

Property capitalisation rates – benchmarking the property market

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CAP rates:
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Abstract

Purpose – The aim of this Education Briefing is to comment upon the construction and role of the capitalisation rate in the valuation of property assets and how the implicit assumptions of growth are market derived and may be considered more robust than the use of growth explicit discounted cash flow (DCF) models where explicit growth assumptions can be questioned.

Design/methodology/approach – This Education Briefing will look at the role of analysing initial yields to derive market capitalisation rates, and it will look at component parts of the yield to isolate growth assumptions and compare property returns to the government bond market.

Findings – Looking at the Maltese market, the briefing shows that the valuer needs to be aware of the advantages and disadvantages of implicit and explicit valuation models.

Practical implications – The choice of valuation model is dependent upon the availability of suitable comparable information and the appropriateness of the model for the market in question. More transparent markets can benefit from the use of explicit models but where information is less available, such as the Maltese market, implicit models may be considered more robust at estimating market value.

Originality/value – This is an Education Briefing discussing the construction and applicability of implicit valuation models using a market capitalisation rate.

Keywords Capitalisation rate, Initial yield, Implicit valuation model, Explicit valuation model, Market growth, Discounted cash flow

Paper type Education briefing

Introduction

This Education Briefing looks at the mechanics on the build-up of property capitalisation rates in the context of the mantra that property is a hedge against inflation. The capitalisation rate is used in property valuation (and the valuation of other assets) to provide a multiplier that when applied to the (normally) annual rent of a property estimates the market value of the property. It is known as an implicit valuation model as the growth expectation in the market is captured in the capitalisation rate.

An alternative valuation model is the explicit discounted cash flow model which, as the name suggests, explicitly sets out the cash flow for a period of time (normally, with property, 10 years) and show any rental and/or capital growth in the cash flow itself. It is known as an explicit valuation model.

This Education Briefing, in the context of the Maltese investment market, considers the advantages and disadvantages of each model and the importance of benchmarking to the market.

It is suggested that the explicit discounted cash flow model should be used sparingly in the valuation of property investments, only in the short term. For the long term, estimates of market value are well catered for with the use of the implicit model using a market derived capitalisation rate when valuing commercial property (office and retail outlets) and trading properties (hotels, petrol stations, schools), respectively.

As these factors are dependent on rates of return, the practising valuer should be well-versed in determining the capitalisation rate.



The capitalisation rate can be derived either by observing recent initial yields from the market (Net Rental Income/Capital Value) or if the market is not so transparent, it can be built-up by reference to other market information. For example, the valuer can reference Fisher's or Gordon's models which relate the property capitalisation rate to other market variables such as the risk free rate of return, risk and growth (for a full discussion on these models with reference to the property market, see [French, 2019](#)).

Gordon's growth model

If we restrict this analysis to Gordon's growth model, this can be used to arrive at, or understand, the property capitalisation rate in relation to risk, risk free return, liquidity and depreciation.

Gordon's growth equation is:

$$I = r + x + y - g - d$$

where i is the initial yield of return.

r is the risk free rate

x is a premium added on due to the lumpiness of property investments as compared to other forms of investments [1].

y is the tenant risk [2].

g is the annual increase – growth – in rent.

d is a factor to cater for depreciation [3].

Obviously, this model can be used to solve any one variable if the other variables are known or rigorously estimated. So, if the valuer has sufficient information on comparable transactions, they can derive an initial yield for the market and then, by estimating all but one of the other component variables (say, r , x , y and d), then the formula will derive the expected growth in the market (g).

Alternatively, if the market is more opaque, and it is not possible to observe initial yields in the market, then the same formula can be used to estimate the capitalisation rate by the build-up model.

The important thing about Gordon's growth formula is that it clearly references the interplay between the property market and the capital market. For example, the property capitalisation rate is correlated to the risk-free rate.

But when calculating growth, it must be anchored in the market. The advantage of the implied growth calculation from Gordon's growth model is that, as it is implied, it is actually an average annual growth figure over the life of the investment. Obviously, this could be applied at the same rate throughout an explicit DCF model and, if this is done, then the two models, implicit and explicit, produce the same answer.

But the temptation with an explicit model is to vary the growth rate according to the current market, and this can lead to an over-jealous expression of growth. For example, it is very difficult to predict what the market conditions will be in say three years' time, let alone for a (normal) 10 year cash flow of an explicit DCF model.

Look at the last 15-year past period from 2007 onwards; in that time, the global markets have been subjected to a financial meltdown as from 2008, whilst in 2019, the COVID pandemic again wrought havoc and now we have the global impact of the onset of the Russian-Ukraine war commenced in 2022 leading to the global cost of living crisis. None of that would have been predicted completely in advance, so how can an explicit DCF model do

the same going forward. The valuer can use the average growth from Gordon's model but the temptation in a buoyant market is to apply a higher rate in the initial years creating a positive bias and higher (unrealistic) values. It can therefore be argued that market participants' views of the potential risk or reward implied by the expected cash flow differing from those that actually occur in the future can be best reflected by using a capitalisation-based implicit model.

CAP rates:
benchmarking
the property
market

Property and the capital markets

To gauge how the risk free rate has varied over the years, [Table 1](#) contains various rate of returns as published by the Central Bank of Malta (CBM), for the safe Government Bonds over the years, with varying years to expiry. As property is normally considered as a long-term investment, the 15-year Government Bond, as averaged over a 4–5 year period, is considered a good proxy. On the other hand, a long-term risk free rate for property is taken as to not go below 2.25%.

[Table 2](#) now notes the initial yield rate as adopted over the years to an office block in Floriana. It is to be noted that whilst the capital/money market over this period, although going from a period of high interest rates to minimal rates, the initial yield of property has only varied by 2.25% over this period. This as noted from the property initial yield having varied from 7% in 1988 down to 4.85% in 2020, up from 4.75% in 2018. This low variance in interest rates over time is one inkling, why property is considered a hedge against inflation. This when the DCF Discount Rate or Target Rate varied over the same period from 14% in 1988 down to 6.25% for 2018 & up to 6.75%. The increases in both rates as at 2020 from 2018, is due to the uncertainties brought about in the property market, due to the COVID-19 disruptions.

The relationship between the DCF discount rate and the capitalisation rate can be referenced back to the annual growth in the market. In very simple terms, the capitalisation rate (k) is equal to target rate (e) minus growth.

CBM	1998	2001	2004	2007	2010	2014	2018	2020	2022
2 YR	n/a	n/a	3.25	4.5	2.41	0.624	0.015	-0.092	0.894
5 YR	5.58	5.47	4.25	4.7	3.66	1.498	0.47	0.053	1.528
10 YR	5.83	6.13	4.7	5.1	4.54	2.612	1.386	0.51	2.187
15 YR	6.22	6.47	4.95	4.9	4.96	3.557	1.856	0.808	2.244

Table 1.
CBM interest rates over
varying time periods

Year	Discount rate	Initial yield	Risk free rate
1988	14.00%	7.00%	11.00%
1992	11.00%	7.00%	7.25%
1998	10.75%	6.25%	7.75%
2001	9.75%	5.75%	6.75%
2004	8.00%	5.25%	5.00%
2007*	8.00%	5.25%	5.00%
2010	8.00%	5.00%	4.75%
2014*	7.75%	4.50%	4.50%
2018	6.25%	4.75%	2.25%
2020**	6.75%	4.85%	2.25%

Note(s): *Global financial meltdown
**COVID year

Table 2.
Floriana office block –
revaluations

So in Table 2, if you deduct the initial yield from the DCF Discount rate, you will calculate the implied growth expectation in the market for that year.

The limited variance of property discount rates over the years as noted in Figure 1 highlights that property investment is considered much less volatile than the other forms of investment available. Figure 1 clearly indicates the great volatility of Malta's Stock Exchange since its inception, as compared to Malta's residential property market over the same period.

Conclusions

It can be seen that it is important that any valuation model used in Malta should be best at capturing the low volatility of the property market as noted in Figure 1. This suggests that the use of the implicit capitalisation model will be best for this market as it applies and implies a market derived average growth rate.

This is because the valuation of investment and trading properties, although tied to an investment method, is also anchored on comparables. The comparables in these instances refer to the market rents for investment properties, with sufficient data available, together with the applicable yield. In the case of trading properties, it is the earnings multiplier, which due to scarcity of sales for these types of properties may not be too easy to obtain. The importance of arriving at an adequate initial yield or earnings' multiplier cannot be underplayed. The above outlines the mechanics on how this may be guided by investment principles, when prior to 1995 property valuation in Malta was viewed to be more heuristic and was based on the experience of the valuer. The cutoff year of 1995 coincides with the deregulation as occurring within the banking global system.

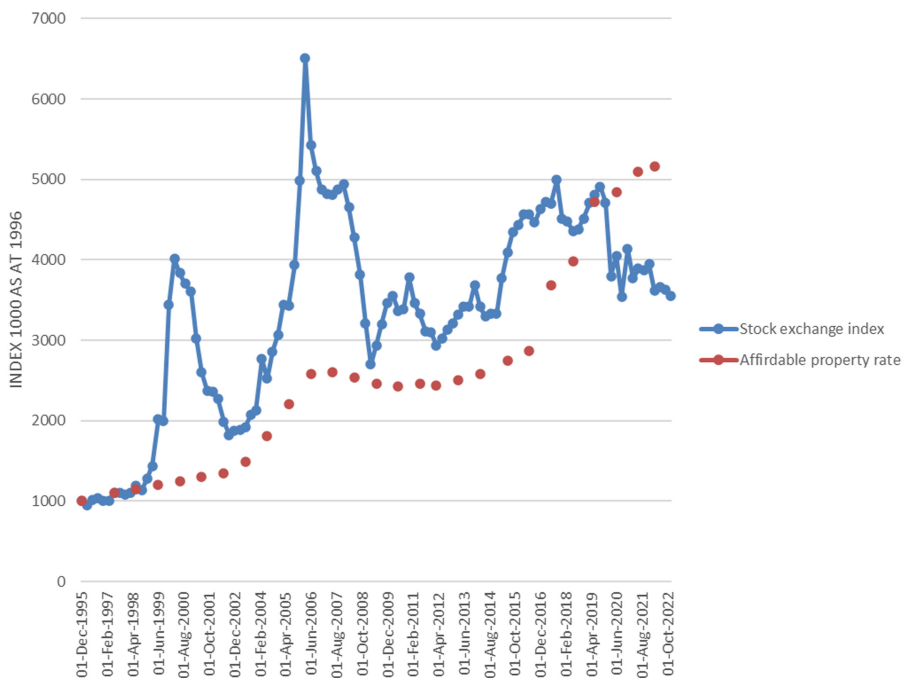


Figure 1.
Property vs stock exchange index 1996-2022

In short, valuers need to understand all markets but most importantly they need to be able to determine and justify the correct market capitalisation rate in relation to the market transparency and mechanics of the indigenous market.

CAP rates:
benchmarking
the property
market

Notes

1. This entails added purchase expenses, whilst disposal of property is more cumbersome than other forms of investment. This is normally taken at 2% for investment properties. For trading properties, this premium can tend towards 4%.
2. In Malta, this is normally taken at 1%
3. This can vary from 1% for office premises, to much higher rates for other types of property.

Reference

French, N. (2019), "Predicted property investment returns: risk and growth models", *Journal of Property Investment & Finance*, Vol. 37 No. 6, pp. 580-588.

Further reading

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