

CRE Proforma – Risk Analysis - Solution

Change the Lease detail figures to those noted below. Check Figure – ATCF in Year 3 should be \$428,201.

Year/ Suite	1	2	3	4	5	6	7	8	9	10	11
A	2	2	2	2	30	8	8	8	8	8	8
B	4	4	4	4	4	4	30	8	8	8	8
C	3	3	3	3	3	40	8	8	8	8	8
D	6	6	6	6	6	6	6	6	6	6	6

For all Suites use a 2.5% Cost Growth Rate. Change the size of Suite A and Suite B to 25000 sq.ft.

Suite A: \$18 Contract Rent, \$0 Expense Stop, 3% Rental Growth Rate.

Suite B: \$28 Contract Rent, \$7 Expense Stop, 0% Rental Growth Rate, \$33 Rental Rate starting year 7.

Suite C: \$15 Contract Rent, \$0 Expense Stop, 3% Rental Growth Rate, 4.5% Sales Growth Rate, 3% of Sales above \$3,000,000. Initial Sales estimated at \$4,500,000.

Suite D: \$30 Contract Rent, \$99 Expense Stop, 0% Rental Growth Rate, 15000 Misc. Income.

Use the following input assumptions

CRE Proforma	Purchased Real Estate
Input Data	
Going Out Cap Rate	8.0%
Selling Expense	7.0%
7- yr Building Improvement %	14%
15-yr Land Improvements	500,000
Purchase Price	15,000,000
Acquisition Costs	45,000
Land Value	2,500,000
Marginal Tax Bracket	35.0%
Depn Recapture Rate	35.0%
Capital Gain Rate	15.0%
Equity Hurdle Rate	15.0%
Depreciation Period	39
Mortgage LTV	65.0%
Amort Term (Years)	25
Maturity (Years)	10
Rate	6.000%
Points	2.00%
Prepay Penalty (%)	0.00%

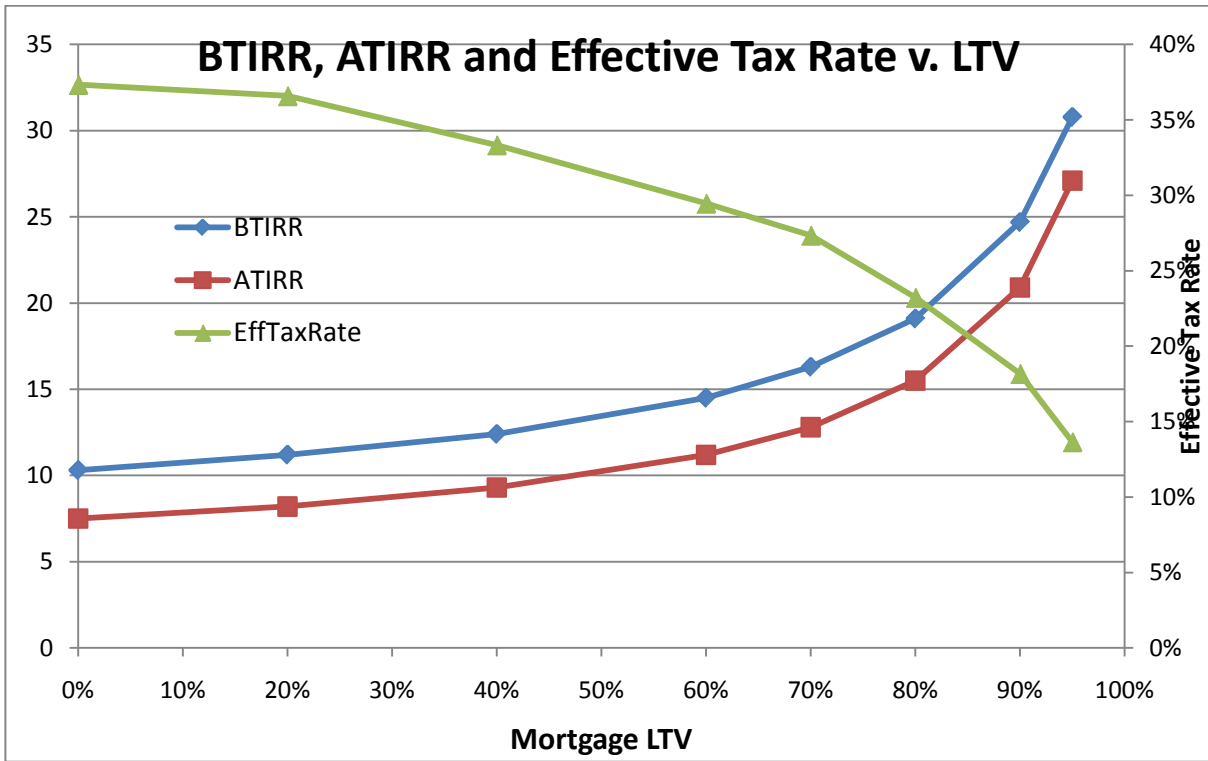
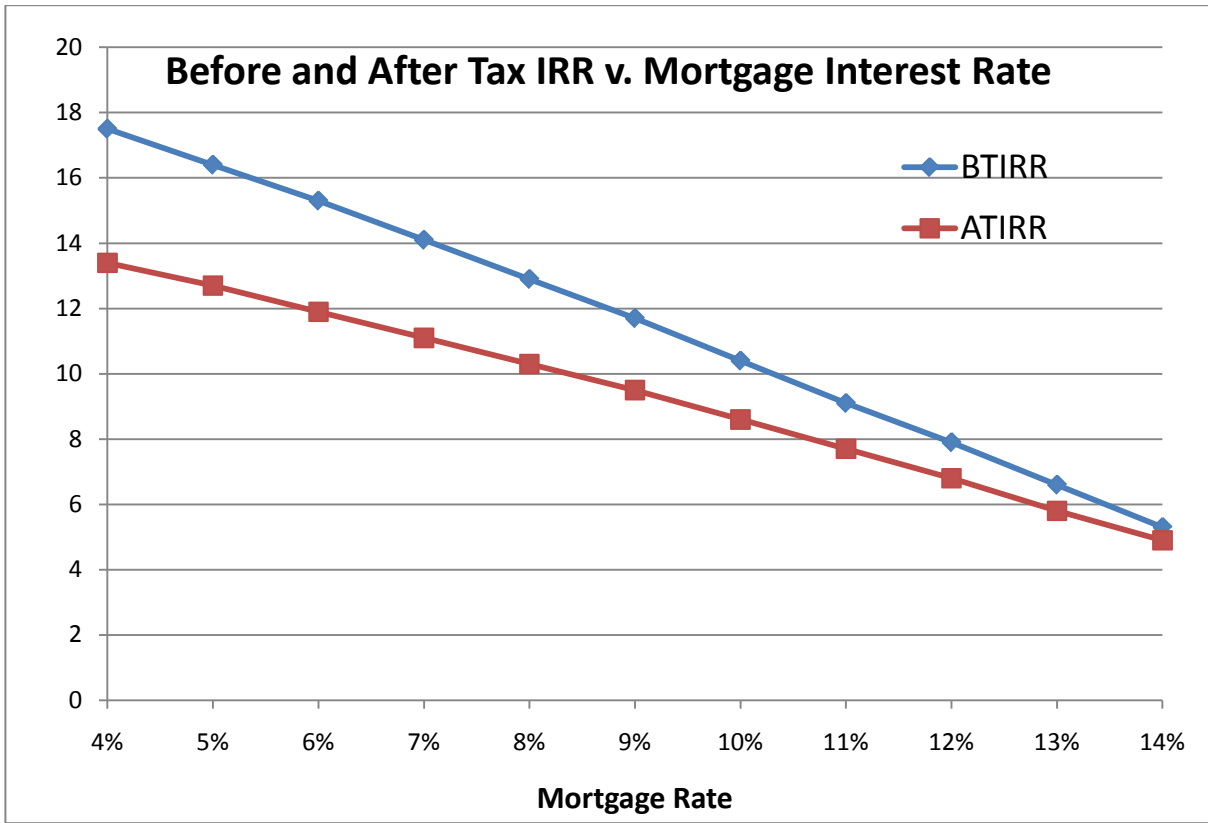
Fin 5433 Homework: Risk Analysis via Proforma

Note: In this homework use your proforma to implement a number of the risk analysis strategies of Chapter 13. You should probably save your base case proforma under a separate name so that as you make changes you can still recover your original base case. You need not turn in your proformas – just turn in the results.

1. Change a single assumption:
 - a. Plot the BTIRR and ATIRR v. Mortgage Rate for rates of 4 - 14%
 - b. Plot the BTIRR and ATIRR v. LTV from 0-95% LTV
 - c. Plot the Effective Tax Rate for LTV from 0-95%
2. Partition the IRR. For the base case scenario, partition the IRR as shown in the text and lecture.
 - a. Operations 46.56%, Sale 53.44%
3. Marginal rate of return. To illustrate how the rate of return can be dependent on how long our holding period is, compute the IRR as if you have a 5 year holding period? This is probably most easily accomplished by using NOI_6 to get the sales price, and then rework the sales portion of the proforma to correct the adjusted basis calculation, and the correct loan payoff. Compute the IRR's using the 5 year cash flow figures. Turn in the "Proforma" tab that shows these changes and the result. Is it better to plan to sell after 5 years than after 10 years? BTIRR falls from 15.3% to 11.5%, so better to wait.
4. Scenario Analysis – simplified version. We will create a pessimistic and optimistic scenario to compare to our base case. We will make the following modifications. (Use 10 yr proforma). What are the BRIRR and ATIRR for the following scenarios?

	Pessimistic	Optimistic
GPI	90% of base	120% of base
Vacancy Losses	125% of base	50% of base
Mortgage Rate	7.50%	5.25%
LTV	50%	90%
Going Out Cap Rate	11%	7%
BTIRR	0.0%	49.5%
ATIRR	0.0%	39.6%

One way to effect the change on the first two items is to simply put the appropriate factor as a multiplier on line 35 and 36. For the other changes, you simply need to input the appropriate figure into the proper input cell.



= Before Tax Cash Flow	499,742	514,977	530,809	547,262	376,517
- Taxes	89,757	92,013	102,608	113,693	59,546
= After Tax Cash Flow	409,985	422,964	428,201	433,569	316,971

Income Taxes From Operations

End of Year Loan Balance	9,750,000	9,576,446	9,392,188	9,196,565	8,988,877	8,768,378
NOI		1,253,575	1,268,810	1,284,642	1,301,095	1,130,350
+ Capital Reserves		120,000	123,000	126,075	129,227	132,458
- Interest Paid		580,279	569,574	558,210	546,144	533,334
- Amortized Finance Costs		19,500	19,500	19,500	19,500	19,500
- Amortized Leasing Costs						
- Depreciation (Building)		254,541	265,608	265,608	265,608	265,608
- Depreciation (Bldg Impr 7-yr)		230,863	240,900	240,900	240,900	240,900
- Depreciation (Land Impr 15-yr)		31,944	33,333	33,333	33,333	33,333
= Taxable Income		256,449	262,894	293,166	324,837	170,132
Taxes Due		89,757	92,013	102,608	113,693	59,546

Cash flow From Resale		EOY 10	Gain on Sale	
Estimated Sales Price	16,226,529		Net Sales Price	15,090,672
- Sales Expense	1,135,857		- Adjusted Basis	12,999,048
= Net Sales Price	15,090,672		= Gain on Sale	2,091,624
- Mortgage Payoff	8,768,378			
= Before Tax Equity				
Reversion	6,322,294		Depreciation Recapture	2,091,624
- Taxes on Sale	732,069		Capital Gain	0
= After Tax Equity Reversion	5,590,225			
			Depreciation Recapture Tax	732,069
			Cap Gain Tax	0
			Total Tax on Sale	732,069