

INCOME APPROACH

The Income Approach considers the return on Investment and is similar to the method that investors typically use to make their investment decisions. It is most directly applicable to income producing property because the expectation of income is the primary motivating factor for the purchase of real estate. Other important considerations are leverage, tax advantages through depreciation, and pride of ownership. In addition, the investor also benefits from equity build-up due to mortgage loan amortization and potential increases in value.

The Income Approach consists of first estimating the probable annual gross income, based upon actual leases or market rentals. From this amount is deducted an allowance for vacancy and rent loss, based upon the property's historical operating experience and/or future projections. Next, all expenses attributable to the real estate are deducted. Also deducted, when appropriate, is a Reserve for Replacement of short-lived components that would normally be replaced during the investment holding period. The resulting net income is then converted into value by capitalization.

Gross Income Estimate

To verify that the subject's projected rentals are at market and to arrive at a projected gross income, we made an examination of the rentals of other similar buildings in the market area. We evaluated the area's rental environment, market orientation, and comparable rental facilities. Our investigation was limited to properties that were similar in style and/or age and had tenant appeal similar to that of the subject property.

It is our determination, after reviewing the general market and studying competitive facilities, that the current rentals are at market. Based upon current rentals, potential gross income for the first year of our analysis, before an allowance for vacancy and rent loss, amounts to \$1,564,820.

Vacancy and Rent Loss

Even when a building is fully occupied as of the date of the appraisal, it is prudent to anticipate some rent loss over the projection period in order to estimate "stabilized" occupancy. Based upon our analysis of the current rental market and the historical rent loss of the subject, a "stabilized" frictional vacancy rate for the subject property is projected at 12.00% of gross

Estimate of Expenses

To arrive at a projected annual Net Income, it is necessary to deduct those expenses that are typical and recurring for the subject property. These are expenses paid for by the owner and relate directly to the operation of the real estate. The expenses used in this income analysis were determined after reviewing expenses of the subject property in prior years and comparing the subject's reported expenses with those of other similar properties. Industry ratios and historical expense patterns for similar property types were also considered.

After considering all of the above, a projection of expenses was made. The expenses for the subject property for the first year of our analysis were estimated at \$664,249.

In our analysis of expenses, we found that certain items fell either above or below what is considered normal for a property of this type. This is not unusual because individual line item expenses vary, depending upon such factors as region, economy, uniqueness of the property, etc. Also, each owner allocates line item expenses differently, which accounts for variances when comparing certain line items in this income analysis to those reported.

Projected Net Income

Deducting the total estimated first year expenses from the first year Effective Gross Income of \$1,447,459 leaves a first year Net Income for the subject property of \$752,881. Annual Income, Vacancy, Expenses, and Projected Net Income for each year of our analysis are shown on the next page.

Reversion at the End of the Holding Period

The estimate of the Reversion is an integral part of any valuation method that relies upon the projection future cash flows. The Reversion is the net cash received by the investor upon sale of the property at the end of our projected holding period of 7 years. Net cash proceeds are calculated by estimating the sale price of the property at the end of the holding period and then deducting any remaining mortgage balance and selling expenses incurred by the seller. The future sale price at the end of the 7th. year of \$7,950,969 was estimated by applying a capitalization rate of 9.47% to the projected terminal year net income of \$752,881. The capitalization rate was developed using the Advanced Mortgage Equity Technique. The terminal year Income Statement and the capitalization rate calculations are presented below.

Terminal Year Income Statement

REFERENCE NO: SAMPLE ANALYSIS
PROPERTY: Office Building
ANALYSIS DATE: 08-01-09

	Amount	% of Gross	Per Gross S.F.
Total Income	\$1,595,825	100.00%	13.23
Vacancy / Credit Loss	<u>-178,695</u>	<u>-11.20%</u>	<u>-1.48</u>
Effective Gross Income	\$1,417,130	88.80%	11.75
Real Estate Taxes	250,000	15.67%	2.07
Insurance	31,207	1.96%	0.26
Utilities	100,000	6.27%	0.83
Cleaning	53,950	3.38%	0.45
Maintenance/Repair	62,414	3.91%	0.52
Management	85,028	5.33%	0.71
Roads/Grounds/sec	24,965	1.56%	0.21
Reserve for replacement	<u>56,685</u>	<u>3.55%</u>	<u>0.47</u>
Total Expenses	\$664,249	41.62%	5.51
NET INCOME	\$752,881	47.18%	6.24

AMET Calculation - Terminal Year

REFERENCE NO: SAMPLE ANALYSIS
PROPERTY: Office Building
ANALYSIS DATE: 08-01-09

Input Variables

Projected Holding Period	7 Years
Loan Ratio 1	70.00%
Interest Rate	7.00%
Loan Term	20 Years
Investor Equity Portion	30.00%
Required Investor Yield (IRR)	11.000%
Growth Rate in Value per Year	0.000%
Growth Rate in Net Income per Year	0.000%
Soft Costs in Addition to Equity	2.000%
Selling Expenses: Terminal Year	7.000%

CALCULATION

Loan 1 x Constant (.70000 x 0.093036)	0.0651251
Equity x Required Yield (.30000 x 0.110000)	<u>0.0330000</u>
	0.0981251
LESS Credit for Equity Build-up	
RATIO x %PAID OFF x SINKING FUND	
Loan 1 70.00 0.2073 0.102215	<u>-0.0148340</u>
BASIC RATE	0.0832911
ADD Amortization of Soft Costs (2.00 x 0.21222)	<u>0.0042443</u>
	0.0875354
ADD Depreciation Factor	<u>0.0071551</u>
TERMINAL YEAR CAP RATE	9.4690%

Capitalization of Net Income

Capitalization is the process of converting into present value (or obtaining the present worth of) a series of anticipated future periodic installments of net income. It is the procedure of expressing such anticipated future benefits of ownership in dollars and processing them into a present worth at a rate that is attracting purchase capital to competitive investments.

The types of capitalization are Yield Capitalization and Direct Capitalization.¹

Yield Capitalization

This method of capitalization uses the discounting procedure to convert future benefits to present value on the premise of a required level of profit or rate of return on invested capital.

Direct Capitalization

This method is used to convert an estimate of a single year's income expectancy into an indication of value in one direct step.

The Direct Capitalization method, using a rate abstracted from the market was not used because there was insufficient income and expense data available for the known comparable sales. Detailed income and expense histories are vital to abstracting a capitalization rate that is reliable.

We have chosen a yield capitalization method in our analysis of income. Two generally accepted methods of yield capitalization are the **Mortgage Equity Technique** and the **Discounted Cash Flow Method**. In all methods of yield capitalization, the future benefits that will be derived from a property are discounted to their present worth to estimate a "present value". The benefits typically considered consist of periodic net income, the growth in periodic net income, the equity build-up through mortgage loan amortization, and the reversion of the sales proceeds in excess of the mortgage loan balance and other costs at the end of the term. The rate at which these cash flows and reversion are discounted to a present value is designated by various analogous terms. Among them are the Equity Yield Rate, the Internal Rate of Return (IRR) and the Discount Rate. IRR is considered by many financial analysts to be the most comprehensive measure of financial benefits that will be received by the investor during the period of ownership.

The **Mortgage Equity Technique** was not used in our analysis because the expected net income generated by the subject property will vary from year to year over the projected holding period of our analysis. Since the capitalization rate derived using the Mortgage Equity technique is applied to the first year's net income, it would not be proper to apply this rate to a

¹ The Appraisal of Real Estate, American Institute of Real Estate Appraisers, 10th. Edition, Chicago, Il., pg 341-342

net income that fluctuates each year due to the existing lease contracts, projected rentals, fluctuating expenses, or vacancy that varies from year to year. In these instances, the proper technique is the Discounted Cash Flow Method.

Discounted Cash Flow Method

Because the subject's cash flows will change during the projected holding period of our analysis, we have chosen the Discounted Cash Flow Method to be the most appropriate method of capitalizing the income of the subject into value. This method accounts for the variance in net income from year to year.

Of particular significance in our analysis are the mortgage interest rates, the estimated holding period, the loan to value ratio, the required cash on cash IRR. *The following assumptions were used in our calculations:*

Projected Holding Period	7 years
Loan Ratio	70.00%
Loan Term	20 years
Investor Equity Portion	30.00%
Required Investor Yield	11.00%
Soft Costs in addition to Equity	2.00%
Selling Expenses in Terminal Year	7.00%

Final Value by the Income Approach

The subject's projected annual income and expenses over the holding period of our analysis and the assumptions above were used to calculate the present value of the annual cash flows by the Discounted Cash Flow Method. An indicated value of \$7,950,969 was calculated. This value has been rounded to \$7,950,000.

Final Value by the Income Approach

Seven Million Nine Hundred Fifty Thousand Dollars

\$7,950,000

Projected Cash Flow Analysis

REFERENCE NO: SAMPLE ANALYSIS
ANALYSIS DATE: 08-01-09

Indicated Value	\$7,950,969
Less Loans 70.00%	<u>5,565,678</u>
Equity	2,385,291
Soft Costs: 2.00%	<u>159,019</u>
Total Investment	\$2,544,310

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>
	08-2009	08-2010	08-2011	08-2012	08-2013	08-2014	08-2015
<u>Cash Flows</u>							
Net Income	752,881	752,881	752,881	752,881	752,881	752,881	752,881
Interest Expense	-385,402	-375,830	-365,566	-354,561	-342,759	-330,105	-316,536
Loan Amortization	-132,406	-141,978	-152,241	-163,247	-175,048	-187,703	-201,272
Cash Flow	235,073	235,073	235,073	235,073	235,073	235,073	235,073
Cash on Cash Yield	9.24%	9.24%	9.24%	9.24%	9.24%	9.24%	9.24%
Debt Coverage Ratio	1.45	1.45	1.45	1.45	1.45	1.45	1.45

Reversion - Proceeds of Sale at the end of 7 Years

Future Sale	\$7,950,969
Sale Costs: 7.00%	-556,568
Less Loans	<u>4,411,783</u>
Reversion	\$2,982,618

Internal Rate of Return: 7 Year Holding Period

Initial Investment	-2,544,310						
Cash Flow	235,073	235,073	235,073	235,073	235,073	235,073	235,073
Reversion							2,982,618
INTERNAL RATE OF RETURN	11.000%						

Present Value of Cash Flows using a Discount Rate of 11.000%

Cash Flow	235,073	235,073	235,073	235,073	235,073	235,073	235,073
Reversion							<u>2,982,618</u>
Present Value							3,217,691
Discount Factor	<u>0.900901</u>	<u>0.811622</u>	<u>0.731191</u>	<u>0.658731</u>	<u>0.593451</u>	<u>0.534641</u>	<u>0.481658</u>
Present Value	211,778	190,791	171,884	154,850	139,505	125,680	1,549,828

P V of CASH FLOWS \$2,544,315 approximates Initial Investment of \$2,544,310, based upon a value of \$7,950,969

Discounted Cash Flow Methodology

Because we have assumed that the typical investor in the subject property would finance the property at the best prevailing mortgage terms, we discounted the cash flows rather than the net incomes during the projection period. This method recognizes that the typical investor would be most concerned with the "yield" on equity, based upon the annual cash flows; that is, actual cash available after all expenses and debt service. The present value of these total cash flows is equal to the total investment, including closing costs.

Using the subject property as an example, the present value of the discounted cash flows of the equity portion of the investment is \$2,544,310, which is equal to the sum of the cash equity of \$2,385,291 and closing costs of \$159,019. Therefore, if we divide the present value of the investment (\$2,544,310) by the percentage of the equity 32.00% (Cash Equity = 30.00% and Soft Costs = 2.00%), the result is the present value of the property, \$7,950,969 ($\$2,544,310/32.00\%$).

Net Present Value Analysis

As a proof of the calculations performed in the Discounted Cash Flow Method, we performed a Net Present Value analysis of the cash flows, using the same Required IRR of 11.00% and Holding Period of 7 years. The net present value of the cash flows, i.e. the Present Value of the cash flows less Initial Cash Investment, is near zero. This verifies that the calculations used in the Discounted Cash Flow Method are correct.

Proof of Yield on Equity

REFERENCE NO: SAMPLE ANALYSIS
 PROPERTY: Office Building
 ANALYSIS DATE: 08-01-09

		Required Rate of Return	11.000%
		Holding Period	7 Years
Original Equity	Ratio	Value	
Equity	0.30000	\$7,950,969	\$2,385,291
Soft Costs	0.02000	\$7,950,969	<u>159,019</u>
		Initial Cash Investment	\$2,544,310
Terminal Equity		Resale Value	\$7,950,969
		Loan Balance	-4,411,783
		Sale Expenses	<u>-556,568</u>
		Net Reversion	\$2,982,618
PROOF			
Year	Cash Flow	Present Value Factor @ 11.000%	Present Value
1	235,073.41	0.9009009	211,777.85
2	235,073.41	0.8116224	190,790.84
3	235,073.41	0.7311914	171,883.65
4	235,073.41	0.6587310	154,850.14
5	235,073.41	0.5934513	139,504.63
6	235,073.41	0.5346408	125,679.83
7	235,073.41	0.4816584	113,225.08
Net Reversion	2,982,617.75	0.4816584	<u>1,436,603.00</u>
		Present Value of Cash Flows	2,544,314.90
		Initial Cash Investment	<u>-2,544,309.75</u>
		Net Present Value	5.15

Yield Analysis

To examine the effect upon value of different Internal Rates of Return, we selected a range of yield rates above and below the Internal Rate of Return of 11.00% that was used to calculate the final estimate of value by the Income Approach of \$7,950,969. Applying the same mathematical analysis, but using this selected range of Internal Rates of Return, the results are presented below.

Yield Range Analysis

REFERENCE NO: SAMPLE ANALYSIS
PROPERTY: Office Building
ANALYSIS DATE: 08-01-09

Input Variables

Projected Holding Period	7 Years
Loan Ratio 1	70.00%
Interest Rate	7.00%
Loan Term	20 Years
Investor Equity Portion	30.00%
Yield Range Analyzed (IRR)	8.000% to 14.000%
Growth Rate in Value per Year	0.000%
Growth Rate in Net Income per Year	0.000%
Soft Costs in Addition to Equity	2.000%
Selling Expenses: Terminal Year	7.000%

Selected IRR	Indicated Value	Required Equity	D.C.R.
8.00%	8,904,872	2,849,559	1.30
8.50%	8,729,968	2,793,590	1.32
9.00%	8,561,938	2,739,820	1.35
9.50%	8,400,375	2,688,120	1.38
10.00%	8,244,906	2,638,370	1.40
10.50%	8,095,209	2,590,467	1.43
11.00%	7,950,969	2,544,310	1.45
11.50%	7,811,867	2,499,797	1.48
12.00%	7,677,658	2,456,851	1.51
12.50%	7,548,074	2,415,384	1.53
13.00%	7,422,880	2,375,322	1.56
13.50%	7,301,869	2,336,598	1.58
14.00%	7,184,810	2,299,139	1.61

Debt Coverage Ratio

The Debt Coverage Ratio is often considered by lenders when underwriting a loan secured by an income producing property. The formula for the DCR is:

$$\text{Net Income} / \text{Annual Debt Service} = \text{Debt Coverage Ratio}$$

Based upon a first year net income of \$752,881 and an annualized loan payment that is based upon a Loan to Value Ratio of 70.00% of value, the indicated DCR for the first year of our analysis is 1.45.