part in the survey, comprising 45 active fund managers at various levels of seniority across 38 organizations, 2 investment surveyors, 2 asset managers and 2 fund acquisition analysts. They were based in the UK but investment holdings were not necessarily confined to the UK.

The first tranche of 27 interviews was undertaken in March 2007 and the second set 3 months later, with 24 respondents. Both periods were before the liquidity crisis in July 2007 when the

[4] Parameters are also estimated for the vector of means of the distributions of worths (α) and the matrix of the variances and covariances associated with that distribution (D).

initial loss of confidence by investors in the value of securitized mortgages in the United States was experienced. However, it is apparent that the market was feeling jittery about the perceived credit risk in the general economy as the TED spread[5] started to rise in April/May and, indeed, this is reflected by the proportion of our survey respondents who predicted a rise in property yields rising to two thirds in June 2007 from only one third in March 2007. This requires temporal stability to be analysed to determine the stability and usefulness of the results. The differences of the rescaled utilities of both groups were very small and further t-tests, undertaken on the utilities of individuals in both collections, revealed no significant temporal difference between the two groups. Thereby, we conclude that preferences over the data collection periods appear stable.

Some funds focus on the UK market while others span Europe. Portfolios are mainly held by institutions and collective investment schemes, and include pension funds, managed real estate funds, real estate unit trusts and specialist vehicles. The majority of funds (63.5%) were over £500 million in size with the average investment size approximately £1.02 billion, holding an average 73 properties. The smallest fund held 15 properties and was estimated at £20 million while the largest fund, at almost £7 billion, held around 550 properties. Approximately 63.5% of the funds were pure property funds while 6 held between 5% and 20% as cash.

4. Results

Aggregating all responses, the HB estimated part-worths indicate that location is considered to be the most important attribute. Disaggregating the analysis by fund characteristics and real estate sector (Tables 2 and 3), respondent characteristics (Table 4) and attribute level (type of location) (Tables 5-7) reveals a high degree of consistency in responses. Almost without exception, location is the most important real estate attribute across fund type, style, size and objective, real estate sector and respondent characteristic. The consistency in result continues

[5] The TED spread is the difference between the US Treasuries three-month T-bill interest rate and three-month LIBOR, and is widely accepted as an indicator of the perceived credit risk in the general economy.

with the type of location being almost unanimously in-town or city centre and the least preferred locations those with no existing public transport, whether suburban or out of the town/city centre. The only notable exceptions where location falls below being the second most important attribute are for the smallest funds and standard shops. Although both of these categories have small sample sizes, the smallest funds may be priced out of prime pitches while, for the latter, this challenges what we would expect. The strength of the aggregate result, placing location as the most important attribute to investors, arguably indicates a concern for minimising both risk and uncertainty in long-term investment returns. Location is the one attribute that has long-term stability (subject, of course, to shifts in the urban structure as governed by user, investor and developer demand and the planning regime). Thus, while tenants and lease terms can change over time, location provides a greater degree of future certainty to the characteristic of the stock selected. This result begins to provide insights into the implicit ex-ante risk judgements and future risk management strategies employed by the investor.

At an aggregate level, the second most important attribute in the stock selection process is economic and functional obsolescence. The degree of consistency in responses is, again, startling, especially (but not surprisingly) with the 100 percent unanimity in the preferred level of specification and flexibility in internal layout being high and the least preferred level being low. The only exceptions of note where concern over economic and functional obsolescence falls by more than one place are where the return objective is non-standard, the sector is, again, retail or the respondents are in the oldest age category (however, the sample sizes for these sub-categories is small). Of more significance is that those with less than one year of experience in fund management ranked this attribute as fourth most important in their stock selection simulation choices. As with location above, the importance placed on this attribute reveals the concerns of investors with standard return objectives (to outperform a benchmark) to minimise risk and, if possible, uncertainty within purchasing decisions. Properties with the greatest flexibility should, *ceteris paribus*, attract the highest level of user demand and, thus, provide

attractive income returns feeding, in turn, to capital growth. This is the case both in the current/short-term market and, in addition, the longer term as premises are able to adapt to changes in the requirements of the user. Further, high spec premises should be, it can be argued, attractive to tenants with good covenant strength who are seeking long-term occupation. This further indicates ex-ante risk management strategies are a consideration in the decision-making process, with risk-taking an inherent element of those with non-standard return objectives, likely to be opportunistic funds.

The third, fourth and fifth most preferred attributes have closely bunched utility levels and are tenant credit worthiness, review clause and multi/single-let, respectively. Similarly, the three least important attributes in the stock selection process have similar utility levels and are period to expiry, sustainability and environmental performance rating and user clause, respectively. These results are, once again, highly consistent when disaggregated by fund and respondent characteristics and real estate sector. Disaggregating the results to determine the preferred attribute levels reveals some interesting findings. Initially, the results are logical and consistent, with absolute consistency in the shortest period to expiry/break (less than five years) being the least preferred option and the longest period (over ten years) being the most preferred. This suggests that investors seek to minimise the likelihood of a void period in income return, following expiry. Similarly, as expected, a restrictive user/assignment clause is least preferred (which would restrict prospective tenant demand) and a standard user/assignment clause (where landlord agreement is to be sought) the most preferred. Two notable exceptions to this are in the retail sector, for the classes of shopping centre and retail warehousing. The least preferred user/assignment clause for those investing in shopping centres is a relaxed clause. This would result in a loss of control to the investor in aligning tenant mix to the optimum level. Conversely, the most preferred user/assignment clause in the retail warehousing sector is a relaxed clause, perhaps in an attempt to minimize any further restrictions on tenant base above those imposed by the traditionally restrictive planning system (in the UK).

While these results are logical and consistent, the findings relating to the environmental performance of an asset are much less so. Although this attribute tends to rank as the seventh most preferred attribute, with very little variation across fund and respondent characteristics or real estate sector, other than an occasional move one place either side, the results indicating the preferred rating level are difficult to interpret. The possible options given are, from highest to lowest rating, excellent, very good, good, pass and, additionally, not known. The strongest pattern is that the most preferred rating is very good. One might attempt to interpret this as a reasonable level to aim for, with opportunities to enhance value through additional environmental improvements without overly burdensome expense. However, the rating that is least preferred most often is just one level below, being a good rating. Examining this, alongside variations in these preferences, sheds no light, with the results showing an absolute lack of clarity or interpretability. This should be of concern to all as it may suggest a lack of consistency in knowledge relating to this attribute. This could stem from it being a comparatively new consideration for investors at the time of the study, with greater awareness needed to maintain future return levels as environmental concerns rise up political and business agendas.

Finally, the results show some further interesting preferences. Investors in standard shops and shopping centres prefer rents set annually, whether linked to an index or turnover, more than investors in other sectors do. This preference in the retail sector perhaps reflects the growth seen in the use of turnover leases in the UK, enabling investors to quickly realise rising returns in market upturns, but limiting falls. These leases also allow investors to see immediate growth in investment returns as result of active asset management. Finally, in line with expectations, the least preferred rent review clauses are those without upwards only review terms, which would bring uncertainty to income flows and, further, challenges to the valuation process in the UK.

A final stage in the analysis of the individual part-worths is through the use of cluster analysis to test for the existence of (comparatively) homogeneous groupings, both in terms of respondent characteristics and fund characteristics. Two-way cluster analysis of the personal and fund characteristics organize respondents into two homogeneous groupings based on their age, experience, qualification, real estate type and fund type. K-means cluster analysis is then used to group the ranked part-worth data into two groupings. A cross comparison of the cluster membership for the two groups drawn from the personal and fund characteristics of the sample and the two part-worth clusters reveals striking similarities. Although the membership of the clusters is not exactly identical, 71% of the respondents allocated to a grouping based on their personal and fund details are clustered in a similar way when they are clustered by part-worths. Clearly stock attribute preferences disclosed by fund managers vary across individuals, and are linked to the characteristics of funds they manage. Yet, there is also some tentative evidence, which supports our initial proposition, to suggest their preferences in the stock selection process are also partly linked to their personal characteristics.

5. Discussion and conclusions

This study has sought to extend our knowledge and appreciation of the dynamics of stock selection. By investigating the relative importance of real estate attributes as perceived by fund managers, and the exogenous factors that may shape the decision-making process, it aims to further our understanding. An application of this understanding is to provide insights into the implicit ex-ante risk judgements and future risk management strategies employed by the investor. Although it may be perceived that we all understand which property attributes are the most important, this has not, in fact, been investigated empirically. This potentially marks an important step in controlling sources of risk, by investigating whether what we think should be done, is reflected by and translated into practice. The paper explores these issues, additionally examining commonality in the perceptions of different investor and fund types. Such an investigation can begin to unravel how the pricing model and, more specifically, the risk premium, is operationalised within practice.

There are clear rankings found in the importance levels, or preferences, attached to different property attributes. Through analysis of the results it may be presumed that there is a positive correlation between the greater the risk to the investment returns from a sub-optimal purchase (relating to the attribute and, more especially, the level of the attribute), the stronger the preference evidenced by the results. This is most clearly seen by the preference of investors for considering location uppermost in their decision-making and, it follows, the most prime (defined as in-town/city centre) type of location available to them. Ultimately, the location of the property cannot be altered and so the risk to investment returns arising from location often cannot be mitigated. If this attribute were considered to be of secondary importance to other attributes, logically it follows that there is an increased likelihood of securing an investment in a location that is sub-optimal to the investor, exposing capital to uncontrollable risk (*ceteris paribus*). The dominance of location in the decision-making process did not differ across fund managers' various economic and market outlooks. Thus, the results suggest that investors are aware of the long-term drivers of return with respect to property attributes, employing ex-ante risk judgements and considering future risk management strategies within the investment decision-making process.

The two most preferred attributes are inherent to the physical property (location and obsolescence). The remaining six attributes are less clearly ordered but generally relate to tenant and lease characteristics (with the exception of the sustainability and environmental performance rating). By considering the importance of these attributes below location and obsolescence indicates that, in terms of ex-ante risk judgements, handling these attributes can be built into a risk management strategy, or business plan for the property, for implementation post acquisition. Indeed, as recently explained by SPR (2010), lease structures and tenant characteristics represent the most important asset factors to be included within models of variation in an asset's cash-flows, signifying their tendencies to contribute to investment risk. In

terms of the preferred levels of these attributes, the results clearly indicate a preference for minimising risk.

Breaking down the ordering of the remaining six attributes into two groups reveals a concern for tenant creditworthiness, rent review clause and whether the property is multi or single-let over and above the period to expiry/review, sustainability and environmental performance rating and user clause. Further, the most sought after levels of these attributes are as expected, if investors are seeking to minimise sources of risk to their expected returns. Preferences for the highest level of tenant creditworthiness, shortest upwards-only rent review period and most multi-tenanted property attributes show ex-ante risk judgements being made for safe, protected and diverse income streams. This stability is valued above long periods to expiry, very good BREEAM ratings and standard user clauses, perhaps seen as attributes presenting the lowest levels of risk and, further, the easiest to control via risk management strategies. The ordering of the importance of the attributes is likely to change over time, for example with the rapid rise in motivations towards environmental efficiency, anecdotal evidence already suggests that the BREEAM rating of sustainability and environmental performance is considered more important than at the time of the study (first six months of 2007).

Disaggregating the results to explore variations in preferences across fund and investor characteristics reveals that the intensive management of real estate assets is a factor in stock selection for the largest funds, alongside opportunistic funds, being comfortable with assets with shorter periods to expiry and lower specifications that lend themselves to active asset management. Further, simulations found that managers of these funds are more likely to purchase secondary quality assets, although the results indicate that none of the respondents will consider tertiary quality assets.

This study has produced a significant number of findings, with both consistencies and some inconsistencies found relating to the investment acquisition decision-making process in the

context of real estate attributes, real estate attribute levels, fund type, objectives and style and respondent personal characteristics. Results have, variously, conformed to theory, challenged it and, subsequently, proved difficult to interpret. In doing so, it improves our understanding of the relative importance of property attributes based around the location, physical characteristics and leasing, including both the quality of the tenant and existing lease structures, and how combinations of these factors are perceived by investors. These stated attribute preferences should mirror the components of the risk premium in the pricing process and, thereby, deliver a better understanding of the pricing of direct property and variation in an asset's worth (investment value) to different types of investors.

Further research is, as always, required. The paper provides details of investors' preferences and perceptions of future market movement at a specific point in the cycle. Yet, naturally, this does not address the possibility that preferences for specific property characteristics may change over time as market conditions shift, as captured in the conceptual model. A comparative, later study would provide an opportunity to review how preferences and risk perceptions change over the property cycle, but is outside the scope of this paper.

Finally, the paper has provided further evidence of the influence of behavioural factors within the profession, although the spread of respondents' characteristics was not even across sub-categories, with meaningful interpretation of the results therefore not always possible. Overall, as the results suggest, the variations found in preferences for individual attributes and attribute levels do highlight the apparent impact of fund managers' age, experience and qualification, within the investment decision, in addition to the impact dictated by fund type and real estate sector. If these variations exist at the stock selection level they may exist at the portfolio level. Variation in risk aversion, arising from fund or even individual behaviours, may offer additional explanation to those proposed by Ball *et al. (*2008), as to why the actual allocation of property in mixed-asset portfolios is much smaller than the theoretical optimum estimated in empirical applications of modern portfolio theory (for example, MacGregor and

Nanthakumaran, 1992). Extending the mean-variance optimization framework established by Markowitz to capture a range of interactive fund and personal factors that may determine the indifference curves of investors is one avenue to be explored in future research. This marrying of traditional and behavioural concepts into a single analytical framework for investment decisions is technically possible, as demonstrated by Frijns *et al.* (2005), and may explain the gaps that exist in portfolio theory. Yet, a direct consequence of our findings that reveal variation in the preferences for stock attributes is to strengthen the case for fund management teams to enforce robust processes to ensure personal preferences or biases do not result in the acquisition of property assets that conflict with the investment objectives and risk management strategies of a fund.

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Figure 1 Real Estate Attributes, Return and Risk

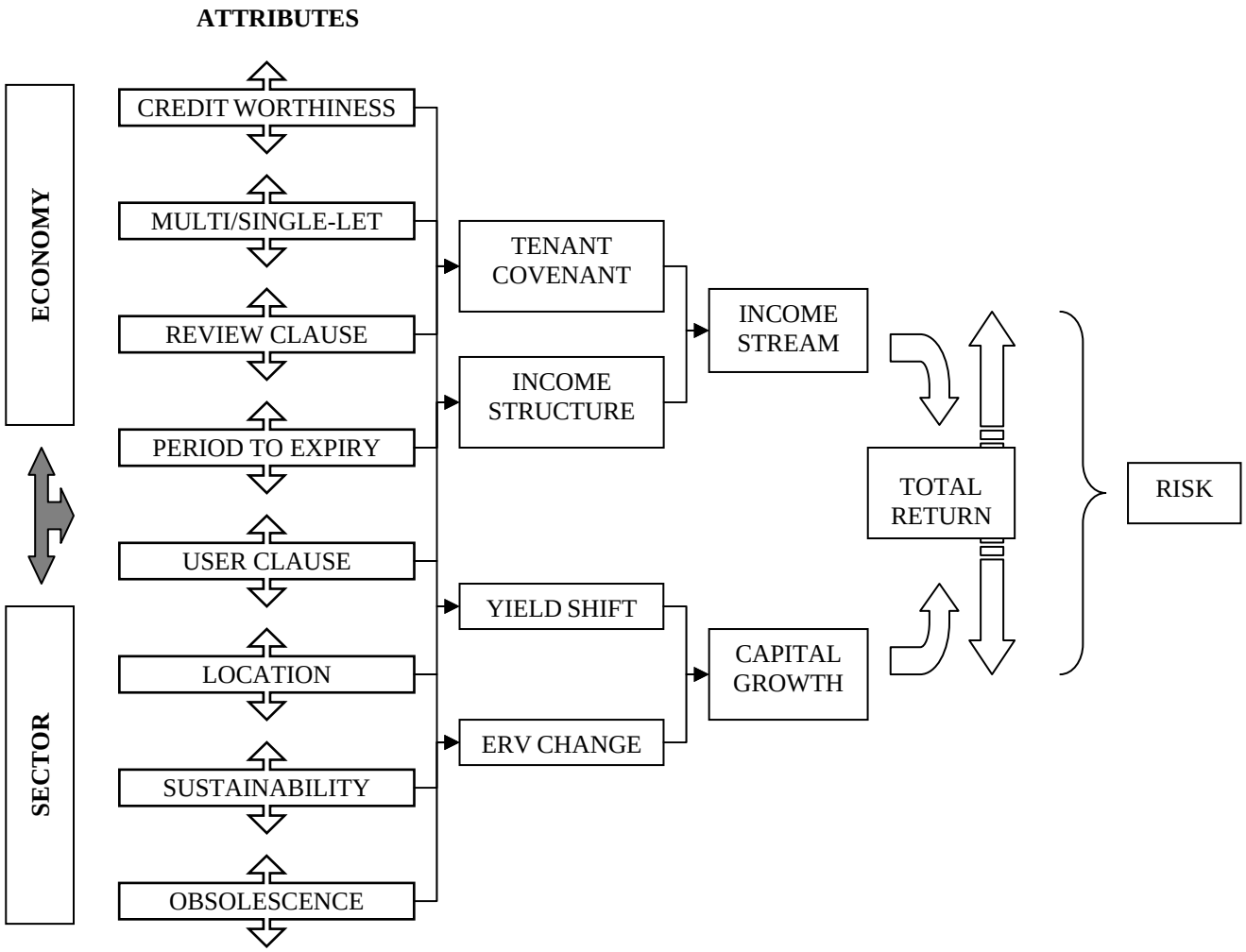

Table 1Defining Attribute Levels

Attributes	Levels
Credit worthiness	1) D&B 5AA rating 2) D&B 3AA or 4AA rating 3) D&B 1AA or 2AA rating 4) D&B AA or BB or CC rating 5) D&B DD or lower rating
Single or multi-let	1) Single let property 2) 2-5 tenants 3) More than 5 tenants
Rent review clause	1) Rent set annually, linked to index or turnover 2) Rent review every 2 to 3 years, upwards only clause 3) Rent review every 4 or more years, upwards only clause 4) Rent review every 2 to 3 years, no upwards only clause 5) Rent review every 4 or more years, no upwards only clause
Period to expiry/break	1) Less than 5 years 2) 5-10 years 3) Over 10 years
User/Assignment clause	1) Restrictive 2) Standard 3) Relaxed or none
Location	1) In town or city centre 2) Suburban, close to existing public transportation 3) Suburban, no existing public transportation 4) Out of the town/city, close to existing public transportation 5) Out of the town/city, no existing public transportation
Sustainability and environmental performance [6]	1) BREEAM pass rating 2) BREEAM good rating 3) BREEAM very good rating 4) BREEAM excellent rating 5) BREEAM rating not known
Economic and functional obsolescence	1) High specification and flexible internal configuration 2) Average specification and internal configuration 3) Low specification and inflexible internal configuration

[6] Since the study these categories have been amended to include an “Outstanding” category

Table 2 Segmentation by Fund Characteristic[#]

		Number of respondents in sample	**Real Estate Attributes**								**Simulated Investment Acquisition Preferences**		
			Location	***Single or multi-let***	***Credit worthiness of the tenant***	***Sustainability rating***	***Rent review clause***	***Period to expiry/break***	***User/assignment clause***	***Economic and functional obsolescence***	***Investment Product 1: Prime quality***	***Investment 2: Secondary quality***	***Investment 3: Tertiary quality***
Total Sample		51	**22.21**	11.34	12.56	8.31	12.09	*8.47*	7.92	17.09	97.50	2.50	0.00
Type of Fund	***Pension Funds***	14	**23.66**	12.15	10.03	9.62	12.41	*8.16*	8.74	15.21	93.03	6.97	0.00
	Life Funds	8	**23.01**	13.53	12.56	7.88	11.19	8.79	*7.80*	15.24	99.87	0.13	0.00
	PUT & CIF	10	20.22	8.53	11.97	7.33	13.53	7.50	*6.60*	**24.32**	100.00	0.00	0.00
	Other Types	19	**21.86**	11.29	14.74	*8.03*	11.48	9.08	8.07	15.44	98.46	1.54	0.00
Vehicle Style	***Opportunistic***	8	**20.09**	12.98	10.86	*7.31*	13.95	8.64	9.00	17.16	99.19	0.81	0.00
	Value Added	8	**19.93**	12.27	15.99	9.59	10.28	*7.80*	8.29	15.84	96.15	3.85	0.00
	Core	25	**21.73**	11.68	13.16	8.24	11.44	8.97	*7.91*	16.87	96.38	3.62	0.00
	Other	9	**28.23**	8.91	9.73	8.43	12.84	*7.01*	7.34	17.50	100.00	0.00	0.00
Open or Closed	***Open Ended***	39	**21.87**	11.44	12.99	8.28	11.83	8.93	*7.25*	17.41	98.53	1.47	0.00
	Closed Ended	11	**22.12**	10.42	11.59	8.22	13.13	*6.62*	10.76	17.14	93.60	6.40	0.00
Portfolio Composition	***Mixed***	5	**20.07**	14.37	11.33	8.84	13.06	7.25	*6.38*	18.70	100.00	0.00	0.00
	Real estate	46	**22.44**	11.01	12.70	8.25	11.99	8.61	*8.09*	16.91	97.30	2.70	0.00
Size of Fund	***< £50 million***	2	11.68	*7.49*	20.07	10.24	10.56	11.35	7.85	**20.75**	100.00	0.00	0.00
	£50 to £100 million	4	**26.90**	12.35	10.99	8.50	10.59	*6.80*	10.24	13.64	100.00	0.00	0.00
	£100 to £250 million	7	**26.65**	11.30	10.10	8.46	10.20	10.37	*7.77*	15.14	99.85	0.15	0.00
	£250 to £500 million	5	**19.64**	11.85	15.60	8.06	13.99	*7.70*	8.30	14.84	93.85	6.15	0.00
	> £500 million	33	**21.73**	11.38	12.36	8.17	12.48	8.22	*7.62*	18.04	97.17	2.83	0.00

[#]Highest part-worths are depicted in bold and lowest in italics, for ease of analysis

Table 3 Segmentation by Fund Objectives and Real Estate Sector[#]

		Number of respondents in sample	Real Estate Attributes								Simulated Investment Acquisition Preferences		
			Location	*Single or multi-let*	*Credit worthiness of the tenant*	*Sustainability rating*	*Rent review clause*	*Period to expiry/break*	*User/assignment clause*	*Economic and functional obsolescence*	*Investment Product 1: Prime quality*	*Investment 2: Secondary quality*	*Investment 3: Tertiary quality*
Return Objectives	***Income Return***	5	**20.06**	12.60	18.27	7.95	11.30	10.84	*4.66*	14.33	100.00	0.00	0.00
	Capital Growth Return	5	**18.81**	13.65	11.56	*5.59*	12.67	9.78	11.20	16.74	100.00	0.00	0.00
	Income & Capital Return	39	**22.69**	11.07	11.94	8.71	11.92	7.99	*7.93*	17.75	96.86	3.14	0.00
	Other Return Objective	2	**26.84**	7.64	13.01	8.10	15.95	8.65	*7.82*	12.01	100.00	0.00	0.00
Benchmark Objectives	***Track Benchmark***	2	19.58	4.47	15.95	5.36	11.92	*5.80*	11.92	**25.00**	100.00	0.00	0.00
	Outperform Benchmark	30	**23.28**	11.25	11.73	8.68	12.07	8.35	*7.70*	16.92	96.76	3.24	0.00
	Split Benchmark	6	**17.32**	11.29	15.98	8.06	9.82	11.62	*7.44*	18.47	96.02	3.98	0.00
	No/other Benchmark Objective	13	**22.40**	12.61	12.38	*8.01*	13.22	7.71	8.04	15.63	99.47	0.53	0.00
Sector	***Standard Shops***	2	12.96	9.98	**18.98**	*7.90*	12.14	16.06	12.51	9.47	99.82	0.18	0.00
	Shopping Centres	2	**29.46**	10.70	7.27	9.78	15.00	5.26	*3.84*	18.69	100.00	0.00	0.00
	Retail Warehousing	10	16.17	11.31	13.78	*7.91*	12.35	10.34	8.15	**19.99**	93.56	6.44	0.00
	Standard Office	22	**24.63**	10.77	12.25	8.37	12.22	7.98	*7.91*	15.87	97.56	2.44	0.00
	Office Parks	2	**34.78**	9.92	10.03	7.65	15.01	*3.63*	5.17	13.82	100.00	0.00	0.00
	Industrial Units	8	**21.31**	14.51	12.40	8.63	11.55	8.01	*6.26*	17.32	99.12	0.88	0.00
	Other types	5	**20.83**	10.15	12.33	8.18	9.53	*7.85*	11.11	20.01	100.00	0.00	0.00

[#]Highest part-worths are depicted in bold and lowest in italics, for ease of analysis

Table 4 Segmentation by Fund Manager Characteristics[#]

		Number of respondents in sample	**Real Estate Attributes**								**Simulated Investment Acquisition Preferences**		
			Location	***Single or multi-let***	***Credit worthiness of the tenant***	***Sustainability rating***	***Rent review clause***	***Period to expiry/break***	***User/assignment clause***	***Economic and functional obsolescence***	***Investment Product 1: Prime quality***	***Investment 2: Secondary quality***	***Investment 3: Tertiary quality***
Gender	***Male***	46	**22.62**	11.26	12.36	8.28	11.93	8.40	*8.10*	17.05	97.29	2.71	0.00
	Female	5	**18.40**	12.06	14.45	8.58	13.62	9.13	*6.30*	17.45	100.00	0.00	0.00
Age	***25 to 35 years old***	14	**25.58**	9.88	11.38	*8.10*	12.53	8.78	8.20	15.56	96.09	3.91	0.00
	35 to 45 years old	25	**21.15**	11.68	12.63	8.63	11.64	7.90	*7.22*	19.15	97.16	2.84	0.00
	45 to 55 years old	8	**22.67**	11.63	12.18	7.81	14.26	*6.82*	8.36	16.27	100.00	0.00	0.00
	55 years old +	4	16.12	13.69	**17.06**	*8.02*	9.09	14.30	10.51	11.21	99.66	0.34	0.00
Years of Experience	***< 1 Year***	14	**22.97**	5.65	18.54	8.35	11.56	14.72	*6.27*	11.94	100.00	0.00	0.00
	1 to 5 Years	25	**22.32**	10.19	13.11	8.61	12.82	*8.58*	8.65	15.72	93.43	6.57	0.00
	5 to 10 Years	8	**25.13**	11.49	7.43	8.98	14.53	*7.04*	7.44	17.97	100.00	0.00	0.00
	> 10 Years	4	**21.29**	11.99	13.51	8.02	11.21	8.45	*7.96*	17.56	97.85	2.15	0.00
Qualifications	***BSc/BA Degree***	27	**23.53**	11.00	12.72	8.15	12.31	*7.82*	8.46	16.02	95.59	4.41	0.00
	MA Degree	8	**25.81**	13.55	7.95	8.61	13.52	*5.62*	7.33	17.62	100.00	0.00	0.00
	MSc Degree	8	17.19	8.74	13.71	8.55	13.16	9.46	*6.68*	**22.50**	99.24	0.76	0.00
	PG Dip	3	**22.74**	10.48	19.54	8.04	8.81	13.69	*3.75*	12.95	99.96	0.04	0.00
	MPhil	2	20.79	9.73	10.82	8.99	8.84	*6.61*	9.66	**24.57**	100.00	0.00	0.00
	Other	3	14.56	**17.37**	14.59	*8.11*	8.93	15.33	11.05	10.06	99.52	0.48	0.00

[#]Highest part-worths are depicted in bold and lowest in italics, for ease of analysis

Table 5 Attribute Level Utilities and Preferences by Fund Type

	All	*Pension*	*Life Fund*	*Unit Trust & CIF*	*Other Type*	*Opportunistic*	*Value Added*	*Core*	*Other Style*
In town or city centre	***80.82***	***88.20***	***78.49***	***68.82***	***82.69***	***68.24***	***82.26***	***74.59***	***114.19***
Suburban, close to existing public transportation	28.92	33.21	32.32	29.04	24.28	18.53	20.14	31.85	38.11
Suburban, no existing public transportation	-63.65	***-80.97***	-39.07	-57.33	-64.56	-35.49	***-66.01***	-58.60	*-101.68*
Out of the town/city, close to existing public transportation	27.56	25.20	28.04	32.49	26.49	27.35	19.28	25.53	36.94
Out of the town/city, no existing public transportation	***-73.65***	-65.64	***-99.78***	***-73.02***	***-68.89***	***-78.63***	-55.68	***-73.37***	-87.55
Single let property	***-44.55***	***-54.20***	***-53.87***	***-32.63***	***-39.79***	***-36.42***	***-50.19***	***-51.18***	***-31.89***
2 to 5 tenants	13.86	19.78	13.95	14.41	9.17	15.28	9.34	18.09	4.37
More than 5 tenants	***30.69***	***34.42***	***39.92***	***18.22***	***30.62***	***21.14***	***40.86***	***33.09***	***27.53***
D&B 5AA rating for tenant(s)	***31.61***	***19.24***	***44.36***	***29.90***	***36.25***	***32.55***	***39.10***	***32.82***	***21.68***
D&B 3AA or 4AA rating for tenant(s)	7.20	1.20	8.14	-10.23	20.40	2.68	26.76	6.88	0.63
D&B 1AA or 2AA rating for tenant(s)	9.17	11.95	10.86	6.11	8.02	3.56	8.44	12.54	7.06
D&B AA or BB or CC rating for tenant(s)	-1.78	5.19	-14.05	-2.48	-1.37	-3.43	2.28	-2.73	-1.34
D&B DD or lower rating for tenant(s)	***-46.21***	***-37.59***	***-49.31***	***-23.29***	***-63.31***	***-35.36***	***-76.59***	***-49.49***	***-28.03***
BREEAM pass rating	-4.30	-5.42	-13.58	-7.97	2.37	-3.67	12.35	-11.04	-0.13
BREEAM good rating	***-10.95***	-13.16	***-17.04***	***-11.83***	-6.29	***-12.72***	***-19.43***	***-13.55***	2.10
BREEAM very good rating	***20.52***	***24.60***	***15.80***	***22.19***	***18.63***	***15.76***	***23.68***	***18.53***	***27.01***
BREEAM excellent rating	-7.30	***-14.71***	11.28	-4.70	***-11.02***	-8.92	-11.94	-3.48	-12.61
BREEAM rating not known	2.02	8.69	3.53	2.31	-3.68	9.54	-4.66	9.55	***-16.37***
Rent set annually, linked to index or turnover	6.00	10.10	-4.81	-0.70	11.05	4.57	11.55	-0.65	16.55
Rent review every 2 to 3 years, upwards only clause	***31.23***	***36.05***	***31.00***	***40.60***	***22.83***	23.67	***18.91***	***32.27***	***44.50***
Rent review every 4 or more years, upwards only clause	20.22	6.45	23.64	38.63	19.25	***30.06***	7.59	17.75	24.89
Rent review every 2 to 3 years, no upwards only clause	-30.39	-21.45	***-30.89***	***-42.83***	***-30.21***	***-37.29***	-15.56	***-29.53***	-38.47
Rent review every 4 or more years, no upwards only clause	***-27.06***	***-31.15***	-18.94	-35.69	-22.92	-21.02	***-22.49***	-19.84	***-47.47***
Less than 5 years to expiry/break	***-23.46***	***-19.53***	***-24.87***	***-11.61***	***-32.01***	***-17.68***	***-25.69***	***-24.90***	***-19.45***
5 to 10 years to expiry/break	0.75	-4.94	0.51	-3.33	7.18	7.41	10.18	-2.36	-4.58
Over 10 years to expiry/break	***22.72***	***24.46***	***24.36***	***14.94***	***24.83***	***10.27***	***15.51***	***27.26***	***24.03***
Restrictive user/assignment clause	***-25.49***	***-23.32***	***-30.71***	***-20.33***	***-27.60***	***-30.47***	***-25.74***	***-24.89***	***-26.09***
Standard user/assignment clause	***18.67***	***16.58***	***20.77***	***20.84***	***18.19***	***29.53***	***16.86***	***15.28***	***21.82***
Relaxed or no user/assignment clause	6.82	6.74	9.94	-0.51	9.41	0.94	8.88	9.60	4.27
High specification and flexible internal configuration	***61.82***	***58.09***	***54.77***	***89.62***	***52.89***	***61.32***	***58.71***	***59.91***	***64.02***
Average specification and internal configuration	8.24	4.20	5.12	15.30	8.81	14.61	5.68	8.26	6.75
Low specification and inflexible internal configuration	***-70.05***	***-62.29***	***-59.89***	***-104.92***	***-61.71***	***-75.93***	***-64.39***	***-68.17***	***-70.77***
None	44.42	5.31	86.27	70.35	41.98	82.88	15.90	45.17	36.22

Table 6 Attribute Level Utilities and Preferences by Sector

	Standard shops	*Shopping centres*	*Retail warehousing*	*Standard offices*	*Office parks*	*Standard industrials*	*Mixed use*
In town or city centre	***36.41***	***102.30***	***51.48***	***91.33***	***149.03***	***76.68***	***81.78***
Suburban, close to existing public transportation	-29.24	40.20	18.86	33.10	43.01	34.96	34.15
Suburban, no existing public transportation	***-41.12***	***-133.39***	-47.30	-70.46	-115.97	-38.85	-66.21
Out of the town/city, close to existing public transportation	33.47	50.09	25.46	31.14	53.16	12.46	18.53
Out of the town/city, no existing public transportation	0.48	-59.20	***-48.49***	***-85.11***	***-129.23***	***-85.24***	***-68.26***
Single let property	***37.68***	***-41.50***	***-49.74***	***-42.79***	***-43.56***	***-64.87***	***-43.92***
2 to 5 tenants	-4.86	-1.33	***29.10***	7.61	7.75	21.54	14.60
More than 5 tenants	***-32.83***	***42.83***	20.64	***35.18***	***35.82***	***43.33***	***29.32***
D&B 5AA rating for tenant(s)	49.87	-6.35	***36.76***	***33.57***	***23.60***	***28.51***	***28.72***
D&B 3AA or 4AA rating for tenant(s)	***58.63***	***-33.02***	-0.97	10.39	-3.46	20.23	-11.53
D&B 1AA or 2AA rating for tenant(s)	-19.73	5.93	15.92	8.47	19.51	6.11	12.37
D&B AA or BB or CC rating for tenant(s)	-12.16	15.99	4.49	-5.04	16.95	-4.61	-5.84
D&B DD or lower rating for tenant(s)	***-76.61***	***17.46***	***-56.20***	***-47.39***	***-56.60***	***-50.24***	***-23.71***
BREEAM pass rating	***34.58***	-2.06	-13.07	-4.66	-14.56	-2.36	-0.62
BREEAM good rating	-16.63	21.55	***-14.06***	***-9.17***	22.13	***-24.07***	***-15.54***
BREEAM very good rating	-1.51	***44.11***	***19.93***	***21.28***	***28.19***	***15.03***	***23.47***
BREEAM excellent rating	***-28.62***	***-32.68***	0.75	-7.27	***-24.82***	0.61	-10.51
BREEAM rating not known	12.18	-30.91	6.44	-0.19	-10.93	10.79	3.19
Rent set annually, linked to index or turnover	***45.29***	***35.31***	11.20	6.20	23.23	***-22.64***	6.14
Rent review every 2 to 3 years, upwards only clause	-21.38	50.42	***28.07***	***34.86***	***53.13***	***29.99***	***28.13***
Rent review every 4 or more years, upwards only clause	21.20	26.70	21.92	19.63	37.28	14.90	18.17
Rent review every 2 to 3 years, no upwards only clause	***-34.61***	-50.16	-27.56	***-34.22***	***-58.90***	-12.65	***-26.53***
Rent review every 4 or more years, no upwards only clause	-10.49	***-62.27***	***-33.63***	-26.47	-54.75	-9.60	-25.90
Less than 5 years to expiry/break	***-80.52***	***-16.21***	***-35.74***	***-24.27***	***-2.57***	***-6.20***	***-11.44***
5 to 10 years to expiry/break	32.82	-8.89	0.21	1.85	-10.56	0.14	-6.51
Over 10 years to expiry/break	***47.70***	***25.10***	***35.52***	***22.42***	***13.13***	***6.06***	***17.94***
Restrictive user/assignment clause	***-52.88***	-4.29	***-27.24***	***-24.82***	***-9.59***	***-15.02***	***-45.55***
Standard user/assignment clause	***47.22***	***17.50***	5.87	***22.26***	***19.57***	***12.13***	***27.63***
Relaxed or no user/assignment clause	5.65	***-13.22***	***21.37***	2.56	-9.98	2.89	17.91
High specification and flexible internal configuration	***36.18***	***73.54***	***73.24***	***57.19***	***48.65***	***55.47***	***80.33***
Average specification and internal configuration	3.43	2.42	13.26	2.76	13.27	23.92	-0.56
Low specification and inflexible internal configuration	***-39.61***	***-75.96***	***-86.50***	***-59.95***	***-61.91***	***-79.39***	***-79.77***
None	49.90	-6.97	43.30	47.15	45.10	33.57	70.17

Table 7 Attribute Level Utilities and Preferences by Personal Characteristics

	Male	*Female*	*> 25 to 35 years old*	*> 35 to 45 years old*	*> 45 to 55 years old*	*> 55 years old*
In town or city centre	***81.69***	***72.82***	***90.12***	***78.53***	***88.95***	***46.33***
Suburban, close to existing public transportation	28.81	29.98	49.55	24.33	19.14	5.04
Suburban, no existing public transportation	-62.83	***-71.21***	-63.51	***-68.75***	-63.36	***-32.84***
Out of the town/city, close to existing public transportation	27.88	24.58	31.41	28.09	27.64	10.60
Out of the town/city, no existing public transportation	***-75.56***	-56.16	***-107.56***	-62.20	***-72.36***	-29.14
Single let property	***-44.32***	***-46.66***	***-42.20***	***-48.17***	***-45.60***	***-28.10***
2 to 5 tenants	14.75	5.66	13.19	13.27	17.26	13.04
More than 5 tenants	***29.57***	***41.01***	***29.01***	***34.89***	***28.33***	***15.06***
D&B 5AA rating for tenant(s)	***31.37***	***33.80***	***26.02***	***32.56***	***33.76***	***40.90***
D&B 3AA or 4AA rating for tenant(s)	9.76	-16.29	-2.67	4.83	14.78	41.42
D&B 1AA or 2AA rating for tenant(s)	7.82	21.55	16.06	7.90	3.61	4.08
D&B AA or BB or CC rating for tenant(s)	-1.91	-0.58	-6.48	1.10	5.79	-18.46
D&B DD or lower rating for tenant(s)	***-47.05***	***-38.48***	***-32.94***	***-46.40***	***-57.94***	***-67.93***
BREEAM pass rating	-2.44	***-21.40***	-8.27	-4.89	-4.75	***14.21***
BREEAM good rating	***-11.47***	-6.13	-4.21	***-11.36***	***-12.88***	***-28.10***
BREEAM very good rating	***19.87***	***26.50***	***21.37***	***22.23***	***19.78***	8.41
BREEAM excellent rating	-7.86	-2.12	***-13.69***	-5.08	-10.67	7.95
BREEAM rating not known	1.90	3.15	4.80	-0.89	8.52	-2.47
Rent set annually, linked to index or turnover	5.59	9.73	7.94	6.36	-2.15	***13.23***
Rent review every 2 to 3 years, upwards only clause	***29.83***	***44.11***	***39.26***	***30.56***	***36.44***	-3.19
Rent review every 4 or more years, upwards only clause	19.12	30.37	16.47	21.95	30.95	1.11
Rent review every 2 to 3 years, no upwards only clause	***-28.91***	***-43.96***	-26.97	***-31.95***	***-48.36***	3.40
Rent review every 4 or more years, no upwards only clause	-25.63	-40.24	***-36.71***	-26.92	-16.87	***-14.55***
Less than 5 years to expiry/break	***-24.09***	***-17.66***	***-22.57***	***-22.08***	***-7.52***	***-67.10***
5 to 10 years to expiry/break	0.46	3.40	7.39	-4.28	-4.74	19.92
Over 10 years to expiry/break	***23.64***	***14.26***	***15.18***	***26.37***	***12.26***	***47.18***
Restrictive user/assignment clause	***-25.90***	***-21.70***	***-24.89***	***-23.93***	***-21.44***	***-45.45***
Standard user/assignment clause	***19.58***	10.32	***26.43***	***13.04***	***19.73***	***24.60***
Relaxed or no user/assignment clause	6.32	***11.38***	-1.54	10.89	1.71	20.85
High specification and flexible internal configuration	***61.10***	***68.40***	***57.27***	***69.01***	***55.67***	***45.06***
Average specification and internal configuration	8.83	2.78	-0.89	11.88	17.17	-0.47
Low specification and inflexible internal configuration	***-69.93***	***-71.18***	***-56.38***	***-80.89***	***-72.84***	***-44.59***
None	42.72	60.14	38.68	43.01	79.23	3.75