

RE 618 / Fin 618 – Real Estate Investment Analysis

Homework – After-Tax Investment Analysis

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- 1) You are considering investing in an apartment property with 420 units that rent for an average of \$750 per month. The current market vacancy rate for similar apartment is 7 percent, and the appropriate operating expense ratio is 45 percent. The asking price for the building is \$26 million, but you believe you can negotiate the price down to \$24 million. You expect to incur closing costs of \$400,000 the purchase price in order to acquire this property.

The property tax assessor currently estimates that 20 percent of the property's value is attributable to the land. You also have a recent private appraisal that valued the property at \$26 million, \$4 million of which was attributable to the land.

You expect that rents will increase at roughly 5 percent per year, while operating expenses will increase at roughly the same rate as overall inflation (expected to be 3 percent per year for the foreseeable future).

Financing is available with a 10-year balloon loan amortized over 20 years at 8.50 percent interest with monthly payments. The lender's maximum LTV ratio is 70 percent and its minimum DCR is 1.30. The lender will charge 2.5 points in conjunction with this loan.

If you purchase this property, you will put it into service on January 1 of next year and will hold it for 5 years (until December 31 of the fifth year). At the end of your holding period, you expect that you will be able to sell it at a cap rate of 9.00 percent; you will incur selling costs of 5 percent of the selling price.

Your current marginal tax rate is 35 percent. Capital gains will be taxed at 15 percent, while depreciation recapture will be taxed at 25 percent.

- a) Assume you have other passive income against which you can offset any losses associated with this investment.
 - Calculate the before- and after-tax cash flows associated with operating this property. (Calculate for each year of your holding period.)
 - Calculate the before- and after-tax equity reversion you expect to receive from this property.
 - Calculate the before- and after-tax NPV and IRR of this property, assuming a 12 percent required rate of return. Based on your analysis, is this property a good investment at a \$24 million purchase price?
- b) Redo all of the analysis from part (a) assuming that you do *not* have any other passive income against which to offset losses. How does this affect your investment return measures?