

Graduate Diploma In Applied Finance & Investment

Property Investment Analysis - E133

Topic 2 - Property Valuation Techniques

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Main Concepts

- Valuation
- Valuers
- Purpose and Basis of Valuations
- Highest & Best Use
- Market Value



Main Methods of Valuation

- Capitalisation of Net Income
- Discounted Cash Flow Techniques
- Summation Method
- Direct Comparison
- Hypothetical Development



Capitalisation of Net Income

Ideally suited to investment properties where **income** is an important component of return



Capitalisation of Net Income

Capitalisation Rate

- Crystallisation of all current & future expectations of benefits / income
- Basis Assumptions consistent (escalation of) revenue and risk expectation is unchanged
- Easily (widely) used and deduced from evidence
- Can then be compared with other investments

$$\text{Capitalisation Rate} = \frac{\text{Net Income (\$pa)}}{\text{Market Value(\$)}}$$



Capitalisation of Net Income

Rental Equation

Gross Income
Less Outgoings (operational, sustainable)
exclude non cash items
Equals Net Income (before tax)



Capitalisation of Net Income

Market Rent

- Identify evidence through research
- Read lease (net or gross, outgoings, rent reviews, period of payment, other obligations)



Capitalisation of Net Income

Initial Yield & Reversionary Yield

$$\text{Initial Yield} = \frac{\text{Net Income (\$pa)} \times 100}{\text{Market Value (\$) (or sale price)}}$$

$$\text{Reversionary Yield} = \frac{\text{Market Net Income (\$pa)} \times 100}{\text{Market Value (\$) (or sale price)}}$$



Capitalisation of Net Income

Current Net Income	\$ 45,000
Market Net Income	\$ 70,000
Purchase Price	\$520,000

$$\begin{aligned} \text{Reversionary Yield} &= \frac{\$70,000 \times 100}{\$520,000} \\ &= 13.46\% \end{aligned}$$

$$\begin{aligned} \text{Initial Yield} &= \frac{\$45,000 \times 100}{\$520,000} \\ &= 8.65\% \end{aligned}$$



Capitalisation of Net Income

You have been asked to value an industrial property



Capitalisation of Net Income

Example 1

You have been asked to value an industrial property which is rented for \$621,300pa gross, this rent has recently been reviewed to market.

Market capitalisation rates are considered to be 8.5%.

You have been given the following outgoings schedule:
Land Tax - \$13,750; Council Rates - \$11,200; Water Rates - \$2,400; Insurance - \$7,755; Repairs & Maintenance - \$8,950; and Management - \$12,500.

Allow 2.0% for vacancies.



Capitalisation of Net Income

Reversions

- bringing to account rental variations
- passing rent differs from market rent (sustainable income)



Capitalisation of Net Income - Reversions

Example 2

You have been asked to value an industrial property at 1st March 2006. It is leased to one tenant, the current gross rent is \$978,500 which is payable monthly in advance, the next market rent review will be on 31st December 2007. The current gross market rent is \$1,100,000. Outgoings are \$115,000 pa.

Market capitalisation rates are 8.25%, use a vacancy factor of 2.0%.



Discounted Cash Flow Techniques

- Used by institutional investors - applied to larger, multi-tenant properties
- Determines "investment value" = in house market value based on:
 - subjective input data (capex, lease renewals,)
 - estimates of rental growth
 - discount rate (risk adjusted return)
- Requires experience and a large database & careful interpretation (ie. stated assumptions)
- NPV of future cash flows
- IRR for investment decision



Discounted Cash Flow Techniques

An office building is available for sale



Discounted Cash Flow Techniques

Example 3

An office building is available for sale at an asking price of \$3,120,000 and under the leases will have the following net income, payable annually in advance.

Year	Net Income
1	\$288,600
2	\$288,600
3	\$295,816
4	\$295,816
5	\$303,210

You anticipate that you can sell the property at the beginning of Year 5 for \$3,280,000 (net).

- Calculate the Internal Rate of Return (IRR) for this property investment?
- At what price would you need to purchase the property in order to achieve a desired hurdle rate of 11%?



Hypothetical Development

- Used for development sites
- Requires
 - end use to be readily determined
 - On completion value to be assessed (market rents identified)
 - cost of development is known (all costs and obligations)
 - profit and risk allowance to be quantified (analysis of comparable projects)



Hypothetical Development

How much should you pay for a development site



Hypothetical Development

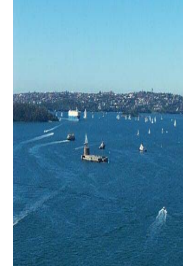
Example 4

A friend who is a property developer has asked you to determine how much they should pay for a development site that has become available. The details on the site are as follows

Large suburban site suitable for development into residential units	
Number of units	15
Estimated Selling price per unit	275,000
Agents and marketing fees on sale of completed units	2.25%
Legal fees on sale of units and purchase of land	1.50%
Profit and Risk Component	20.00%
Construction Costs including site preparation per unit	75,000
Consultants Fees % of construction costs	10.00%
Local Authority Contributions	10,000
Contingencies, % of hard costs	10.00%
"Hard costs" in relation to a development are construction costs, consultants fees and local authority contributions	
Interest rate on development costs and land purchase	10.00%
Holding costs on the land during development	12,000
Stamp duty on purchase of land	5.50%
You estimate that it will take 3 months to get the necessary approvals and 7 months to build the units, after completion of construction it will take another 2 months to finish selling all the units	



Summation Method



Summation Method

- Sum of constituent parts (eg. house)
- Land assessed by way of Direct Comparison
- Improvements assessed by way of depreciated replacement cost
- Used for specialised properties (rarely sold) assuming ongoing profitable use
- Understand limitations (depreciation, cost = value ?)



Direct Comparison



Direct Comparison

- Most commonly used as primary method for residences
- Identify benchmark rate which is widely recognised
- Other properties compared on benchmark rates
 - Strata investment; \$/m² GLA
 - Residence ; \$/m²
 - Marina ; \$/berth



Capitalisation of Net Income - Example 1

Gross Income		621,300	110	5,648
Vacancies	2.00%	12,426		
		608,874		
Less Outgoings				
Land tax		13,750		
Council Rates		11,200		
Water Rates		2,400		
Insurance		7,755		
Repairs & maintenance		8,950		
Management		12,500		
		56,555		
Net income		552,319		
Capitalisation	8.50%	6,497,871		

Capitalisation of Net Income - Reversions Example 2

Current Gross Rent		978,500		
Market Gross Rent		1,100,000		
Difference		121,500		
Monthly		10,125		
Date of valuation		1-Mar-06		
Next rent review		31-Dec-07		
Number of months		22		
Discount rate		8.25%		
Capitalisation				
Market rent		1,100,000		
less vacancies	2.00%	22,000		
		1,078,000		
Less outgoings		115,000		
Net income		963,000		
Capitalise	8.25%	11,672,727		
Calculate reversion	n	22	Annually	
	pmt	10,125	121,500	
	rate	0.6875%	8.25%	
Reversionary PV		-207,483.98	-215,645.89	
Market value		11,465,243	11,457,081	

Discounted Cash Flow - Example 3

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Purchase	-3,120,000					
Income		288,600	288,600	295,816	295,816	303,210
Sale						3,280,000
Net Cash Flow	-3,120,000	288,600	288,600	295,816	295,816	3,583,210
IRR	10.2495%					
		Year 1	Year 2	Year 3	Year 4	Year 5
Income		288,600	288,600	295,816	295,816	303,210
Sale						3,280,000
Net Cash Flow		288,600	288,600	295,816	295,816	3,583,210
Discount Rate	11.0000%					
		1.11	1.2321	1.367631	1.51807041	1.685058155
PV	3,031,856	260,000	234,234	216,298	194,863	2,126,461

Hypothetical Development Example 4

Value on Completion				
Gross Realisation	15	275,000		4,125,000
Realisation Costs				
Agents and Marketing Fees	2.25%	92,813		
Legals fees	1.50%	61,875	154,688	
Net Realisation				3,970,313
Profit and Risk (Net realisation / (1.20%))	20.00%			3,308,594
Development Costs				
Construction Costs (includes Site Preparation)		1,125,000		
Consultants Fees		112,500		
Local Authority Contributions		10,000		
Contingency Allowance		124,750		
Total Development Costs			1,372,250	
Holding Costs				
Council Rates, Water rates, Land tax etc.		12,000	1,384,250	
Finance During Development				
50% of a 7 months development period at 10%	5.83%	40,374	1,424,624	1,883,970
Land Costs (Finance Period 12 months)				
Interest	10.00%	161,023		
Legal Fees	1.50%	24,153		
Stamp Duty	5.50%	88,563	273,739	1,610,231
	17.00%			1,610,231
Residual Land Value per unit				1,610,000
				107,333