Practice Questions for Exam #2

Real Estate Compared to Bonds – Simplified Examples

You have a $1000 to invest with a 10-year horizon and are comparing investing in a 10-year bond (that has equal risk to the real estate considerations), and unlevered and levered real estate. The bond pays 8% annual coupon. Your buildings provide an NOI of $80 and you expect to buy and sell your buildings for $1000, with no acquisition or selling expense. You are in a 35% marginal tax bracket, with a 25% depreciation recapture rate and a 15% capital gains tax rate. You can take a 30-year straight line depreciation on the buildings (valued at $800 each) and not depreciate the $200 land value. You can get bullet loans for 75% LTV at 5% for 10 years. No PALL's are allowed. Complete the following table of cash flows that will provide the IRR noted.

	Bond PreTax	Post Tax		Unlevered Bldg PreTax	Post Tax		4 Levered Bldgs PreTax	Post Tax
0	-1000			-1000			-1000	
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
IRR	8.0%	5.2%		8.0%	5.6%		17%	13.4%
Sum of AT CF's								

What is the Effective Tax Rate for each of these investments? (35%, 30%, 21%) For this example, what makesthe unlevered CRE investment favorable from a tax point of view compared to bonds? How does the leveraged RE further lower the effective tax rate?

Using the intuition developed from above answer the following. If rather than a bullet loan, the bank offered only a fully amortizing 10 year loan, also at 5%, would the ATIRR be higher or lower? Why? Would the effective tax rate be higher or lower? Why?

Sample Exam Questions: After Tax Proforma

Note: Credit will be awarded only if you fully document your solution.

You have the opportunity to invest in a small office building, that can be purchased for $300,000, for which a 75% Ltv bullet loans is available at 6.5% that has 3 points and a 7 year term. If the loan is prepaid before the 7 year term there is a prepayment penalty of 1% per year early that it is repaid. The land value is estimated at $60,000 and $40,000 of the purchase price is deemed to be 7 year property for depreciation purposes. There are no 15-year depreciable land improvements for this building. The figures below are for an "above line" NOI. $3250 per year in projected capital expenditures were deducted, above the NOI line.

Year	1	2	3	4	5
NOI	25,000	26,000	27,000	28,500	30,000

You project you can sell this building for $350,000 in five years and will incur 7% selling expenses. You have no Passive Income Gains and make more than $150,000 per year so you will have to suspend any tax losses that may incur. Your marginal tax rate on ordinary income is 40%, on depreciation recapture is 30% and on capital gains is 20%. Write out an appropriate proforma and respond to the following questions.

i) What is your after tax IRR on this investment for a 5 year holding period? {BTIRR = 17.5% (provided as a check figure), ATIRR=13.0%, using the mid month rule for the first and last year's depreciation. Also remember to amortize points over the loan loan term and that any unused points can be deducted in the year the load is paid off. A prepayment penalty is considered interest to the bank, so it is tax deductable as interest in the year paid.) What is your effective tax rate on this investment? {25.7%}

ii) If you could sell this property after 3 years for $330,000 (with 7% selling expense), what is your ATIRR. {ATIRR=7.7%, Note: Due to the prepayment penalty you will show negative taxable income from operations in year 3. You need not suspend this loss as you have a greater tax due on sale for depreciation recapture, so on net you will be a taxpayer in year 3} What does this indicate about the optimal holding period for this building? (Higher return if you hold longer, as shown in Part i).

iii) The bank also offers an 85% LTV bullet loan at 7.5%, with 5 points. If you keep the building for 5 years, what is the marginal cost of the additional funds (Do a pre tax analysis for this question)? {21.6%, not adjusting for the tax deductibility of the mortgage.) Is leverage working for you under this scenario? Why or why not?

iv) Outline the various choices you have in the disposition of your building and note advantages and disadvantages of each choice. (Use Chapter 14 and associated lecture to guide you here)