Chapter 15: Define or describe the following Key Terms

Annual Percentage Rate (APR)

Discount points

Amortization

Chapter 15: Study Questions

1. Calculate the original loan size of a fixed-payment mortgage if the monthly payment is $1,146.78, the annual interest is 8.0%, and the original loan term is 15 years.

2. For a loan of $100,000, at 7 percent annual interest for 30 years, find the balance at the end of 4 years and 15 years assuming monthly payments.

6. Give some examples of up-front financing costs associated with residential mortgages. What rule can one apply to determine if a settlement (closing) cost should be included in the calculation of the effective borrowing costs?

7. A homeowner is attempting to decide between a 15-year mortgage loan at 5.5 percent and a 30-year loan at 5.90 percent. Assume the up-front costs of the two alternatives are equal. What would you advise? What would you advise if the borrower also has a large amount of credit card debt outstanding at a rate of 15 percent?

10. Assume the following:

Loan Amount:	$100,000
Interest rate:	10 percent annually
Term:	15 years, monthly payments

a. What is the monthly payment?

b. What will be the loan balance at the end of nine years?

c. What is the effective borrowing cost on the loan if the lender charges 3 points at origination and the loan goes to maturity?

d. What is the effective borrowing cost on the loan if the lender charges 3 points at origination and the loan is prepaid at the end of year 9?

16. Assume that you have purchased a home and can qualify for a $200,000 loan. You have narrowed your mortgage search to the following two options:

Mortgage A

Loan term: 30 years

Annual interest rate: 6 percent

Monthly payments

Up-front financing costs: $5,000

Discount points: 3

Mortgage B

Loan term: 15-years

Annual interest rate: 5.5 percent

Monthly payments

Up-front financing costs: $7,000

Discount points: 3

Which loan would you choose?

Chapter 16: Define or describe the following Key Terms

Balloon Mortgage

Debt Coverage Ratio

Debt Yield Ratio

Financial Risk

Lockout Provision

Mezzanine Loans

Sale-Leaseback

Study Questions:

3. Distinguish between recourse and non-recourse financing.

5. Assume the annual interest rate on a $500,000 7-year balloon mortgage is 6 percent. Payments will be made monthly based on a 30-year amortization schedule.

a. What will be the monthly payment?
b. What will be the balance of the loan at the end of year 7?
c. What will be the balance of the loan at the end of year 3?
d. Assume that interest rates have fallen to 4.5% at the end of year 3. If the remaining mortgage balance at the end of year 3 is refinanced at the 4.5 percent annual rate, what would be the new monthly payment assuming a 27-year amortization schedule?

9. What is the difference in the present value of these two loan alternatives? Assume the appropriate discount rate is 6 percent.

a. $700,000 Loan at 6%, 30-year term, $50,000 in upfront fees.

b. $750,000 Loan at 6%, 30-year term, and no upfront financing costs.

c. What is the difference in the present value of these two loan alternatives? Assume that 6% is the appropriate discount rate.

Chapter 18: Define or describe the following Key Terms

After-Tax Cash Flow

Net Income Multiplier

Operating Expense Ratio

Capitalization Rate

Effective Gross Income Multiplier

Effects of Leverage

Chapter 18: Study Questions

Use the following information to answer questions 1 – 3:

You are considering the purchase of an office building for $1.5 million today. Your expectations include the following: first-year potential gross income of $340,000; vacancy and collection losses equal to 15 percent of potential gross income; operating expenses equal to 40 percent of effective gross income and capital expenditures equal 5 percent of EGI. You expect to sell the property five years after it is purchased. You estimate that the market value of the property will increase four percent a year after it is purchased and you expect to incur selling expenses equal to 6 percent of the estimated future selling price.

1. What is estimated effective gross income (EGI) for the first year of operations?

2. What is estimated net operating income (NOI) for the first year of operations?

3. What is the estimated going-in cap rate (Ro) using NOI for the first year of operations?

7. Why might a commercial real estate investor borrow to help finance an investment even if she could afford to pay 100 percent cash?

9. What distinguishes an operating expense from a capital expenditure?

10. Explain why income property cash flow is not the same as taxable income.

12. Using the following information, compute net operating income (NOI) for the first year of operations. Use an “above-line” treatment of capital expenditures. (Use table below)

a. • Number of apartments: 10
b. • Rent per month per apartment: $900.00
c. • Expected vacancy and collection loss: 10 percent
d. • Annual maintenance: $18,000
e. • Property taxes: $9,000
f. • Property insurance: $7,000
g. • Management: $8,000
h. • Capital expenditures: $5,000
i. • Other operating expenses: $3,000
j. • Annual mortgage debt payments: $35,000

Potential gross income	
- Vacancy and collection losses	
= Effective gross income	
- Annual maintenance	
- Property taxes	
- Property insurance	
- Management expense	
- Other operating expenses	
- Capital expenditures	
= NOI	

Chapter 19: Define or describe the following Key Terms

Before Tax Cash Flows

After-Tax Cash Flows

Leverage

Leveraged Cash Flow

Unleveraged Cash Flow

Chapter 19: Study Questions

2. Why might a commercial real estate investor borrow to help finance an investment even if she could afford to pay 100 percent cash?

3. Using the "CF" key of your financial calculator determine the IRR of the following series of annual cash flows: CF0= -$31,400; CF1 = $3,292; CF2 = $3,567; CF3 = $3,850; CF4 = $4,141; and CF5 = $50,659.

5. State, in no more than one sentence, the condition for favorable financial leverage in the calculation of NPV.

9. You are considering the acquisition of a small office building. The purchase price is $775,000. Seventy-five percent of the purchase price can be borrowed with a 30-year, 7.5 percent mortgage. Payments will be made annually. Up-front financing costs will total three percent of the loan amount. The expected before-tax cash flows from operations--assuming a 5-year holding period—are as follows:

Year	**BTCF**
1	$48,492
2	53,768
3	59,282
4	65,043
5	$71,058

The before-tax cash flow from the sale of the property is expected to be $295,050. What is the net present value of this investment, assuming a 12 percent required rate of return on levered cash flows? What is the levered internal rate of return? (Prepare a table with following headings)

Year	Equity Investment	NOI	Debt Service	BTER	Total Cash Flow	Present Value at 12%

Chapter 20: Income Taxation and Value

A. Define or describe the following Key Terms:

Active Income,

Passive Income,

Dealer Property,

Depreciable Basis,

Investment Property,

Like-Kind Exchanges,

Original Cost Basis,

Section 1231 Property,

Trade/Business Property

B. Test Problems:

2 Under current federal income tax law, what is the shortest cost recovery period available to investors purchasing commercial rental property?

5 For tax purposes, a substantial real property improvement (*CAPX*) made after the initial purchase is

7 In 2012 you purchased a small office building for $450,000, which you financed with a $337,500 fixed-rate, 25 year mortgage. Up-front financing costs totaled $6,750. How much of this upfront financing expense could be written off against ordinary income in 2012?

8 If the investor is in the 33% income tax bracket, how much will a tax credit of $2,000 save the investor in taxes?

C. Study Questions: Use the following paragraph to answer questions 3, 4 and 5.

Five years ago you purchased a small apartment complex for 1 million. You borrowed $700,000 at 7% for 25 years with monthly payments. The original depreciable basis was $750,000 and you have used a 27 ½ year straight-line depreciation over the five year holding period. Assume no capital expenditures have been made since acquisition. If you sell the property today for $1,270,000 in a fully taxable sale:

3. What will be the taxes due on sale? Assume 6% selling costs, 33% percent ordinary income tax rate, a 15 percent capital gains tax rate, and a 25 percent recapture rate.

4. What will be the after-tax equity reversion (cash flow) from the sale?

5. Over the entire five-year holding period, how much were your taxes from rental operations reduced by the annual depreciation deductions? Ignore the increased taxes due on sale.

Chapter 22: Define or describe the following Key Terms

Anchor tenant

Cancellation option

Concessions

Percentage rent

Rentable area

Sublease

Tenant improvement allowance

Usable area

Chapter 22: Study Questions

4. What factors tend to make both owners and tenants prefer longer-term leases, all else being equal?

5. Assume a small office building has a total usable area of 40,000 square feet and 5,000 square feet of common area. Tenant Z occupies 6,000 square feet of usable area. What is Tenant Z's rentable area?

6. Assume a retail tenant is paying a base rent of $120,000 per year (or $10,000 per month). In addition, the tenant must pay 7 percent of gross store sales in excess of $143,000 per month as percentage rent. If the store produces $170,000 in gross sales in a month, what is the percentage rent in that month? What is the total rent due for the month?