

# Financial Real Estate Finance Exam 2003

Author: Tod McGrath

Professor @MIT Massachusetts Institute of Technology

Published 2014

# Create, Share, and Discover Online Quizzes.

QuizOver.com is an intuitive and powerful online quiz creator. [learn more](#)

Join QuizOver.com



## How to Analyze Stocks

By Yasser Ibrahim

1 month ago  
12 Responses

© iStock: Thomson Moter



## Pre Employment English

By Katharina jennifer N

5 months ago  
19 Responses

© iStock: Albin



## Lean Startup Quiz

By Yasser Ibrahim

2 months ago  
16 Responses

© iStock: Gekwini Okun

Powered by QuizOver.com

The Leading Online Quiz & Exam Creator

Create, Share and Discover Quizzes & Exams

<http://www.quizover.com>

## Disclaimer

All services and content of QuizOver.com are provided under QuizOver.com terms of use on an "as is" basis, without warranty of any kind, either expressed or implied, including, without limitation, warranties that the provided services and content are free of defects, merchantable, fit for a particular purpose or non-infringing.

The entire risk as to the quality and performance of the provided services and content is with you.

In no event shall QuizOver.com be liable for any damages whatsoever arising out of or in connection with the use or performance of the services.

Should any provided services and content prove defective in any respect, you (not the initial developer, author or any other contributor) assume the cost of any necessary servicing, repair or correction.

This disclaimer of warranty constitutes an essential part of these "terms of use".

No use of any services and content of QuizOver.com is authorized hereunder except under this disclaimer.

The detailed and up to date "terms of use" of QuizOver.com can be found under:

<http://www.QuizOver.com/public/termsOfUse.xhtml>

## eBook Content License

Geltner, David, and Tod McGrath. 11.431J Real Estate Finance and Investment, Fall 2006. (MIT OpenCourseWare: Massachusetts Institute of Technology), <http://ocw.mit.edu/courses/urban-studies-and-planning/11-431j-real-estate-finance-and-investment-fall-2006> (Accessed 1 May, 2014). License: Creative Commons BY-NC-SA

### Creative Commons License

Attribution-NonCommercial-NoDerivs 3.0 Unported (CC BY-NC-ND 3.0)

<http://creativecommons.org/licenses/by-nc-nd/3.0/>

You are free to:

Share: copy and redistribute the material in any medium or format

The licensor cannot revoke these freedoms as long as you follow the license terms.

Under the following terms:

**Attribution:** You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

**NonCommercial:** You may not use the material for commercial purposes.

**NoDerivatives:** If you remix, transform, or build upon the material, you may not distribute the modified material.

**No additional restrictions:** You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.

# Table of Contents

Quiz Permalink: <http://www.quizover.com/question/real-estate-finance-2003-exam-by-prof-tod-mcgrath-mit-massachusetts>

Author Profile: <http://www.quizover.com/user/profile/tod.mcgrath>

## 1. Real Estate Finance Exam 2003

- Part I: Multiple Choice (80% of grade, 26 equal-weighted questions).
- Part II (20%): 1 of 2 questions.
- Part III: Extra-credit question.

4. Chapter: Part I: Multiple Choice (80% of grade, 26 equal-weighted questions).

1. Part I: Multiple Choice (80% of grade, 26 equal-weighted questions). Questions

#### 4.1.1. Total development costs (including sufficient profit for the develo...

Author: Tod McGrath

Total development costs (including sufficient profit for the developers) are \$200/SF. Cap rates in the asset market are 10%.

What is the "replacement cost rent" in this market?

Please choose only one answer:

- \$20.00/SF.
- \$16.00/SF.
- \$12.50/SF.
- \$10.00/SF.

Check the answer of this question online at QuizOver.com:

Question: [Total development costs including sufficient by Prof. Tod McGrath](#)

Flashcards:

<http://www.quizover.com/flashcards/total-development-costs-including-sufficient-by-prof-tod-mcgrath?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/total-development-costs-including-sufficient-by-prof-tod-mcgrath?pdf=1505>

#### 4.1.2. All of the following are fundamental causal determinants of cap rat...

Author: [Tod McGrath](#)

All of the following are fundamental causal determinants of cap rates in the property asset market, except:

Please choose only one answer:

- The opportunity cost of capital (as determined in the capital market).
- The expected growth in property rents (as determined in the space market).
- The risk perceived for the property (as determined in the space and capital market).
- The net income divided by the property price.

Check the answer of this question online at [QuizOver.com](#):

Question: [All of the following are fundamental causal by Prof. Tod McGrath](#)

Flashcards:

<http://www.quizover.com/flashcards/all-of-the-following-are-fundamental-causal-by-prof-tod-mcgrath?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/all-of-the-following-are-fundamental-causal-by-prof-tod-mcgrath?pdf=1505>



#### 4.1.3. Which of the following is an example of "negative feedback" in the ...

Author: Tod McGrath

Which of the following is an example of "negative feedback" in the real estate system?

Please choose only one answer:

- Since the stock of built space cannot readily shrink, rents will fall when demand falls.
- Lenders make money by issuing loans, so they tend to keep the capital flowing to developers even during down markets.
- Real estate markets exhibit inertia, so market participants rationally extrapolate past rent trends into the future.
- Growth in space usage demand stimulates increased rents or improved prospects for future rents, which increases the present value of real estate assets, which improves the profitability of new development projects.

Check the answer of this question online at QuizOver.com:

Question: [Which of the following is an example of by Prof. Tod McGrath @MIT](#)

Flashcards:

<http://www.quizover.com/flashcards/which-of-the-following-is-an-example-of-by-prof-tod-mcgrath-mit?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/which-of-the-following-is-an-example-of-by-prof-tod-mcgrath-mit?pdf=1505>

#### 4.1.4. Which of the following is true about typical real estate investment...

Author: Tod McGrath

Which of the following is true about typical real estate investment (unlevered, at the direct property level) and inflation risk?

Please choose only one answer:

- Real estate investment appreciation returns do not generally keep pace with inflation in the long run, but real estate investment provides a hedge against inflation risk in that unexpected changes in inflation tend to be positively correlated with changes in property value in the short to medium term.
- Real estate investment appreciation returns generally at least equal the inflation rate in the long run, but real estate does not provide a good hedge against inflation risk in that unexpected changes in inflation do not tend to be positively correlated with changes in property value in the short to medium term.
- Real estate investment appreciation returns generally at least equal the inflation rate in the long run, and real estate investment provides a hedge against inflation risk in that unexpected changes in inflation tend to be positively correlated with changes in property value in the short to medium term.
- Real estate investment appreciation returns do not generally keep pace with inflation in the long run, and real estate does not provide a good hedge against inflation risk in that unexpected changes in inflation do not tend to be positively correlated with changes in property value in the short to medium term.

Check the answer of this question online at QuizOver.com:

Question: [Which of the following is true about typical by Prof. Tod McGrath](#)

Flashcards:

<http://www.quizover.com/flashcards/which-of-the-following-is-true-about-typical-by-prof-tod-mcgrath?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/which-of-the-following-is-true-about-typical-by-prof-tod-mcgrath?pdf=1505>

#### 4.1.5. In which of the following situations would it be most appropriate t...

Author: [Tod McGrath](#)

In which of the following situations would it be most appropriate to measure an investment manager's performance using the IRR rather than the time-weighted average periodic return?

Please choose only one answer:

- Client hires manager to place capital as soon as possible.
- Client requires a large proportion of its invested capital to be liquid at all times for withdrawal on demand.
- Client gives manager a line of capital with discretion over when to acquire and dispose of illiquid assets.
- All of the above.

Check the answer of this question online at [QuizOver.com](#):

Question: [In which of the following situations would by Prof. Tod McGrath](#)

Flashcards:

<http://www.quizover.com/flashcards/in-which-of-the-following-situations-would-by-prof-tod-mcgrath?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/in-which-of-the-following-situations-would-by-prof-tod-mcgrath?pdf=1505>

#### 4.1.6. The expected return on an investment in a property is inversely rel...

Author: Tod McGrath

The expected return on an investment in a property is inversely related to the price you pay for the property fundamentally because:

Please choose only one answer:

- The future cash flows the property can generate are independent the price you pay for the property today.
- The return must include a risk premium.
- Inflation must be subtracted out.
- The investor faces a budget constraint.
- (e) None of the above.

Check the answer of this question online at QuizOver.com:

Question: [The expected return on an investment in by Prof. Tod McGrath @MIT](#)

Flashcards:

<http://www.quizover.com/flashcards/the-expected-return-on-an-investment-in-by-prof-tod-mcgrath-mit?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/the-expected-return-on-an-investment-in-by-prof-tod-mcgrath-mit?pdf=1505>

#### 4.1.7. The table below shows two 10-year cash flow projections (in \$ milli...

Author: Tod McGrath

The table below shows two 10-year cash flow projections (in \$ millions, including reversion) for the same property.

The upper row is the projection that will be presented by the broker trying to sell the building, the bottom row is the realistic expectations.

Suppose that it would be relatively easy for any potential buyers to ascertain that the most likely current market value for the property is about \$10 million.

What is the most likely amount of "disappointment" in the ex post annual rate of total return earned by an investor who buys this property believing the broker's cash flow projection?

[table]

Year 1 ;2;3 ;4;5;6;7;8 ;9 ;10

Presented ;\$1.0000 ;\$1.0300;\$1.0609 ;\$1.0927;\$1.1255;\$1.1593;\$1.1941;\$1.2299 ;\$1.2668 ;\$14.7439

Realistic ;\$1.0000 ;\$1.0000;\$1.0000 ;\$1.0000;\$1.0000;\$1.0000;\$1.0000;\$1.0000 ;\$1.0000 ;\$11.0000

[/table]

Please choose only one answer:

- 0.00%
- 1.00%
- 3.00%
- 26.68%
- (e) Cannot be determined from the information given.

Check the answer of this question online at QuizOver.com:

Question: [The table below shows two 10-year cash flow by Prof. Tod McGrath](#)

Flashcards:

<http://www.quizover.com/flashcards/the-table-below-shows-two-10-year-cash-flow-by-prof-tod-mcgrath?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/the-table-below-shows-two-10-year-cash-flow-by-prof-tod-mcgrath?pdf=1505>

#### 4.1.8. The table below shows the projected cash flows (including reversion...

Author: Tod McGrath

The table below shows the projected cash flows (including reversion) for Property A and Property B.

If both properties sell at fair market value for a cap rate (initial and terminal cash yields) of 8%, then which statement below correctly describes the relative investment risk in the two properties?

Annual net cash flow projections for two properties (\$ millions)

[table]

Year ;1 ;2 ;3 ;4 ;5;6;7;8;9;10

A ;\$1.0000 ;\$1.0300 ;\$1.0609 ;\$1.0927 ;\$1.1255;\$1.1593;\$1.1941;\$1.2299;\$1.2668;\$18.10

B ;\$1.0000 ;\$1.0000 ;\$1.0000 ;\$1.0000 ;\$1.0000;\$1.0000;\$1.0000;\$1.0000;\$1.0000;\$13.50

[/table]

Please choose only one answer:

- Property A is more risky.
- Property B is more risky.
- Both properties are equally risky.
- Cannot be determined based on the information given.

Check the answer of this question online at QuizOver.com:

Question: [The table below shows the projected cash by Prof. Tod McGrath @MIT](#)

Flashcards:

<http://www.quizover.com/flashcards/the-table-below-shows-the-projected-cash-by-prof-tod-mcgrath-mit?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/the-table-below-shows-the-projected-cash-by-prof-tod-mcgrath-mit?pdf=1505>

#### 4.1.9. You are trying to apply a multi-year DCF analysis to evaluate an in...

Author: [Tod McGrath](#)

You are trying to apply a multi-year DCF analysis to evaluate an investment property with some long-term leases in it.

You observe that other properties with similar lease structure and risk have been selling at cap rates around 11% (based on

NOI with no capital reserve). You believe these other properties typically face capital expenditures on the order of 1% of

property value per year in the long run, and that given such expenditures their net cash flows and values would reasonably

be expected to grow in the long run at about 3% per year. What discount rate should you apply to your subject property in your DCF valuation?

Please choose only one answer:

- The Treasury bond rate because of the long-term leases.
- 10%
- 13%
- 14%
- (e) Cannot be determined from the information given.

Check the answer of this question online at [QuizOver.com](#):

Question: [You are trying to apply a multi-year DCF by Prof. Tod McGrath @MIT](#)

Flashcards:

<http://www.quizover.com/flashcards/you-are-trying-to-apply-a-multi-year-dcf-by-prof-tod-mcgrath-mit?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/you-are-trying-to-apply-a-multi-year-dcf-by-prof-tod-mcgrath-mit?pdf=1505>

#### 4.1.10. Normally, one would expect what relation between the "going-in" and...

Author: Tod McGrath

Normally, one would expect what relation between the "going-in" and "going-out" cap rate?

Please choose only one answer:

- The going-in cap rate should be higher than the going out.
- The going-out cap rate should be at least as high as the going-in rate.
- There is no particular relation between the two.

Check the answer of this question online at QuizOver.com:

Question: [Normally one would expect what relation by Prof. Tod McGrath @MIT](#)

Flashcards:

<http://www.quizover.com/flashcards/normally-one-would-expect-what-relation-by-prof-tod-mcgrath-mit?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/normally-one-would-expect-what-relation-by-prof-tod-mcgrath-mit?pdf=1505>



#### 4.1.11. Suppose the lease on a certain space will expire at the beginning o...

Author: [Tod McGrath](#)

Suppose the lease on a certain space will expire at the beginning of 2001. You believe that the probability of the existing

tenant renewing is 50 percent. If he renews, you will need to spend only an estimated \$5.00/SF to upgrade his space. If he does

not renew, it will take \$25.00/SF to modernize the space, even then you expect 6 months of vacancy. What expected cash flow

forecast should you put in year 2001 of your pro-forma for this space, if you expect triple-net market rents on new leases in 2001 to be \$20/SF?

Please choose only one answer:

- \$17.50/SF
- \$15.00/SF
- zero
- - \$10.00/SF
- (e) Insufficient information provided to answer the question.

Check the answer of this question online at [QuizOver.com](#):

Question: [Suppose the lease on a certain space will by Prof. Tod McGrath @MIT](#)

Flashcards:

<http://www.quizover.com/flashcards/suppose-the-lease-on-a-certain-space-will-by-prof-tod-mcgrath-mit?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/suppose-the-lease-on-a-certain-space-will-by-prof-tod-mcgrath-mit?pdf=1505>

#### 4.1.12. Suppose you analyze a particular deal and it appears that for an in...

Author: Tod McGrath

Suppose you analyze a particular deal and it appears that for an investment of \$1,000,000 your client can obtain a positive NPV of over \$500,000. Your client is typical of the type of high tax bracket individual investors who commonly

purchase and sell this type of property, and indeed typically determine equilibrium prices in the asset market in which these properties are sold. What should you do?

Please choose only one answer:

- Reject the deal out of hand because it costs twice as much as its NPV.
- Phone your client right away on your cell phone and urge her to pounce on this deal before it "gets away" - the seller must have made a mistake in their offering price!
- Buy the property with cash, take out an 80% loan-to-value ratio mortgage, and laugh all the way to the bank with \$200,000 of arbitrage profits!
- Sharpen your pencil, double-check your assumptions and analysis, try to find what is unique about your client.
- (e) Cannot be answered from the information given.

Check the answer of this question online at QuizOver.com:

Question: [Suppose you analyze a particular deal and by Prof. Tod McGrath @MIT](#)

Flashcards:

<http://www.quizover.com/flashcards/suppose-you-analyze-a-particular-deal-and-by-prof-tod-mcgrath-mit?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/suppose-you-analyze-a-particular-deal-and-by-prof-tod-mcgrath-mit?pdf=1505>

#### 4.1.13. Which statement is true ex ante?

Author: [Tod McGrath](#)

Which statement is true ex ante?

Please choose only one answer:

- Leverage normally increases the owner's income return (cash yield) if you pay market value for the property.
- Leverage normally increases the owner's income return (cash yield) if you pay more than market value for the property.
- Leverage normally increases the owner's total return (including appreciation) if you pay market value for the property.
- Leverage normally increases the owner's total return (including appreciation) if you pay more than market value for the property.

Check the answer of this question online at [QuizOver.com](#):

Question: [Which statement is true ex ante by Prof. Tod McGrath @MIT Massachusetts](#)

Flashcards:

<http://www.quizover.com/flashcards/which-statement-is-true-ex-ante-by-prof-tod-mcgrath-mit-massachusetts?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/which-statement-is-true-ex-ante-by-prof-tod-mcgrath-mit-massachusetts?pdf=1505>

#### 4.1.14. Assuming riskless debt, if the return risk is $\pm 15\%$ with a 40% Loan/...

Author: Tod McGrath

Assuming riskless debt, if the return risk is  $\pm 15\%$  with a 40% Loan/Value Ratio, then with a 80% Loan/Value Ratio the return risk is:

Please choose only one answer:

- $\pm 7.5\%$
- $\pm 15\%$
- $\pm 30\%$
- $\pm 45\%$
- (e) Cannot be determined from the information given.

Check the answer of this question online at QuizOver.com:

Question: [Assuming riskless debt if the return risk by Prof. Tod McGrath @MIT](#)

Flashcards:

<http://www.quizover.com/flashcards/assuming-riskless-debt-if-the-return-risk-by-prof-tod-mcgrath-mit?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/assuming-riskless-debt-if-the-return-risk-by-prof-tod-mcgrath-mit?pdf=1505>

#### 4.1.15. All of the following are true about the "property before-tax (PBT) ...

Author: Tod McGrath

All of the following are true about the "property before-tax (PBT) shortcut", except:

Please choose only one answer:

- The PBT shortcut is useful not only because it simplifies the investment analysis but because it avoids the necessity of estimating after-tax parameters that may be difficult to observe without error.
- The shortcut is made possible by the existence of a reasonably well functioning market for the type of investment asset in question.
- The shortcut works for estimating market value always, and for estimating investment value for investors who are typical of the marginal investors in the relevant asset market.
- At the PBT level the investor's own subjective opportunity cost of capital can be used as the discount rate in order to estimate that investor's "investment value" (IV) for the property.

Check the answer of this question online at QuizOver.com:

Question: [All of the following are true about the by Prof. Tod McGrath @MIT](#)

Flashcards:

<http://www.quizover.com/flashcards/all-of-the-following-are-true-about-the-by-prof-tod-mcgrath-mit?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/all-of-the-following-are-true-about-the-by-prof-tod-mcgrath-mit?pdf=1505>

#### 4.1.16. After-tax cash flow will exceed before-tax cash flow whenever:

Author: Tod McGrath

After-tax cash flow will exceed before-tax cash flow whenever:

Please choose only one answer:

- Taxable income is negative.
- Capital expenditures exceed net operating income.
- The building is fully depreciated.
- Interest and depreciation expenses are less than net operating income.

Check the answer of this question online at QuizOver.com:

Question: [After-tax cash flow will exceed before-tax by Prof. Tod McGrath](#)

Flashcards:

<http://www.quizover.com/flashcards/after-tax-cash-flow-will-exceed-before-tax-by-prof-tod-mcgrath?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/after-tax-cash-flow-will-exceed-before-tax-by-prof-tod-mcgrath?pdf=1505>

4.1.17. A non-residential commercial property which cost \$500,000 is consid...

Author: [Tod McGrath](#)

A non-residential commercial property which cost \$500,000 is considered to have 30 percent of its total value attributable to

land. The annual depreciation expense chargeable against taxable income is:

Please choose only one answer:

- \$18,182
- \$15,873
- \$13,967
- \$8,974

Check the answer of this question online at [QuizOver.com](#):

Question: [A non-residential commercial property which by Prof. Tod McGrath](#)

Flashcards:

<http://www.quizover.com/flashcards/a-non-residential-commercial-property-which-by-prof-tod-mcgrath?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/a-non-residential-commercial-property-which-by-prof-tod-mcgrath?pdf=1505>

#### 4.1.18. The difference between the net operating income (NOI) and the equity...

Author: [Tod McGrath](#)

The difference between the net operating income (NOI) and the equity before-tax cash flow (EBTCF) is:

Please choose only one answer:

- Property Tax Expense and capital expenditures.
- The debt service and capital expenditures.
- Property taxes and income taxes.
- Interest expense and depreciation expense.

Check the answer of this question online at [QuizOver.com](#):

Question: [The difference between the net operating by Prof. Tod McGrath @MIT](#)

Flashcards:

<http://www.quizover.com/flashcards/the-difference-between-the-net-operating-by-prof-tod-mcgrath-mit?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/the-difference-between-the-net-operating-by-prof-tod-mcgrath-mit?pdf=1505>



4.1.19. The NOI is \$40,000; there are \$5,000 in tenant improvement expendit...

Author: [Tod McGrath](#)

The NOI is \$40,000; there are \$5,000 in tenant improvement expenditures paid for by the landlord; there is a \$200,000

interest-only loan at 8 percent annual interest; the depreciable cost basis of this residential property is \$300,000; the owner's tax

bracket is 33 percent. What is the Equity After-Tax Cash Flow (EATCF)?

Please choose only one answer:

- \$14,680
- \$27,800
- \$30,680
- \$35,000
- (e) Cannot be determined from the information given.

Check the answer of this question online at [QuizOver.com](#):

Question: [The NOI is 40 000 there are 5 000 in tenant by Prof. Tod McGrath](#)

Flashcards:

<http://www.quizover.com/flashcards/the-noi-is-40-000-there-are-5-000-in-tenant-by-prof-tod-mcgrath?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/the-noi-is-40-000-there-are-5-000-in-tenant-by-prof-tod-mcgrath?pdf=1505>

4.1.20. A seller has offered you a \$1,000,000 interest-only 5 year loan at ...

Author: [Tod McGrath](#)

A seller has offered you a \$1,000,000 interest-only 5 year loan at 6% (annual payments), when market interest rates on

such loans are 8%. Basing your decision on market values, how much more should you be willing to pay for the property

than you otherwise think it is worth, due to the financing offer?

Please choose only one answer:

- Zero, by definition.
- \$26,497
- \$79,854
- \$98,412

Check the answer of this question online at [QuizOver.com](#):

Question: [A seller has offered you a 1 000 000 interest by Prof. Tod McGrath](#)

Flashcards:

<http://www.quizover.com/flashcards/a-seller-has-offered-you-a-1-000-000-interest-by-prof-tod-mcgrath?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/a-seller-has-offered-you-a-1-000-000-interest-by-prof-tod-mcgrath?pdf=1505>

#### 4.1.21. Again considering the same seller loan offer as in the previous que...

Author: Tod McGrath

Again considering the same seller loan offer as in the previous question, suppose you face a 35% marginal income tax

rate and so does the marginal investor in the debt market. Now basing your decision on investment value, how much more

should you be willing to pay for the property than you otherwise think it is worth, due to the financing offer?

Please choose only one answer:

- Zero, by definition.
- \$26,497
- \$55,973
- \$86,602

Check the answer of this question online at QuizOver.com:

Question: [Again considering the same seller loan offer by Prof. Tod McGrath](#)

Flashcards:

<http://www.quizover.com/flashcards/again-considering-the-same-seller-loan-offer-by-prof-tod-mcgrath?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/again-considering-the-same-seller-loan-offer-by-prof-tod-mcgrath?pdf=1505>

4.1.22. Consider a 20-year (monthly-payment), 8%, \$80,000 mortgage with 2 p...

Author: Tod McGrath

Consider a 20-year (monthly-payment), 8%, \$80,000 mortgage with 2 points prepaid interest up front. What is the

"effective interest rate" or yield over the borrower's expected holding period if the borrower expects to hold the loan for 12

years?

Please choose only one answer:

- 8.00%
- 8.25%
- 8.31%
- 8.56%

Check the answer of this question online at [QuizOver.com](http://www.quizover.com):

Question: [Consider a 20-year monthly-payment 8 80 by Prof. Tod McGrath @MIT](http://www.quizover.com/question/consider-a-20-year-monthly-payment-8-80-by-prof-tod-mcgrath-mit)

Flashcards:

<http://www.quizover.com/flashcards/consider-a-20-year-monthly-payment-8-80-by-prof-tod-mcgrath-mit?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/consider-a-20-year-monthly-payment-8-80-by-prof-tod-mcgrath-mit?pdf=1505>

#### 4.1.23. In comparing an adjustable rate mortgage (ARM) with a fixed rate mo...

Author: Tod McGrath

In comparing an adjustable rate mortgage (ARM) with a fixed rate mortgage (FRM):

Please choose only one answer:

- Both the borrower and lender bear more interest rate risk with the ARM than with the FRM.
- Both the borrower and the lender bear less interest rate risk with the ARM than with the FRM.
- The ARM borrower bears more interest rate risk, but the ARM lender bears less interest rate risk, than with the FRM.
- The ARM borrower bears less interest rate risk, but the ARM lender bears more interest rate risk, than with the FRM.

Check the answer of this question online at QuizOver.com:

Question: [In comparing an adjustable rate mortgage by Prof. Tod McGrath @MIT](#)

Flashcards:

<http://www.quizover.com/flashcards/in-comparing-an-adjustable-rate-mortgage-by-prof-tod-mcgrath-mit?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/in-comparing-an-adjustable-rate-mortgage-by-prof-tod-mcgrath-mit?pdf=1505>

4.1.24. Consider an 8.5% loan amortizing at a 25-year rate with monthly pay...

Author: Tod McGrath

Consider an 8.5% loan amortizing at a 25-year rate with monthly payments. What is the maximum amount that can be

loaned on a property whose net operating income (NOI) is \$500,000 per year, if the underwriting criteria specify a debt service

coverage ratio (DCR) no less than 125%?

Please choose only one answer:

- \$2,789,406
- \$3,409,091
- \$3,844,614
- \$4,000,000
- (e) \$4,139,619

Check the answer of this question online at QuizOver.com:

Question: [Consider an 8.5 loan amortizing at a 25 by Prof. Tod McGrath @MIT](#)

Flashcards:

<http://www.quizover.com/flashcards/consider-an-8-5-loan-amortizing-at-a-25-by-prof-tod-mcgrath-mit?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/consider-an-8-5-loan-amortizing-at-a-25-by-prof-tod-mcgrath-mit?pdf=1505>

4.1.25. For the same property as above, suppose the underwriting criteria i...

Author: Tod McGrath

For the same property as above, suppose the underwriting criteria is a maximum loan/value ratio (LTV) of 75%, and we

estimate property value by direct capitalization using a rate of 11% on the stated NOI. By this criterion what is the maximum

loan amount?

Please choose only one answer:

- \$2,789,406
- \$3,409,091
- \$3,844,614
- \$4,000,000
- (e) \$4,139,619

Check the answer of this question online at QuizOver.com:

Question: [For the same property as above suppose the by Prof. Tod McGrath](#)

Flashcards:

<http://www.quizover.com/flashcards/for-the-same-property-as-above-suppose-the-by-prof-tod-mcgrath?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/for-the-same-property-as-above-suppose-the-by-prof-tod-mcgrath?pdf=1505>

4. Chapter: Part II (20%): 1 of 2 questions.

1. Part II (20%): 1 of 2 questions. Questions



#### 4.1.1. Suppose you own a vacant but developable land parcel on the outskir...

Author: Tod McGrath

Answer either one of the questions below, or diversify your portfolio by answering both.

If you answer both, we will grade both and assign each question half of the 20% for this part.

If you answer only one, that one you answer will get the full 20%.

Please be sure it is clear to us which question(s) you want to be graded.

If the TA cannot figure it out on her own, she will grade both.

This land produces no income but owes 2% of its value per year in property taxes.

Meanwhile, typical income properties are yielding 9% (that is, they have a current cash yield, or "cap rate", of 9%).

If inflation is expected to be around 3% per year, and you expect your land will appreciate at 10% per year, what should you do with this land parcel? (Be specific and please explain why you should do what you say.)

Suppose you own a vacant but developable land parcel on the outskirts of the metropolitan area.

Check the answer of this question online at QuizOver.com:

Question: [Suppose you own a vacant but developable Answer either one of the](#)

Flashcards:

<http://www.quizover.com/flashcards/suppose-you-own-a-vacant-but-developable-answer-either-one-of-the?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/suppose-you-own-a-vacant-but-developable-answer-either-one-of-the?pdf=1505>

#### 4.1.2. Fully explain and clarify the following statement:

Author: Tod McGrath

Answer either one of the questions below, or diversify your portfolio by answering both.

If you answer both, we will grade both and assign each question half of the 20% for this part.

If you answer only one, that one you answer will get the full 20%.

Please be sure it is clear to us which question(s) you want to be graded.

If the TA cannot figure it out on her own, she will grade both.

"There are two types of tax shields available to investors in property equity: depreciation tax shields (DTS) and interest tax shields (ITS),

but only one of these types of tax shields generally adds to the investment value of the investment no matter what the investor's marginal tax rate."

Fully explain and clarify the following statement:

Check the answer of this question online at QuizOver.com:

Question: [Fully explain and clarify the following Answer either one of questions](#)

Flashcards:

<http://www.quizover.com/flashcards/fully-explain-and-clarify-the-following-answer-either-one-of-questions?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/fully-explain-and-clarify-the-following-answer-either-one-of-questions?pdf=1505>

#### 4.1.3. As part of your answer, quantify the NPV to two different borrowers...

Author: Tod McGrath

Answer either one of the questions below, or diversify your portfolio by answering both.

If you answer both, we will grade both and assign each question half of the 20% for this part.

If you answer only one, that one you answer will get the full 20%.

Please be sure it is clear to us which question(s) you want to be graded.

If the TA cannot figure it out on her own, she will grade both.

loan of \$1,000,000 at 6% interest when the market yield on corporate bonds is 6% and on otherwise identical municipal

bonds is 4%, and Borrower A faces a marginal tax rate of 30% while Borrower B faces a marginal tax rate of 35%.

As part of your answer, quantify the NPV to two different borrowers, from an after-tax investment value perspective, of a perpetual

Check the answer of this question online at QuizOver.com:

Question: [As part of your answer quantify the NPV either one questions below](#)

Flashcards:

<http://www.quizover.com/flashcards/as-part-of-your-answer-quantify-the-npv-either-one-questions-below?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/as-part-of-your-answer-quantify-the-npv-either-one-questions-below?pdf=1505>

4.1.4. Also, compare the NPV to Borrower B to the PV of the that borrower'...

Author: Tod McGrath

Answer either one of the questions below, or diversify your portfolio by answering both.

If you answer both, we will grade both and assign each question half of the 20% for this part.

If you answer only one, that one you answer will get the full 20%.

Please be sure it is clear to us which question(s) you want to be graded.

If the TA cannot figure it out on her own, she will grade both.

(the PV of the borrower's tax deductions associated with the loan).

Also, compare the NPV to Borrower B to the PV of the that borrower's interest tax shields

Check the answer of this question online at QuizOver.com:

Question: [Also compare the NPV to Borrower B to the Answer either one of questions](#)

Flashcards:

<http://www.quizover.com/flashcards/also-compare-the-npv-to-borrower-b-to-the-answer-either-one-of-questio?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/also-compare-the-npv-to-borrower-b-to-the-answer-either-one-of-questio?pdf=1505>

#### 4. Chapter: Part III: Extra-credit question.

##### 1. Part III: Extra-credit question. Questions

#### 4.1.1. Consider the following fully-amortizing 5-year ARM (contract interest rate can change once every 60 months) with 15-

Author: Tod McGrath

Earn up to 5% extra credit. It can help you but not hurt you. And this time, no

diversification. You must pick only one of the questions below to answer. If the TA cannot tell which one you wanted, he

will simply grade the first. (Aside: Do you get how valuable diversification is if you are risk-averse?)

year maturity, monthly payments. The ARM has initial interest rate 6.5% with 2 points, caps are 2% per jump, 5% lifetime,

margin is 300 basis points, index is Treasury Bonds that are currently yielding 6.0%. The loan amount is \$100,000. Under

the "straight line" assumption about future interest rates (i.e., assuming the market rate on the index remains constant), what

is the yield to maturity? (Show your work if you want to possibly get partial credit.)

Consider the following fully-amortizing 5-year ARM (contract interest rate can change once every 60 months) with 15-

Check the answer of this question online at QuizOver.com:

Question: [Consider the following fully-amortizing Earn up to 5 extra credit](http://www.quizover.com/question/consider-the-following-fully-amortizing-earn-up-to-5-extra-credit?pdf=1505)

Flashcards:

<http://www.quizover.com/flashcards/consider-the-following-fully-amortizing-earn-up-to-5-extra-credit?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/consider-the-following-fully-amortizing-earn-up-to-5-extra-credit?pdf=1505>

4.1.2. (5 points) Consider a \$4,000,000, 7%, 25-year mortgage with monthly...

Author: Tod McGrath

Earn up to 5% extra credit. It can help you but not hurt you. And this time, no

diversification. You must pick only one of the questions below to answer. If the TA cannot tell which one you wanted, he

will simply grade the first. (Aside: Do you get how valuable diversification is if you are risk-averse?)

the market yield is 7.5% (BEY), how many disbursement discount points must the lender charge to avoid doing a negative

NPV deal from a market value perspective?

(5 points) Consider a \$4,000,000, 7%, 25-year mortgage with monthly payments and a 7-year maturity with balloon. If

Check the answer of this question online at QuizOver.com:

Question: [5 points Consider a 4 000 000 7 25-year Earn up to extra credit.](#)

Flashcards:

<http://www.quizover.com/flashcards/5-points-consider-a-4-000-000-7-25-year-earn-up-to-extra-credit?pdf=1505>

Interactive Question:

<http://www.quizover.com/question/5-points-consider-a-4-000-000-7-25-year-earn-up-to-extra-credit?pdf=1505>