

FINANCE 673
REAL PROPERTY VALUATION

Department of Finance
Mays Business School
Texas A&M University

Dr. Thomas O. Jackson, MAI, CRE

Homework Assignment 2

Direct Capitalization

4. Below are data from three comparable sales.

Sale	Sale Price	PGI	EGI	I_o
1	\$1,250,000	\$240,000	\$220,800	\$130,200
2	\$1,660,000	\$347,000	\$317,000	\$180,800
3	\$1,050,000	\$178,500	\$166,500	\$94,700

A. *Extract a vacancy allowance*

B. *Extract an operating expense ratio, based on EGI.*

5. An appraiser is attempting to determine the highest and best use of a vacant site. Based on one of the possible uses, the I_O is expected to be \$500,000 during the first year. The cost of the improvements would be \$4,000,000, including entrepreneurial incentive.² The appraiser believes that an appropriate building capitalization rate is 11% and that 9% is an appropriate land capitalization rate.
- a. *Estimate the value of the land.*
 - b. *What is the implied land-to-value ratio (L)?*
 - c. *What is the implied R_O ?*
6. Refer to the previous problem. Instead of using separate capitalization rates for the land and building, the appraiser believes that the I_O should be capitalized at an overall rate of 10.75%. *What is the value of the land?*

7. An appraiser is analyzing a comparable property that produces an annual I_0 of \$300,000 per year. Overall capitalization rates in the market are 10%. The land associated with the property was sold at \$600,000 and leased back at \$55,000 per year. *What is the implied building capitalization rate?*

8. A comparable property that has a loan-to-value ratio of 70% is being used in an appraisal. The mortgage capitalization rate on the loan is 11.2%. The property is typical of the market in which overall cap rates are considered to be 12%. *What is the implied equity capitalization rate?*

9. Given the following information, what is the indicated property value?

V_L	\$400,000
I_O	\$180,000
R_L	8%
R_B	12%

10. A property is purchased with a mortgage of \$800,000 and a mortgage constant of 9.5%. The mortgage is believed to be typical market financing. The equity capitalization rate on similar properties is 13%. The property produces an I_O of \$120,000. *What is the indicated property value?*

11. A lender indicates that he will underwrite a loan on a property based on the following criteria:

R_M	10%
DCR	1.25
M	75%

a. *What is the implied overall capitalization rate?*

b. *What is the implied equity capitalization rate?*

12. a. *Given the information below, what is the value of the property?*

I_O	\$70,000
R_L	8%
R_B	10%
Ratio of land value to total value	0.25

b. *What is the implied land value?*