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Analysis of the relative importance of security of income as a determinant of the capitalization rate for CBD office investment property in Sydney

DAVID R.R. PARKER
GPO Box 3002, Sydney NSW 2001, Australia

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Summary

From the viewpoint of CBD office investment property in Sydney, the following paper suggests that security of income is second only to location as a determinant of the capitalization rate.

Keywords: capitalization rate, determinants, security of income

1. Introduction

The current economic recession has created an unprecedented focus of attention both in Australia and overseas on the property market, its operation and its participants – especially valuers and the valuation process. As Table 1 shows capital values of commercial investment properties fell dramatically in Australia during the year to June 1991.

Such unprecedented interest in the property market has coincided in Australia with a cyclical downturn in economic activity and rise in the level of personal bankruptcy and

Table 1. Decreases in capital values – Australia, year to June 1991

Portfolio	Change in capital value (%)
JLW capital value index	
Sydney CBD	−25.5
Melbourne CBD	−20.6
Perth CBD	−25.7
AMP Society*	−16.2
National Mutual*	−12.0

* *Source: Financial Review*, 15 October, 1991.

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corporate financial collapse (compounding in Australia by 19.47% and 15.86% in the years to June, 1990 and June, 1991, respectively, ASC Corporate Relations, 1991) leading to an increased incidence of financial default under leases in investment property.

The importance of the security and reliability of the income stream of a property has, accordingly, become a highly topical issue of late both in Australia and overseas but one for which relatively little original research appears to have been conducted.

This paper seeks to consider the relative importance of security of income as a determinant of the capitalization rate for CBD office property in Sydney. Whilst security of income as an issue is important for all types of investment property, current market conditions dictate that it is most relevant for commercial property as, like many other international markets, the level of oversupply in the office markets of Australia is currently cyclically high as shown in Table 2.

Table 2. CBD vacancy rates – December 1991*

City	Vacancy rate (%)
Sydney	15.7
Melbourne	23.3
Brisbane	11.8
Adelaide	15.8
Perth	26.6
Canberra	3.8

* *Source:* Jones Lang Wootton Research.

Accordingly, this paper primarily considers the commercial property market though the findings are of relevance to other sectors of the investment property market.

2. The importance of the capitalization rate

Whilst it is not proposed to consider the investment method of valuation *per se* in detail, it is relevant to note the sensitivity of the computation of capital value within the method to relatively small changes in the capitalization rate adopted. For example, a major Australian CBD office building which produces a net income of A$30 million per annum may be valued at A$500 million if a capitalization rate of 6% is adopted. Assuming that the net income has been faultlessly derived, small changes in the capitalization rate adopted can make very significant changes to the resulting capital value figure, as indicated in Table 3.

For major CBD office investments, this aspect is particularly important, due to the sheer size of the numbers involved. With so much at stake, the assessment of an appropriate capitalization rate becomes a critical issue.

3. Identification of the determinants of the capitalization rate

To determine the relative importance of security of income as a determinant of the capitalization rate, it is first necessary to identify what are the determinants of the

Table 3. The sensitivity of capital values

Capitalization rate (%)	Change in capital value
5.0	+A$100m
5.5	+A$45m
6.0	A$0m
6.5	−A$38m
7.0	−A$71m

capitalization rate in general. It may then be possible to confirm whether security of income is such a determinant and, if so, assess its relative importance.

To identify the determinants of the capitalization rate, a literature review was conducted, tempered by the author's personal experience as an institutional property investment operative and supplemented by original research through questionnaire responses.

Interestingly, the literature review conducted failed to identify an existing, comprehensive list of the determinants of the capitalization rate. Many authors identified the same factors as being amongst determinants of the capitalization rate (in particular, Millington (1979), Rost and Collins (1990), Richmond (1975), Britton *et al.* (1980), Baum and Mackmin (1979), Enever (1981), with some authors identifying certain matters not considered by others. Accordingly, in the following section, the various factors listed as determinants of the capitalization rate are likely to have arisen in the work of several authors and it is impractical to footnote every author separately to each determinant, though the contribution of each is hereby acknowledged. Where an author has made a specific comment which is of interest regarding a particular determinant of the capitalization rate below, this is accredited accordingly.

Whilst individual determinants of the capitalization rate may be identified, it is important to note that such determinants are varied and numerous rather than similar and limited (Shepherd, 1935, p. 296; Dubois, 1953, p. 254). The various determinants are listed for reference below and considered individually in detail:

- special characteristics of property as an asset class
- economic situation
- alternative investments
- state of the property market
- risk
- legal environment
- planning
- location
- building
- tenant
- growth
- sentiment.

As the literature review did not identify an existing, comprehensive list of the determinants of the capitalization rate in the work of any other author, the above list is considered to be original research *per se*. This list was subsequently used as the basis for a questionnaire to ascertain the relative importance of the various determinants identified and detailed below.

3.1. *Special characteristics of property as an asset class*

As one of the four major asset classes, Australian property has been shown to offer high returns, low risk and a low correlation to other asset classes (Parker, 1991). Accordingly, some of the fundamental characteristics which distinguish property as an asset class may also be argued to be influences in the determination of the capitalization rate for a given sector such as CBD office property.

Enever (1981, p. 17) and Cairns (1985, p. 500) identify such characteristics and these are summarized in Table 4. The relative importance of such factors will be considered below – are each of the factors identified in Table 4 taken as read by valuers and, whilst not disregarded, given little regard, or are each addressed in the context of given market conditions? For example, the prevalence of confidentiality clauses in the present market may prevent the release of any information regarding certain transactions, which compounds the basic property market characteristic of imperfect knowledge.

3.2. *Economic situation*

The prosperity of the country, inflationary and recessionary trends, credit conditions, the economic stability of a particular neighbourhood and similar factors all influence the capitalization rate (Litchfield, 1958, p. 115) though the link, at times, may be difficult to observe. Cairns (1985, p. 697) (Table 5 and Fig. 1) notes that yields for Sydney CBD property moved only in a band of 5.75% to 8.00% between 1970 and 1984 despite the following dramatically wide range of movements for other economic indicators.

The capitalization rate (as shown in Fig. 1) is remarkably static compared to other variables with no apparent correlation evident during the period. The cyclical nature of the variables is clearly evident, though the extent of lag between the cycles is neither consistent nor predictable.

3.3. *Alternative investments*

The role of alternative investments as competitors for investment funds is generally held to be one determinant of the capitalization rate (Enever, 1981, p. 5) for investment property.

Accordingly, it is likely that the risk/return profile of other asset classes, other property sectors and other investments within the office market sector would be likely to have an impact upon the assessment of an applicable capitalization rate for a CBD office investment property to maintain a relativity.

3.4. *State of the property market*

The state of the property market may refer to either or both of:

- the state of the market overall for all classes of property; or
- the state of the market for a particular sector of the property market, such as the office sector, or subsector such as CBD offices.

Table 4. Special characteristics of property as an asset class

Heterogeneity	Every property is unique and all are different. An over-dependence on one factor may make a property vulnerable (e.g. location may be affected by road widening).
Indivisibility	Property is usually indivisible and each indivisible unit is of a relatively high cost, meaning that the availability of credit can have a profound effect.
Inelasticity of supply	Difficulty in varying the supply is important. The supply of land is virtually fixed. Planning and lead times are a problem, making property abnormally vulnerable to booms and slumps.
High costs of transfer	Costs are high relative to other investments with the need for a contract, mortgage, valuation, etc.
Management	Property is complex and requires specialist management, which takes time, experience, expertise, money, etc.
Special risks	1. Physical factors – fire, earthquake, flood, wear and tear 2. Risk of liability to third parties due to defective premises 3. Financial risk of granting leases for specified periods without rent review 4. Economic risk that property will become obsolete in terms of design or purpose.
Perpetuity	Land is durable and always essential.
Imperfect knowledge	Transactions are infrequent and often kept secret.
Decentralized market	No central market exists, with property bought and sold through agents, who usually deal in a particular geographic market or property sector.
Government intervention	Rife, such as rent control, taxation, credit control, land use control, compulsory purchase, etc.
Legal	Landlord and tenant legislation, town planning, building regulations, etc.
Ability to create interests in property	Leashold interests, etc., and vertical and horizontal interests such as joint tenants, tenancies in common, etc.
Scarcity	It is arguable that capitalization rates would be lower for CBD office property compared to other property due to 'scarcity'. Indeed, in the case of most CBDs, this is a direct result of geographical constraints and the limited nature of the supply of land.
Long-term nature	An investment in property is generally viewed as being of a long-term nature, with high short-term returns often linked to high risks such as may be involved in speculation. The nature of the property market cycle make it particularly difficult accurately to judge the peak and trough of the cycle such that sustained holding periods are often required for property investments.
Illiquid	Property as an asset class is difficult to divide into small lots – strata title, unitization, securitization, property equities and similar concepts aside. For large CBD office towers illiquidity is a particularly important issue due to the sheer level of funds committed by such ownership and the apparent reluctance of the market to trade in part shares of a building which do not offer management control.

Table 5. Comparative data, 1970–84

Inflation	2.20– 15.80%
Bond rate	5.80– 16.40%
5-year mortgage rate	9.75– 18.25%
All Ords Index	201.70–775.30
Sydney CBD office yields	5.75– 8.00%

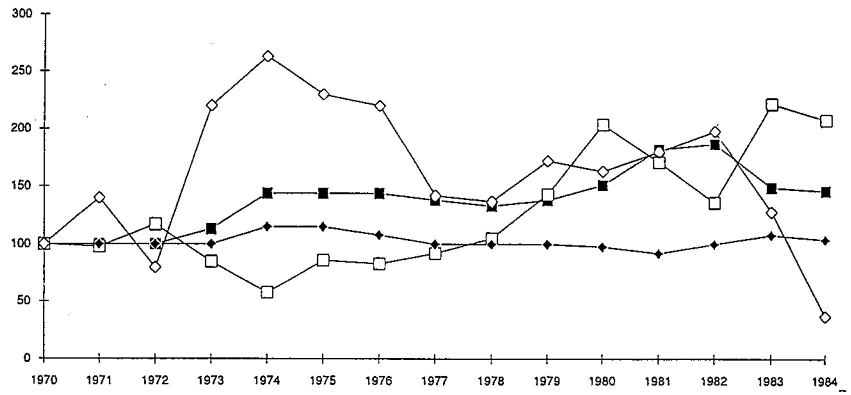

Fig. 1. Comparative data 1970–84. ■, 5 year MTGE rate; □, All ORDs; ◆, CAP rates; ◇, CPI.

Whilst Lichfield (1958, p. 115) notes that major influences on the property market, such as war, can cause a change in the state of the market which is easily visible, the effects of less significant influences may be harder to detect, particularly those which are pervasive over an extended period of time.

3.5. *Risk*

Though widely considered and with a divergence of views, a consensus appears to exist that property is ostensibly a riskier form of investment than a government bond and should be priced accordingly. Common factors for consideration in assessing the risk margin for investment property relative to government bonds include such aspects of property as its security, liquidity, ease of purchase and sale, management requirements, growth prospects, etc., with the margin for risk attributed to CBD office property variously assessed for the Sydney CBD at +1–1.5% (Cairns, 1985, p. 697) to +2% (Student, 1959) with Brown (1984, p. 700) noting that 2% 'is probably acceptable for property as a whole but is incorrect when applied to individual properties' in the UK.

3.6. *Legal environment*

Traditional legal issues such as title, easements, encroachments and leases plus contemporary issues such as health and safety, asbestos, environmental issues, site contamination and

so forth are generally agreed to be fundamental to the determination of the capitalization rate.

In the UK, the problem of proving title under the deed system is a consideration whereas in Australia the indefeasibility of title offered by the Torrens system overcomes this problem, though other issues concerning strata title, company title and community title require consideration in capitalization rate analysis.

3.7. *Planning*

Of all determinants of the capitalization rate cited, perhaps planning is the most property-specific. For certain types of property such as development sites or shopping centres, the planning situation and any likely changes are of paramount importance from the viewpoint of what can be developed on the site and the likelihood of competition, respectively.

However, for established CBD office property in Australia, planning could be expected to be a less significant issue except, perhaps, in cases where CBD zonings and permitted intensities of development may be subject to change in the future or, for example, where a property far exceeds its plot ratio, due to development in the past and so could not be built today.

Newell and Fibbens (1991, p. 384) confirm that the majority of valuers check the zoning, the existence of appropriate development consents, limitations, plot ratios, etc. However, it is suspected that planning will be relatively dormant determinant of the capitalization rate for CBD office investments and a valuer might only change the rate adopted to reflect planning if the property being valued is either an over or underdevelopment of the site.

3.8. *Location*

The old adage of 'location, location and location' should cause this determinant to be the most important in the assessment of an appropriate capitalization rate for any type of investment property.

Location may be deemed to include situation and position. Whilst location within a particular city is important, position in terms of suburb/street address and other factors together with the situation with regard to views, adjacent buildings and uses, etc., are all important issues in determining an appropriate capitalization rate. Not only an inferior street, but also the wrong side of a street, can be factors detrimentally affecting the value of CBD office property.

The effect on capital value and the selection of an appropriate capitalization rate of changes over time in the perceived quality of a given location, either by evolution or by forced changes, is referred to by Hughes (1952, p. 69) who cites enforced post-war migration to the West-End of London, due to bombing of the City, as 'playing havoc with valuation'.

Given the relatively small size of the CBDs of Australia's capital cities, location may be of lower significance here than it would be for office investments in larger international cities. Further comparative work in this regard may, accordingly, be of particular interest.

3.9. *Building*

In the simplest theoretical form, if two buildings are adjacent to each other and one is brand new while the other is 50 years old, the new building should be worth more than the old building.

It is, therefore, likely that the features of a specific building may have an impact upon the determination of the capitalization rate such as the adequacy of the finishes, layout, foyer, services, etc. Such factors may also change over time, as shown by the trend to open plan floors rather than rooms and the move to full height glass for office windows which has led to older buildings with conventional, smaller windows being considered inferior by tenants.

3.10. *Tenant*

The importance of the tenant has been considered widely by numerous authors. Not only is the quality or strength of the tenant's covenant important, but also the provisions of the lease in assessing the security and reliability of the income stream for an investment property. An analysis of each of the relevant lease clauses will be required to assess the likelihood of the rent being allowed to go down and the prospects of it going up (maybe by fixed annual minimum reviews or periodic reviews to market), together with the procedure should the tenant default.

It is, therefore, generally accepted that the quality of the tenant (and hence the security and reliability of the income stream) is an important determinant of the capitalization rate. However, of particular interest here, given the recent rate of corporate financial collapse referred to above, is the *relative* importance of the tenant (and hence the security and reliability of the income stream) as a determinant of the capitalization rate.

3.11. *Growth*

Like risk, growth can be defined and interpreted in a variety of equally legitimate ways. The growth prospects for investment property may be either rental growth or capital appreciation or both and growth may also be considered relative to other asset classes, between different sectors of the property market and between different properties within each sector. These comments are by no means an exhaustive list of the aspects and likely incidence of growth for investment property but merely seek to illustrate the potential breadth of the concept.

Brown (1984, p. 704) notes that growth is an expression of a valuer's or investor's views on location, tenant, age and quality of building. It may, therefore, be a factor which interlinks with a variety of other determinants of the capitalization rate, being dependent upon the latter for its assessment rather than being independent. As such, the relative ranking attributed to growth below is of particular interest.

3.12. *Sentiment*

General investment market sentiment, sentiment of investors towards property as an asset class, sentiment of investors towards particular types of property and so forth are all considerations in the determination of an appropriate capitalization rate for an investment property.

Sentiment can be argued to affect investment property in a variety of ways. Millington (1979, Ch. 10) devotes considerable attention to factors that cause changes in value for property (including fashion, taste, society, etc.), which may all be considered as part of an investor's sentiment towards property. Other authors consider the need for the valuer to assume the position of a potential purchaser and have regard to the sentiment prevailing

amongst such parties and those issues to which purchasers would be most likely to have regard.

The views of an investor or valuer regarding future events may also be relevant. Dubois (1953, p. 254) notes that an 'expectation' of price movements influences the capitalization rate adopted and Cairns (1985) comments:

> 'Those who ignore the future tend to be undervaluing in times of a rising market and overvaluing in times of a falling market' (Cairns, 1985, p. 698).

Hence, sentiment is a potentially significant factor in the determination of an appropriate capitalization rate, as it may feature not only in the analysis of previous transactions, but also as a consideration of the property being valued from the client's viewpoint and through an assessment of expectations of the future. The valuer, therefore, may be conscious of sentiment in at least three situations.

4. Practitioner questionnaire

Having identified the most likely principal determinants of the capitalization rate for a CBD office building in Sydney from a literature review, a questionnaire approach using practising valuers was adopted to determine the relative importance of each determinant and ascertain if any other determinants had been omitted from the list.

It was decided to approach practising valuers for questionnaire purposes rather than property investors for a variety of reasons, including the following:

- there are relatively few major portfolio investors in the Australian property market and, of these, even fewer who specialize in commercial property;
- of those investors, their objectives and investment philosophies vary widely between groups which may be likely to impact upon their respective approaches to the valuation of commercial investment properties which would serve to detract from a focus on the capitalization rate;
- there are numerous valuers in Sydney who specialize in the valuation of CBD commercial investment property;
- valuers are experienced in valuing to a standard definition of open market value and, if a standard definition of open market value can be adopted, a closer focus on the determinants of the capitalization rate, rather than any other extraneous issues may be achieved from respondents.

An interview sample which reflected both depth of professional experience and daily involvement in the valuation of CBD office properties was considered most suitable. This could be obtained through a survey of a large number of individual valuers practising in the Sydney CBD. However, it was anticipated that the major real estate agencies would be frequently involved in the valuation of CBD office towers and cumulatively employ several dozen valuers who adopt common 'house' approaches to valuation, as well as a common definition of open market value. In such a case, it should be possible to interview the chief valuer only and obtain very similar information to that which would be obtained from interviewing a much larger number of subordinate valuers.

Accordingly, to achieve quality rather than quantity in responses, the heads of the valuation divisions of seven of the major international real estate agencies in Sydney were interviewed for a period of approximately 45 minutes each in late October and early November 1991 and a questionnaire completed. Questions were included to test the above assumptions of sample quality, to quantify the number of valuers employed, to assess the number of valuations of office investment property undertaken by the practice and to confirm that the firm was active in the valuation of major CBD office buildings. Questions were included to ascertain the period for which the respondent had been practising and his role or eminence within the industry in order to further validate the suitability of the sample.

The sample surveyed represented a total staff of 65 registered valuers carrying out approximately 4740 valuations of income-producing property per annum having between them valued the 12 largest office buildings in the Sydney CBD within the last year and with one such property having been valued four times and two others having been valued twice by different respondents. The experience of the respondents was deep, with an average of 27 years each spent as a practising valuer and including three Fellows of the RICS, six Fellows of the Australian Institute Of Valuers And Land Economists and numerous Presidents and past Presidents of the latter.

The results of the questionnaire therefore suggest that the use of a small sample of eminent valuers is a valid proxy for the use of a much larger sample of less experienced and qualified valuers. Given the depth of experience, the high level of qualification and the large number of CBD office investment properties regularly being valued by the sample, their views and comments on the determinants of the capitalization rate should be indicative of those of many of the practising valuers of office investment property in Sydney today. It is also arguable that the sample's views should be consistent with those of valuers practising in other similar markets internationally.

5. The relative importance of the various determinants

Each of the questionnaire respondents was provided with a list of the determinants of the capitalization rate identified above and asked to consider each in the context of a Sydney CBD office investment property. Respondents were encouraged to add other determinants that they considered relevant to make the list more comprehensive. Given the highly subjective nature of assessing the relative importance of the factors listed, a ranking of three levels was advocated, namely:

1. Very important;
2. Important;
3. Less important.

This ranking was designed to accommodate a response that all determinants listed were important for the valuation of a CBD office investment property, with the acknowledgement that some may be marginally more important than others.

Allowing for a simple 3, 2, 1 weighting to very important, important and less important responses, respectively, the following ranking resulted, starting with the most important and ending with the least important:

1. Location
2. Tenant } equal
   Growth }

4. Building
5. Risk } equal
   State of the property market }
   Economic situation }
8. Legal
9. Characteristics of property as an asset class } equal
   Sentiment }
11. Alternative investments
12. Planning

The ranking of determinants is a central feature of this paper and the responses to the above questionnaire are fascinating. Location was the only determinant classified by each respondent as very important and supports the continued relevance of the old adage. There was, therefore, no indication that the small size of the CBDs of the major Australian capital cities relative to other international cities rendered this determinant any less important.

Several respondents noted that the depressed state of the present property market led to their ranking of tenant strength and growth prospects as the joint second most important determinant of the capitalization rate. The strength of the tenant determines the security and reliability of the income stream and the prospects for growth are implicitly greater with a strong location and tenant than if either of these variables were weak. It is interesting to note that growth was ranked as an important independent variable, rather than being ranked lower and so implicitly considered a variable dependent upon others (such as the state of the property market or the economy) for significance.

Accordingly, the top three or most significant determinants of the capitalization rate are clearly closely linked in relation to an office building within the Sydney CBD in the current market and the security and reliability of the income stream is the joint second most important factor.

It is interesting that valuers consider the building itself to be a more important issue in determining a capitalization rate than such factors as the general state of the market and risk. Characteristics of a particular property in terms of finishes, services and reputation were considered particularly important if location, tenant quality (and, therefore, implicitly growth prospects) were common with other properties being considered. A frequent comment was that, in the current market, tenants have a wide choice of buildings of comparable quality of location within the Sydney CBD and it is the features of a particular building that may make it preferable to others. It would be interesting to see if this factor achieved a similar ranking in a bull market.

The grouping of risk, the state of the property market and the economic situation being of next and equal importance by respondents was significant. Whilst the description of risk adopted for the purposes of the questionnaire was limited, comments by most respondents seemed to indicate that they were considering risk in a wider context. To some extent, the economic situation and the state of the property market are broadly linked concepts (as referred to above) and many aspects of risk in terms of property investment are closely linked to these two factors. It is clear, therefore, that valuers have regard to risk, the economic situation and the state of the property market in their assessment of the appropriate capitalization rate for a CBD office investment in Sydney.

Legal issues were ranked higher than expected though respondents' frequent references to freehold/leasehold and to the recent spate of valuations and transactions involving long leasehold interests in the Sydney CBD may have coloured their views on the relative importance of this determinant.

Despite the state of the property market and the economic situation achieving a higher ranking, the closely related concepts of the characteristics of property as an asset class and sentiment jointly ranked surprisingly low. It was anticipated that the characteristics of property would have been considered on a par with alternative investments (given the conceptual similarity), but this was not the case. Similarly, the ranking of sentiment above alternative investments was surprising as it could be argued that, to some extent, sentiment is a subjective assessment of the likely performance of property (given its characteristics) relative to other investment media and the economy as a whole. The distinction between sentiment prevailing at the time of historic evidence, the present valuation and in the assessment of expectations of the future was not mentioned by any of the respondents. Accordingly, it would appear that valuers take the special characteristics of property largely as read in determining an appropriate capitalization rate, with an intriguing impartiality to sentiment.

The ranking of alternative investments as the penultimate consideration suggests a disconcerting insularity amongst valuers regarding the role of property in the capital markets. All respondents, except one, appeared to have very little awareness of the relative returns from other asset classes at present which may merely be confirmation of the limited relevance of alternative investments as a determinant of the capitalization rate or may be a manifestation of the respondents' view of the limited relevance of the relationship. When pressed on how it was possible to determine what was an acceptable IRR for a particular property without regard to total returns from other investment classes, most respondents became uncertain and fell back upon comparable sales to justify their logic.

The ranking of planning as the least important determinant of the capitalization rate for CBD office investment property was as expected. As referred to above, the likelihood of rezoning or another significant planning related change affecting an existing Sydney CBD office tower is limited, leading respondents to agree that, whilst the planning position should be confirmed, it was not a major factor in the determination of the capitalization rate for a CBD office investment property.

The ranking exercise drew some interesting ancillary comments from respondents. A consensus that the determinants of the capitalization rate vary over time was evident, as respondents all sought to confirm that it was within the context of the Sydney CBD office market at the present time that the assumptions were to be ranked. The use of DCF techniques was generally agreed to allow greater attention to be paid to risk, particularly through the use of sensitivity analysis, though little use of probability analysis appeared to be evident.

Whilst there was a consensus that all determinants were important and required simultaneous evaluation in the assessment of an appropriate capitalization rate, most valuers appeared to undertake such a process through subjective mental deliberation, rather than any more objective basis involving weighting, ranking, probabilities or other such methods.

It is interesting that none of the respondents added any further determinants to the existing list and that the point scores attributed to those determinants identified are relatively close together. Given that the maximum score that could be attributed to each determinant was 21 and the minimum score 7, it is significant that all answers scored between 13 and 21. Furthermore, over half of the determinants scored between 18 and 21, illustrating the

difficulty respondents found in ranking the determinants and suggesting that the determination of the capitalization rate is a process of mentally juggling a series of variables of almost identical importance. However, there was a clear order of ranking which achieved some consistency between respondents and the results of the survey are, therefore, considered reliable.

6. Conclusion

The relative importance of security of income as a determinant of the capitalization rate for Sydney CBD office investment property in the current market is well illustrated by the results of the questionnaire. Second only to location and equal to growth, tenant strength (and hence security and regularity of income) is a major determinant of the capitalization rate. As the key finding of this paper, this factor is both original and highly significant, as it objectively confirms the generally though subjectively derived understanding of many market participants and commentators both in Australia and overseas.

This finding does, however, need to be viewed in context, as it represents the relative importance of only one determinant at one point in time for one given market. It would be particularly interesting to compare the relative importance of the respective determinants in different property markets, between different property sectors and over time. Such data could form the basis for a highly useful and relevant predictive model to forecast the capitalization rate though, whilst research to facilitate the development of such a model is presently under way, by its very nature it will be a considerable period before any meaningful results can be published.

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