

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 income, or \$187,778. The vacancy rate for the first year of our analysis is projected at 7.50%,

Leased Fee Income Approach Example

or \$117,362.

Effective Gross Income

Deducting the first year vacancy and rent loss of \$117,362 leaves an Effective Gross Income for the first year of our analysis of \$1,447,459. Annual income for each year of our projected holding period is shown below.

Multi-Year Income Schedule

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

	<u>Year 1</u> 08-2009	<u>Year 2</u> 08-2010	<u>Year 3</u> 08-2011	<u>Year 4</u> 08-2012	<u>Year 5</u> 08-2013	<u>Year 6</u> 08-2014	<u>Year 7</u> 08-2015
<u>Gross Income</u>							
Suite #1	7,000	7,000	7,000	7,000	7,000	7,000	7,000
Suite #2	5,600	5,600	5,600	5,600	5,600	5,600	5,600
Suite #3	7,000	7,000	7,000	7,000	7,000	7,000	7,000
Suite #4	8,400	8,400	8,400	8,400	8,400	8,400	8,400
Suite #5	9,800	9,800	9,800	9,800	9,800	9,800	9,800
Suite #6	11,200	11,200	11,200	11,200	11,200	11,200	11,200
Suite #7	12,600	12,600	12,600	12,600	12,600	12,600	12,600
Suite #8	14,000	14,000	14,000	14,000	14,000	14,000	14,000
Suite #9	15,400	15,400	15,400	15,400	15,400	15,400	15,400
Suite #10	16,800	16,800	16,800	16,800	16,800	16,800	16,800
Suite #11	18,200	18,200	18,200	18,200	18,200	18,200	18,200
Suite #12	19,600	19,600	19,600	19,600	19,600	19,600	19,600
Suite #13	21,000	21,000	21,000	21,000	21,000	21,000	21,000
Suite #14	22,400	22,400	22,400	22,400	22,400	22,400	22,400
Suite #15	23,800	23,800	23,800	23,800	23,800	23,800	23,800
First Floor Retail	270,000	270,000	270,000	270,000	270,000	270,000	270,000
Texas Company - Office	75,000	75,000	75,000	75,000	75,000	75,000	75,000
CBC Computer	75,000	75,000	75,000	75,000	75,000	75,000	75,000
Masterplan Office	84,000	84,000	84,000	84,000	84,000	84,000	84,000
Sentinel	126,000	126,000	126,000	126,000	126,000	126,000	126,000
Science Foundation Ltd	70,000	70,000	70,000	70,000	70,000	70,000	70,000
Mutual Investment	140,000	140,000	140,000	140,000	140,000	140,000	140,000
Capital Formation Part.	210,000	210,000	210,000	210,000	210,000	210,000	210,000
Modern Design	210,000	210,000	210,000	210,000	210,000	210,000	210,000
Masterplan - storage	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Storage Income	21,562	21,562	21,562	21,562	21,562	21,562	21,562
Miscellaneous Income	19,825	19,825	19,825	19,825	19,825	19,825	19,825
Parking lot fees	30,633	30,633	30,633	30,633	30,633	30,633	30,633
Total Income	1,564,820	1,564,820	1,564,820	1,564,820	1,564,820	1,564,820	1,564,820
CAM Charges	33,520	34,190	34,874	35,571	36,283	37,008	37,749
Vac / Credit Loss	<u>-136,146</u>	<u>-136,202</u>	<u>-136,260</u>	<u>-136,319</u>	<u>-136,379</u>	<u>-136,440</u>	<u>-136,502</u>
Effective Gross	1,462,194	1,462,808	1,463,434	1,464,073	1,464,724	1,465,388	1,466,066

Estimate of Expenses

To arrive at a projected annual Net Income, it is necessary to deduct those expenses

Leased Fee Income Approach Example

Texas Company - Office	75,000	75,000	75,000	75,000	75,000	75,000	75,000
CBC Computer	75,000	75,000	75,000	75,000	75,000	75,000	75,000
Masterplan Office	84,000	84,000	84,000	84,000	84,000	84,000	84,000
Sentinel	126,000	126,000	126,000	126,000	126,000	126,000	126,000
Science Foundation Ltd	70,000	70,000	70,000	70,000	70,000	70,000	70,000
Mutual Investment	140,000	140,000	140,000	140,000	140,000	140,000	140,000
Capital Formation Part.	210,000	210,000	210,000	210,000	210,000	210,000	210,000
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Miscellaneous Income	19,825	19,825	19,825	19,825	19,825	19,825	19,825
Parking lot fees	<u>30,633</u>	<u>30,633</u>	<u>30,633</u>	<u>30,633</u>	<u>30,633</u>	<u>30,633</u>	<u>30,633</u>
Total Income	1,564,820	1,564,820	1,564,820	1,564,820	1,564,820	1,564,820	1,564,820
CAM Charges	33,520	34,190	34,874	35,571	36,283	37,008	37,749
Vac / Credit Loss	<u>-136,146</u>	<u>-136,202</u>	<u>-136,260</u>	<u>-136,319</u>	<u>-136,379</u>	<u>-136,440</u>	<u>-136,502</u>
Effective Gross	1,462,194	1,462,808	1,463,434	1,464,073	1,464,724	1,465,388	1,466,066
<u>Fixed</u>							
Real Estate Taxes							
School Taxes	200,000	204,000	208,080	212,242	216,486	220,816	225,232
Local Taxes	80,000	81,600	83,232	84,897	86,595	88,326	90,093
County Taxes	20,000	20,400	20,808	21,224	21,649	22,082	22,523
Insurance	31,207	31,831	32,468	33,117	33,779	34,455	35,144
<u>Operating</u>							
Utilities	80,913	82,531	84,182	85,865	87,583	89,334	91,121
Cleaning	53,950	55,029	56,130	57,252	58,397	59,565	60,757
Maintenance/Repair	62,414	63,662	64,935	66,234	67,558	68,910	70,288
Management	87,732	87,768	87,806	87,844	87,883	87,923	87,964
<u>Other</u>							
Roads/Grounds/sec	24,965	25,465	25,974	26,493	27,023	27,564	28,115
<u>Leasing Costs</u>							
Tenant Improvements	10,000	0	0	0	0	0	0
<u>Reserve</u>							
Reserve for replacement	<u>58,488</u>	<u>58,512</u>	<u>58,537</u>	<u>58,563</u>	<u>58,589</u>	<u>58,616</u>	<u>58,643</u>
Total Expenses	709,668	710,798	722,151	733,732	745,543	757,591	769,880
NET INCOME	752,526	752,009	741,282	730,341	719,181	707,797	696,186
<u>Vacancy Percentage-Input</u>							
Imputed Vacancy-calc.	8.52%	8.52%	8.52%	8.52%	8.52%	8.52%	8.52%
Expense Ratio	44.40%	44.45%	45.14%	45.85%	46.56%	47.30%	48.04%
Growth Rate - E.G.I.	N/A	0.04%	0.04%	0.04%	0.04%	0.05%	0.05%
Growth Rate in Expenses	N/A	0.16%	1.60%	1.60%	1.61%	1.62%	1.62%
Growth Rate in Net Income	N/A	-1.38%	-1.43%	-1.48%	-1.53%	-1.58%	-1.64%

Leased Fee Income Approach Example

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 \$7,227,153 was estimated by applying a capitalization rate of 9.47% to the projected terminal year net income of \$684,343. The Terminal Year 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
Total Income	\$1,603,324	100.00%
Vacancy / Credit Loss	-136,566	-8.52%
Effective Gross Income	\$1,466,758	91.48%
Real Estate Taxes	344,606	21.49%
Insurance	35,847	2.24%
Utilities	92,943	5.80%
Cleaning	61,972	3.87%
Maintenance/Repair	71,693	4.47%
Management	88,005	5.49%
Roads/Grounds/sec	28,677	1.79%
Reserve for replacement	<u>58,670</u>	<u>3.66%</u>
Total Expenses	\$782,414	48.80%
NET INCOME	\$684,343	42.68%

CAPITALIZATION

Year 8 Net Income Divided by Terminal Cap Rate = Terminal Value

\$684,343	0.094690	\$7,227,160
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Analysis Type: Lease

Leased Fee Income Approach Example

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 to develop the income value because the expected net income generated by the subject property will vary from year to

Leased Fee Income Approach Example

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 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. However, we did use the Mortgage Equity Technique to develop the Terminal Year capitalization rate because income and expenses are projected to be stabilized in the terminal year and beyond.

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%

Leased Fee Income Approach Example

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 \$7,481,256 was calculated. This value has been rounded to \$7,500,000.

Final Value by the Income Approach

Seven Million Five Hundred Thousand Dollars

\$7,500,000

Leased Fee Income Approach Example

Projected Cash Flow Analysis

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

Indicated Value	\$7,481,259
Less Loans 70.00%	<u>5,236,882</u>
Equity	2,244,378
Soft Costs: 2.00%	<u>149,625</u>
Total Investment	\$2,394,003

	<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	752,526	752,009	741,282	730,341	719,181	707,797	696,186
Interest Expense	-362,634	353,628	343,970	333,615	322,511	310,604	-297,836
Loan Amortization	-124,584	-	-	-	-	-	-189,382
Cash Flow	265,308	<u>264,792</u>	<u>254,065</u>	<u>243,123</u>	<u>231,963</u>	<u>220,580</u>	<u>208,969</u>
Cash on Cash Yield	11.08%	11.06%	10.61%	10.16%	9.69%	9.21%	8.73%
Debt Coverage Ratio	1.54	1.54	1.52	1.50	1.48	1.45	1.43

Reversion - Proceeds of Sale at the end of 7 Years

Future Sale	\$7,227,160
Sale Costs: 7.00%	-505,901
Less Loans	<u>4,151,154</u>
Reversion	\$2,570,105

Internal Rate of Return: 7 Year Holding Period

Initial Investment	-2,394,003						
Cash Flow	265,308	264,792	254,065	243,123	231,963	220,580	208,969
Reversion							2,570,105
INTERNAL RATE OF RETURN	11.000%						

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

Cash Flow	265,308	264,792	254,065	243,123	231,963	220,580	208,969
Reversion							<u>2,570,105</u>
							2,779,074
Present Value							
Discount Factor	<u>0.900901</u>	<u>0.81162</u>	<u>0.73119</u>	<u>0.65873</u>	<u>0.59345</u>	<u>0.53464</u>	<u>0.481658</u>
Present Value	239,016	214,911	185,770	160,153	137,659	117,931	1,338,564

P V of CASH FLOWS \$2,394,003 approximates Initial Investment of \$2,394,003,
 based upon a value of \$7,481,259

Leased Fee Income Approach Example

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 \$2,394,002, which is equal to the sum of the cash equity of \$2,244,377 and closing costs of \$149,625. Therefore, if we divide the present value of the investment (\$2,394,002) 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, \$7,481,256 ($\$2,394,002/32.00\%$).

Leased Fee Income Approach Example

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	\$7,481,259	\$2,244,378
Soft Costs	0.02000	\$7,481,259	<u>149,625</u>
		Initial Cash Investment	\$2,394,003
Terminal Equity		Resale Value	\$7,227,160
		Loan Balance	-4,151,154
		Sale Expenses	<u>-505,901</u>
		Net Reversion	\$2,570,105
PROOF			
Year	Cash Flow	Present Value Factor @ 11.000%	Present Value
1	265,307.72	0.9009009	239,015.96
2	264,791.53	0.8116224	214,910.73
3	254,064.59	0.7311914	185,769.84
4	243,123.28	0.6587310	160,152.84
5	231,962.78	0.5934513	137,658.62
6	220,579.59	0.5346408	117,930.85
7	208,968.84	0.4816584	100,651.60
Net Reversion	2,570,104.75	0.4816584	<u>1,237,913.00</u>
		Present Value of Cash Flows	2,394,002.94
		Initial Cash Investment	<u>-2,394,002.75</u>
		Net Present Value	0.19

Leased Fee Income Approach Example

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 \$7,481,256. 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%
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%	8,344,076	2,670,105	1.38
8.50%	8,185,894	2,619,486	1.41
9.00%	8,033,921	2,570,855	1.44
9.50%	7,887,792	2,524,093	1.46
10.00%	7,747,170	2,479,095	1.49
10.50%	7,611,755	2,435,762	1.52
11.00%	7,481,260	2,394,003	1.54
11.50%	7,355,407	2,353,730	1.57
12.00%	7,233,961	2,314,867	1.60
12.50%	7,116,685	2,277,339	1.62
13.00%	7,003,365	2,241,077	1.65
13.50%	6,893,808	2,206,019	1.68
14.00%	6,787,815	2,172,101	1.70

Leased Fee Income Approach Example

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 \$752,526 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 1.54.