

# Valuation by Capitalization: A Review of Comments by International Practitioners

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## **Abstract**

Through a small-sample practitioner survey conducted in four world cities during late 1992, the similarities in the state of the respective prime CBD office investment property markets at that time were found to be paralleled by a consistency of trends in the valuation methodology adopted by practitioners for such property and in both the source of and relative importance of determinants of the capitalization rate.

## **1. Introduction**

While commentaries on the impact of the global economic recession on the property markets of the United States, Canada, Great Britain, and Australia are regularly produced (Ellis, 1993),<sup>1</sup> such international comparative studies generally fail to consider the possible effects on valuation methodology.

It is proposed that similarities between the state of the prime CBD office investment markets of certain cities in the United States, Canada, Great Britain, and Australia will result in corresponding trends in valuation methodologies to permit broadly similar issues to be addressed within the valuation process. This proposition is investigated through a comparative analysis of data from the respective property markets and interviews with a small sample of practicing valuers in each country, focusing on principle valuation methods adopted, capitalization rate selection, and the relative importance attached to identified determinants of the capitalization rate.

## **2. Comparative analysis of property market data**

Ellis (1992, 1993) produce a condensed, half yearly summary of world office market data that indicates the broad trends for rental and capital movements in thirty-two major cities. London, New York, Sydney, and Toronto, which are to be considered in this study, are all surveyed by Richard Ellis. Converted to a common global basis, the changes in rent, capitalization rates, and resulting capital values during late 1992 are given in Table 1.

At first glance, the results are both interesting and depressing. Three of the four cities to be considered experienced declines in rental levels, though of differing degrees. Given that it is only a six-month period under review, the falls of 19 percent and 13 percent in Toronto and the City are quite considerable. It is likely that participants in individual markets may dispute the data for their city (for example, Jones Lang Wootton, (1992) quote the nominal Sydney CBD prime office rent falling by 10 percent and the effective, incentive adjusted rent by 16.6 percent for the period), but the overall trend is, clearly, negative. As with the data on rental movements, there may be likely to be some variation in the opinions of different research houses and analysts regarding yield levels and the quantum of movement, but the broad trend is likely to remain negative.

Table 1. Global property market data, changes June to December 1992.

London, City	Capitalization		Rental Rate Changes <sup>a</sup>	Capital Value Changes <sup>b</sup>
	Rate Changes %	YP		
London, West End	-0.50%	-1.18	-13%	-19.70%
New York, Midtown	-0.50%	-1.28	-6%	-13.13%
Sydney	-0.75%	-1.07	-7%	-15.37%
Toronto	-0.75%	-1.48	0%	-9.99%
	0.00%	0.00	-19%	-18.65%

Note: All data based on U.S. dollars converted at the June 1992 exchange rates quoted by Richard Ellis, to remove exchange rate fluctuation effects.

a. Equivalent net rent, expressed in U.S. dollars exclusive of service charges, rates, and taxes as well as discounting any gross floor areas to net floor areas.

b. Combined effect of rent change and capitalization rate change for 1,000 sqm of office space in each city. Source: Richard Ellis.

The similarities between the prime CBD office markets of the four cities under consideration are significant. Most have deteriorating rental levels, weakening capitalization rates, and apparently declining capital values. Determining capital value during such periods of change in rental rates becomes challenging for the world's valuers, particularly when coupled with simultaneous movements in the capitalization rate for prime CBD office investment property and few, if any, significant investment sales to consider for guidance as to the actual extent of the fall in capital value. Given the similarities of the challenges facing valuers around the world, their respective methodological responses will be interesting to observe.

### 3. Valuation methodology

A review of standard valuation texts (Pyhrr et al., 1989; Britton, Davies, and Johnson, 1980; Rost and Collins, 1990) identifies that both the capitalization of income and discounted cash flow methods of valuation are advocated for use by valuers in North America, Great Britain, and Australia for the valuation of prime CBD office investment properties. Valuers within each country also use alternative, local methods that have parallel methods (rather than identical replicas) in the other countries. For the purposes of this analysis, the use of the capitalization of income and discounted cash flow methodologies within the respective countries will be considered. By late 1992, considerable attention had been focused in Australia on the advantages and disadvantages of the two methods for use in a depressed property market. This literature will be considered briefly below. A perusal of professional journals from the United States and Great Britain<sup>2</sup> at the same point in time suggests attention had also been given to similar issues overseas.

The vulnerability of the capitalization of income method to accurate quantification of the net income stream and the capitalization rate, plus the sensitivity of resulting capital values is widely appreciated (Millington, 1979; Britton, Davies and Johnson, 1980). Willett (1989) confirms this to be a vital issue for Australian institutional investors in prime CBD office property. Hatcher (1992) reviews the applicability of the capitalization of income method of valuation in a period of high office vacancies, prevalent incentives, declining nominal rentals and an absence of sales data. The author finds the method to be inadequate, a view shared by Brown (1992) who favors discounted cash flow approaches to overcome the limitations of the capitalization of income method, particularly for large investment properties.

Discounted cash flow methods have long been advocated in Australia as a practical alternative to the capitalization of income method (Gibson, 1989), but a reluctance by valuers

to universally embrace the technique for application to all types of investment property has been apparent. The inability of the variables, in the traditional capitalization of income method, to cope with the features of a depressed property market and the comparative ease with which discounted cash flow methodologies can address such points have been considered in detail within the local professional press (Parker, 1993). It was therefore interesting to observe which method prevailed in use in Sydney in late 1992 and how this compares to the other countries surveyed.

The reliance of the capitalization of income method on market derived evidence of the capitalization rate was particularly problematical in Sydney in late 1992 as the last sale of a prime CBD office investment building had been in March 1990. Accordingly, for those valuers persisting in the use of the capitalization of income method for the valuation of prime CBD office investment property in Sydney in late 1992, exactly how the capitalization rate was derived both here and overseas was a particularly topical issue.

### 4. Survey technique

To ascertain more about the principle methods being used in late 1992 for prime CBD office investment property valuation in the United States, Canada, Great Britain, and Australia, a small survey of valuers was undertaken by questionnaire and interview in each of the countries between June and December 1992. The survey was prepared to collate data to ascertain from valuers, for prime CBD office investment property, which principle methods of valuation they adopted at that time, how the capitalization rate was selected, and what were the relative levels of importance of twelve identified determinants of the capitalization rate.

Valuers from large, well-established national practices in each country were used as the survey sample in an endeavor to achieve some consistency. Such valuers are more accessible than investors in each country and share a common understanding of internationally standardized definitions of open-market value. Also, as the proposed focus was on the valuation of prime CBD office investment property, it would be probable that only those valuers practicing in the large, international firms would be likely to be regularly involved in such projects within each city.

Although the number of valuers practicing in such firms is likely to be relatively small compared to the total population of valuers in each country, the highly specialized nature of the valuation of prime CBD office investment property would be likely to mean that the sample is indicative of practitioners in this specialty within the respective countries, with the respondents' views and approaches likely to be at the forefront of valuation methodology for that country. Seventeen valuation practices were surveyed—seven in Australia, four in Great Britain, and three each in the United States and Canada. The time constraints of interviewing regrettably precluded the use of a larger overseas sample.

Prior to the survey being undertaken, each respondent interviewed was qualified with questions on the number of valuers employed by the firm, the number of prime CBD office property valuations undertaken each year, the value range, the number of years spent practicing as a valuer, qualifications, and posts held in industry bodies. From the responses, it was clear that the sample was experienced, highly qualified, and regularly involved in the valuation of prime CBD office investment property.

The practitioner survey reported in this paper is acknowledged to be of a small sample and an inadequate base from which substantive and definitive conclusions may be drawn. However, it does generate some interesting results and comments, based on a sample of highly specialized professionals, through a more formalized structure than the collation and analysis of purely anecdotal comments.

## 5. Survey outcomes

The survey sought to address three areas—to identify those valuation methods being used, to ascertain how the capitalization rate was selected, and to derive an international comparative ranking for the determinants of the capitalization rate.

### 5.1. Valuation methods adopted

Each respondent was asked to nominate whether the capitalization of income or discounted cash flow was the principle or secondary method usually adopted for the valuation of prime CBD office investment property and to note any other methods that may be regularly used. There was considerable consistency among respondents within each country, and the results are given in Table 2.

It is interesting that the DCF approach appears to have become the principle method of valuation in each city except London. Given the problems inherent in reflecting vacancies, letting up periods, incentives, and overrenting within the traditional capitalization of income method, the existence of such factors in each of the four markets was expected to lead valuers toward greater use of DCF techniques. While the use of DCF techniques may overcome many of the problems inherent within the traditional capitalization of income method, it creates further problems of its own for valuers to address such that the use of DCF is not a panacea for all valuation problems.

In Australia, the principal use of the DCF method was on the basis that the results were checked through the use of a traditional capitalization. A similar view was held in the United States where the capitalization of “stabilized” income streams was a regular comment, and in Canada it was suggested that the big investment houses were split between the two methods, with a house rule to use both being commonly found within the larger valuation practices.

Given that the British valuers appear to be out of line internationally, their comments were particularly interesting. A view that the numerous layers of leasehold interests, which are a regular feature of prime office investments in London, led to a preference to use variations on traditional capitalization methods (such as hardcore, term and reversion, “tiered top slice,” and so on) was common and an unwillingness to embrace DCF techniques apparent. This finding is particularly interesting to compare with comments in British journals (Baum, 1992; Pringle, 1992) that both advocate and acknowledge the use of DCF methods in British practice to assess the value of prime CBD office property investments.

The only users of the cost approach in late 1992 appeared to be those valuers practicing in the United States. Of particular interest was the extent, internationally, of the continued use of the basic value measure, capital value per square meter. Given the very sophisticated, computer-assisted approaches to valuation that are now available and being used by the practices surveyed, the return to such a simple comparative yardstick for a guide to value was a surprising finding. The approach does, however, offer an easy guide to the relativity of value between properties in a declining market facilitating an overview prior to finalizing an opinion of value.

Table 2. Valuation methodology: prime CBD office investment property.

Country	Principle Method	Secondary Method	Other Methods
Australia	DCF	Capitalization	Capital Value PSM
United States	DCF	Capitalization	Cost Approach Capital Value PSM
Canada	DCF, Capitalization	Capitalization, DCF	Capital Value PSM
Great Britain	Capitalization	DCF	Capital Value PSM

Source: Author.

The only references to considering a range of values or the application of basic sensitivity analysis came from those respondents who made regular references to valuation matrices. Basing the assessment of variables in each of the methods identified on comparables was commonly mentioned, though there was also general agreement that, in late 1992, such comparables were very rare.

### 5.2. Selection of the capitalization rate

Though falling behind the discounted cash flow method as the principle valuation technique for prime CBD office investment property, the capitalization of income method is still widely used. Accordingly, the survey sought to ascertain just how, in late 1992, valuers were selecting the capitalization rate for use in the method during a period of such limited sales activity in the subsector. A hallmark of all responses to questions regarding the selection of the capitalization rate was that no single approach was commonly and invariably used. However, the search for elusive comparable evidence and the principle of mentally juggling a variety of factors simultaneously and distilling from such deliberations a capitalization rate for the given property investment were regular responses. Some interesting differences in approach did, however, appear between various practices in each country, which could be usefully implemented by other practices.

Talking to investors and salespeople was common and more formalized in some practices than others. One Canadian practice conducted a periodic in-house survey of 150 institutions to ascertain what level of capitalization rate would trigger that investor to consider CBD office investments. While being refreshingly comprehensive, this survey was also forward looking as it sought to ascertain what an investor would do rather than what an investor had just done. The practice also conducted regular personal interviews with all institutions that owned investment property worth \$250 million (Canadian) or over in order to understand their attitudes and views on value first hand, as a further guide in the selection of the capitalization rate. The same practice also included a three- or four-page section in their valuation report headed “Comparative Investment Features of Property.” Within this section, the valuer explicitly considered each relevant property investment factor for the subject relative to that for the comparable evidence being interpreted. This simple, small step provides a framework for the process of mentally juggling relevant factors, thus making capitalization rate selection more explicit and potentially more rational. Such an approach could, if objectively applied, lead to a major step forward in the quality and consistency of information processing by valuers, which should enhance both the resulting analysis and valuation.

One of the U.S. practices surveyed approached the selection of the appropriate capitalization rate in the opposite direction to that adopted in Australia. They projected cash flows for the next ten years and made a reasoned guess as to the terminal capitalization rate (the impact of which was diminished by being at the end of the cash flow period), then established the target discount rate and looked at the capitalization rate today that could be deduced from the NPV of the cash flow. This was then compared to other sources of evidence, and variations of the cash flow were run to observe the sensitivity. It was acknowledged that, to a degree, this merely transferred the problem of the selection decision from the capitalization rate to the discount rate, though it was pointed out that some clients and investing institutions could more easily identify target discount rates than acceptable capitalization rates for property investments. As a check, the practice consulted the Korpacz Investor Survey (Korpacz, 1992) as part of the process of mental deliberation.

As well as adding the phrase, “stellar assets” to the international real estate lexicon, the same U.S. practice also noted that total returns for property locally had not varied much

over time despite changes in the bond rate and periods of low inflation, with a return of 11 to 12 percent being average. This was a particularly interesting comment from an Australian perspective, as in 1992, inflation, cash, and bond rates fell to historically low levels, which fueled a contentious debate as to where the acceptable levels of total return for the various property sectors lay. Further research in this area could be potentially fascinating for both investors and valuers.

A recurrent theme throughout all respondents' comments was that the capitalization rate was, ultimately, subjectively determined. Frequent references to "feel" and intuition together with a need to "keep close to the market" underlined the concept of mentally juggling a series of variables from which the skill and experience of the valuer deduced the appropriate capitalization rate. Accordingly, the final part of the practitioner survey sought to identify and rank those specific factors that the respondents considered to be determinants of the capitalization rate.

### 5.3. Determinants of the capitalization rate

Following an extensive previous literature review by the author (Parker, 1992), a list of the most commonly identified determinants of the capitalization rate for prime CBD office investment property had been collated. This list had also been tempered by the authors experience as an institutional property investment operative and supplemented through other previous original research.

The identified determinants of the capitalization rate are summarized in Table 3, in alphabetical order rather than any presumed order of importance. This list was provided to each of the survey respondents, in an interview, and they were also requested to add other determinants that they considered relevant. Respondents were then asked to rank each determinant as either very important, important, or less important to overcome the common view that all determinants were important with the acknowledgment that some were potentially more important than others. The responses to such survey were then scored with a simple 3, 2, 1 weighting from highest importance to lowest importance, respectively, and the scores totaled and ranked. The rankings that emerged for each country are given in Table 4 and, though only for a small sample, are quite fascinating.

The large number of "equals" rankings of determinants is a regrettable feature of the limitations of sample size and range of scores for assessment. A larger sample and a range of 1 to 5 within which to rank importance would have resulted in a clearer hierarchy of

Table 3. Determinants of the capitalization rate for prime CBD office investment property.

- Alternative investments: both alternative property investments and opportunities in other sectors such as equities, fixed interest, or cash;
- Building itself: age, condition, quality of services, special features, obsolescence, etc.
- Economic situation: international/federal/state/city levels, macro and micro, taxation, etc.
- Growth prospects: potential for income growth or capital appreciation;
- Legal issues: freshhold/leasehold, restrictive covenants, leases, health and safety issues, etc.;
- Location: situation, position, etc.;
- Planning: plot ratios, zoning/use limitations, etc.;
- Risk: the possibility of events not occurring as anticipated;
- Sentiment: general sentiment toward property as an investment asset class currently, perceptions for the future, etc.;
- Separable characteristics of property as an asset class: long-term nature, illiquidity, management intensity, market imperfections, lack of information, scarcity, durability, etc.;
- State of the property market: supply and demand for both investment owners and tenants, relative state of prime office submarket, market stability, etc.;
- Tenant(s): security and regularity of income stream, structure of leases, rent review provisions, outgoings shortfalls, etc.

Source: Author.

## VALUATION BY CAPITALIZATION

Table 4. Survey results: determinants of the capitalization rate, comparative rankings.

	Australia	United States	Canada	Great Britain
1. Tenant		1. Location	1. Growth	1. Tenant
2. State of property market		2. Building	Location	2. Building
3. Growth		Growth	Tenant	State of property market
4. Risk		State of property market	4. Sentiment	4. Location
5. Location		Tenant	State of property market	Sentiment
6. Building		6. Economic situation	6. Risk	6. Alternative investments
7. Alternative investments		7. Sentiment	7. Alternative investments	Legal
Economic situation		8. Legal	Building	Risk
Legal		Separable characteristics	Economic situation	9. Growth
Sentiment		Risk	Legal	Separable characteristics
11. Separable characteristics		11. Alternative investments	Separable characteristics	11. Economic situation
12. Planning		Planning	12. Planning	12. Planning

Source: Author.

determinants. Despite this, consistency was found between respondents within countries. Based on the smallest sample size of three respondents, the maximum and minimum scores that any determinant could achieve were 9 and 3, respectively, with proportionately wider ranges for the larger sample sizes. When adjusted, it is notable that over 55 percent of scores were within the range of 6 and 8, indicating the difficulty that respondents in all countries experienced when ranking the determinants, particularly those in the midrange. Such a finding concurs with the suggestion that practitioners are mentally juggling a variety of factors of near equal importance when selecting the capitalization rate.

Though differences in the rankings exist, there is considerable consistency between countries in the grouping of determinants. Table 5 illustrates the consistency among the top five ranking determinants, with tenant the only determinant to appear among the top two in every country. The significance of the security and regularity of the income stream displacing the commonly taught most important determinant, location, is an interesting comment on both the valuers focus and the state of the property markets surveyed in late 1992. There is also some consistency among the bottom-ranking determinants between countries, though no apparent consistency among the remaining midranking determinants. Such inconsistency may indicate differences in local conditions, differences in respondents interpretation of

Table 5. Top five determinants: consistency of ranking.

	State of the Property Market				
	Tenant	Location	Property Market	Growth	Building
Australia	✓	✓	✓	✓	✓
United States	✓	✓	✓	✓	✓
Canada	✓	✓	✓	✓	✓
Great Britain	✓	✓	✓	✓	✓

Source: Author.

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the definitions, differing applicability of the various determinants in the respective markets, or a variety of other factors that would require considerable further research for clarification. It does, however, reinforce the concept of valuers mentally juggling a variety of factors—some that are consistently more important, some that are of lesser importance, and the remainder that appear fluid in between.

The ranking across countries is also worthy of note. Great Britain is apparently different to the other three countries. The United States and Canada have some similarities, and Australia appears slightly different again. While trends between countries and among determinant rankings can be observed, any further explanation is beyond the scope of this paper and would require far more research of a different style. Just how and why the determinants might move both within and between markets and over time is worthy of considerably more attention. It is of significance that no respondents added any further determinants to the list or sought to dispute or disregard any of the determinants cited.

## 6. Conclusion

Having ascertained that considerable similarities existed in late 1992 between the state of property markets in certain cities within the United States, Canada, Great Britain, and Australia, it was also found that there was some consistency in the valuation methodology being adopted within the respective countries for the valuation of prime CBD office investment property. A global trend toward the use of DCF valuation methods in preference to capitalization of income methods was identified though the specific reasons that Great Britain had not embraced the former to the same extent as the United States, Canada, and Australia at that time was not investigated and would be worthy of further attention.

Considerable consistency was found in respondents' approaches to the selection of the capitalization rate and in the general ranking of certain determinants in order of importance. Between each country, however, differences in rankings were observed, but the principle of mentally juggling a variety of factors of slightly differing degrees of importance to distil a capitalization rate appeared to be universally accepted. The survey did not seek to ascertain why such differences in the order of importance of determinants existed, and further research in this area would be worthwhile.

Though only a small sample for research purposes and an inadequate base from which to draw substantive conclusions, this study offers interesting indicators of the apparent similarity of trends in approach by valuers to common problems worldwide. Given that such similarities exist, scope for the exchange of research between countries facing comparable challenges is considerable and could only be beneficial for those valuers practicing within each participating country. The information collated through such exchange could be a vital resource in the development of compatible valuation theory and consistency of practice around the world.

## Notes

1. Other major international agencies such as Jones Lang Wootton, Hillier Parker, and Weatherall Green and Smith also produce international market commentaries periodically.
2. See, for example, *Appraisal Journal*, *Real Estate Appraiser and Analyst*, and *Journal of Real Estate Research* in the United States and *Estates Gazette*, *Journal of Valuation*, and *Journal of Property Research* in Great Britain.