# Keynote:
# The Capitalisation Rate Conundrum: Principles, Practice and Conquering Industry Problems

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**Abstract**

Capitalisation rates are central to a very popular short cut valuation method used widely around the world for investment property valuation. In the hands of an experienced valuer, the capitalisation rate provides a useful heuristic but very small changes in the rate may make very large differences in capital value. This paper explores the theoretical foundations and practical applications of capitalisation rates together with potential errors in capitalisation rate implementation.

Despite warnings about the shortcomings of the capitalisation of income method of valuation in the Greenwell Report of 1976, the method remains extensively used for a wide range of investment property types around the world. The capitalisation rate conundrum is how to effectively apply the capitalisation of income method in markets with incomplete or unreliable data.

The principles or theoretical foundations of the capitalisation of income method are often overlooked when the method is selected for application resulting in the inappropriate application of the method. This problem may be compounded in practice by practitioners attempting to apply the capitalisation of income method despite incomplete or unreliable data, leading to a valuation conclusion that may be erroneous.

Conquering industry problems may be contended to be based in only using the capitalisation of income method when it is fit for purpose and its theoretical foundations can be supported, perhaps through a more consistent and sophisticated approach to analysis. If not fit for purpose, alternative income valuation methods or alternative valuation approaches should be considered and, in markets where incomplete or unreliable data is an underlying problem, it may be contended that an opportunity exists for professional data providers to offer solutions.

## Introduction

The capitalisation of income method of valuation is one of the income approaches to valuation recognised by the International Valuation Standards Council and the Royal Institution of

Chartered Surveyors (IVSC, 2021; RICS 2021), being widely used in many markets around the world.

The capitalisation of income method is deceptive in its simplicity. While using only a net income stream and a capitalisation rate may appear easy, every aspect of the property being valued has then to be reflected in either the income stream or the capitalisation rate. Hence, as the income stream is unchanging, the capitalisation rate effectively becomes the medium though which to reflect all aspects of growth and risk in the income stream.

The capitalisation of income method is heavily dependent on valuer judgment, with small differences in the capitalisation rate making potentially large differences in the assessment of value. Where capitalisation rates are in the order of 7% or higher, scope remains for valuer judgement to be expressed through conventional incremental changes of 0.25% in the capitalisation rate. However, when capitalisation rates are in the order of 3% to 4%, expressing valuer judgment becomes much harder as the impact of a 0.25% change is significantly greater while the ability to determine if a capitalisation rate should be 3.1% or 3.2% is not only challenging but also impactful on the assessment of value.

While it is now well established that DCF is the appropriate method of valuation for large, multi-tenanted investment properties, with the dynamic nature of the method better suited to reflecting the complexity of the cash flows generated by such assets, the capitalisation of income method remains widely used though it is more appropriate for smaller properties with fewer tenants or as a check method for an assessment of value by DCF.

It is now almost 50 years since Greenwell's (1976) criticism of the capitalisation of income method as incorrect, illogical and by deduction leading to inaccurate valuations, to which the RICS responded by establishing a research programme into valuation methods and publishing Guidance Notes on the Valuation of Assets in 1976, the original RICS Red Book. Remarkably, despite the exponential development in the complexity of interests arising from investment property over the last 50 years, the use of the capitalisation of income method still persists.

**Conundrum**

Despite criticism, the capitalisation of income method of valuation continues to be used extensively for a wide range of investment property types around the world. The method is heavily dependent on the underlying assumptions that form its theoretical foundation and the judgment practiced by valuers in its application.

For the underlying assumptions and for judgment to be effectively applied, sufficient data is essential. With only two principal variables to consider, being the net income stream and the capitalisation rate, data for each should be both complete and reliable for each comparable transaction being considered.
Reliance on incomplete or unreliable data may result in the ineffective application of the method leading to a valuation conclusion that may be erroneous. The capitalisation rate conundrum is, therefore, how to effectively apply the capitalisation of income method in markets with incomplete or unreliable data.

**Principles**

A previous edition of the International Valuation Standards usefully described the capitalisation of income method as:

> where an all-risks or overall capitalisation rate is applied to a representative single period income (IVSC, 2013, para 60, page 24)

The method is, therefore, dependent on the underlying assumptions that form the theoretical foundation for the capitalisation rate and the representative single period income.

The underlying assumptions that form the theoretical foundation for the capitalisation rate include that it is:

- implicit that the capitalisation rate will have regard to the time cost of money;
- implicit that the capitalisation rate will have regard to the rewards attaching to the income stream other than rental growth;
- implicit that the capitalisation rate will have regard to the risks attaching to the income stream;
- implicit that there are sufficient comparable transaction properties;
- implicit that the subject property and the comparable transaction properties will be in the same sector, sub-sector and geography;
- implicit that the subject property and comparable transaction properties will have similar investment characteristics, as listed below; and
- assumed that any differences in the above between the subject property and the comparable transaction properties are capable of reflection by adjustment of the capitalisation rate based on valuer judgment.

The underlying assumptions that form the theoretical foundation for the representative single period income include that it is:

- assumed to be the prevailing current market income;
- implicit that growth is assumed to either remain constant or be consistent with the market;
- assumed to continue in perpetuity;
- implicit that there are sufficient comparable transaction properties;
- implicit that subject property and comparable transaction properties will have similar rent review profiles including frequency and basis;
- implicit that subject property and comparable transaction properties will have similar lease terms for outgoings, repair, alienation, etc; and
- assumed that any differences in the above between the subject property and the comparable transactions are capable of reflection by manual calculation (such as term and reversion, differential rent review patterns, repair or refurbishment costs, etc) or in the capitalisation rate.

Concerning growth, Baum et al (2018) illustrate how the capitalisation rate implicitly reflects capital growth only and not rental growth, noting the following derivation from Gordon's Growth Model:

$$K = R - G$$

where:

K = capitalisation rate
R = required return or discount rate
G = growth in rents

Further:

$$R = RFR + RP$$

where:

$$K = R - G$$

so combining the equations:

$$K = RFR + RP - G$$

where:
RFR = risk free rate
RP = risk premium
which illustrates the interlinked and inter-related nature of each of these key valuation inputs.

It should be noted that this approach focuses on the addition of an allowance for rental growth only to the capitalisation rate. With the potential for capital growth reflected in the capitalisation rate, K, only the potential for rental value growth, G, should be added to the capitalisation rate to derive the discount rate.

Concerning risk, Parker (1996) identified 12 groups of issues or investment characteristics that impact upon the determination of the capitalisation rate, being:

- alternative investments;
- building;
- economic situation;
- growth;
- legal environment;
- location;
- planning;
- risk;
- sentiment;
- separable asset class characteristics;
- state of the property market; and
- tenant.

In the context of Grade A office properties in Sydney, Parker (1996) identified the three most significant groups of issues or investment characteristics affecting capitalisation rate differences between properties to be building, location and tenant.

This is consistent with the contemporary classification of groups of issues or investment characteristics as systematic, unsystematic or idiosyncratic risk influences in the context of individual Grade A office properties within the Sydney CBD:

| Systematic Risks | Unsystematic Risks | Idiosyncratic or Specific Risks |
|---|---|---|
| Risks affecting all office properties in the Sydney CBD | Risks affecting all grade A office properties in the Sydney CBD | Risks differing between individual grade A office properties in the Sydney CBD |
| Alternative investments | Growth | Building |
| Economic situation | Legal environment | Location |
| Separable asset class characteristics | Planning | Tenant |
| | Sentiment | |
| | State of the property market | |

Therefore, when considering the adjustment of the capitalisation rate from analysed comparable sales of Sydney Grade A office properties for application to the valuation of another Sydney Grade A office property:

- those groups of issues or investment characteristics listed in the systematic risks column will be common to all properties and reflected in the capitalisation rate of each; and
- those groups of issues or investment characteristics listed in the unsystematic risks column will be common to all properties and reflected in the capitalisation rate of each; but
- those groups of issues or investment characteristics listed in the idiosyncratic or specific risks column will differ between each property and so require reflection in the adjustments made to the capitalisation rate.

Accordingly, the capitalisation of income method of valuation is dependent, for effective implementation, on the above underlying assumptions that form the theoretical foundations for the capitalisation rate and the representative period income.

**Practice**

The capitalisation of income method is heavily dependent on the underlying assumptions that form its theoretical foundation, as considered above, and the judgment practiced by valuers in its application.

For the underlying assumptions and for judgment to be effectively applied, sufficient data is essential. For judgment concerning the adjustment of the capitalisation rate from transaction evidence for application to the subject property, such data needs to be sub-sector specific with the valuation of a CBD office property requiring data from other CBD office property

transactions. Data from suburban office property transactions or from transactions in the retail sector or industrial sector is unlikely to be helpful.

It is only by considering sub-sector specific data that the valuer can isolate the idiosyncratic issues or investment characteristics requiring adjustment from the comparable transactions for application to the subject property. It is only by having common systematic and unsystematic issues or investment characteristics data between the comparable transactions and the subject property that adjustment for same can be avoided, so allowing focus on the idiosyncratic issues or investment characteristics.

Adjustment for idiosyncratic issues is easier in some sub-sectors that others. For example, in the warehouse sub-sector of the industrial sector, there may be several comparable transactions in the geographic vicinity for single tenant investment properties which may be analysed to indicate capitalisation rates in the range of 6% to 7% for application to the subject property. This provides the valuer with the opportunity to adjust for idiosyncratic issues or investment characteristics using the conventional increments of 0.25%.

However, for example, in the CBD sub-sector of the office sector, there may be several comparable transactions in the geographic vicinity for single tenant investment properties which may be analysed to indicate capitalisation rates in the range of 5% to 5.25% for application to the subject property. This provides the valuer with limited opportunity to adjust for idiosyncratic issues or investment characteristics and with no opportunity to use the conventional increment of 0.25%. This may result in adjustments of 5, 10, 15 or 20 basis points, which is a very precise level of adjustment with a very significant effect on the capital value assessed.

In addition to judgment concerning the adjustment of the capitalisation rate from transaction evidence for application to the subject property, valuer judgment is also required to address differences between the valuation scenario and the underlying assumptions that form the theoretical foundation for the capitalisation rate and the representative period income. This may range from a term and reversion scenario requiring judgment on the capitalisation rate differential (if any) to adjustments for capital expenditure, voids and so forth.

The level of judgment required may rise significantly when the subject property is multi-tenanted rather than single tenanted. Reflecting the challenges arising, there has been an increased adoption around the world of the discounted cash flow method of valuation and a range of vendor produced software products than can more easily accommodate and reflect the increased number of variables requiring judgmental input.

**Conquering Industry Problems**

With only two dependent variables, the capitalisation of income method may be most appropriate for adoption where there is a stable property in a stable property market with stable comparable sales transactions where each has a relatively simple risk profile. This effectively limits the use of the capitalisation of income method to simpler, smaller properties for which there is a substantial pool of comparable sales evidence in a deep market (Parker, 2016).

As may be anticipated, problems might arise when the capitalisation of income method is applied to a multi-tenanted property with a complex risk profile in an unstable property market with

limited or no comparable sales transactions or where data and information is incomplete or unreliable. This raises the fundamental question as to whether the capitalisation of income method is fit for purpose for such a valuation.

If data and information is complete and reliable, then the valuer may consider the use of the discounted cash flow method for such a valuation. Adjustments to the risk premium within the discount rate and the ability to reflect rental growth explicitly in the cash flow provide the valuer with greater opportunities for clearly stated assumptions and transparency.

If data and information is incomplete and/or unreliable, then the valuer may consider the income approach to be inappropriate and adopt either a market approach or a cost approach, consistent with the recommendations of the International Valuation Standards Council and the Royal Institution of Chartered Surveyors.

However, complete and reliable data is essential for the operation of an efficient property market where information is fully impounded into pricing. Therefore, in the absence of complete and reliable data, it is in the interests of regulators and market participants to promptly and effectively address this problem.

Historically, such intervention would have been undertaken by either Government or the relevant professional body in the country concerned, usually in a cost-effective manner to allow distribution of information either at no cost or at low cost. Today, such intervention is more likely to be undertaken by a professional data provider such as a national or international IT group whose business is the computerised collection and distribution of data. However, as a profit-making business, such national and international IT groups may be likely to charge higher rates for the distribution of information. One approach to attempting to keep the distribution of information reasonably priced is for Government, the relevant professional body and a national or international IT group to work together, though such relationships have proved challenging in the past.

Accordingly, the most practical response to the capitalisation rate conundrum of how to effectively apply the capitalisation of income method in markets with incomplete or unreliable data is for Government, the relevant professional body and a national or international IT group to work together and develop an effective system of collection and distribution of complete and reliable information.

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