

Name (Print Clearly): Practice Exam Solutions

**FINANCIAL MANAGEMENT – I**  
**BAFI 402, FALL 2001**  
**Final Exam**

**General Guidelines:**

1. **Print your name** on top of this page.
2. Please write your answers in ink (Blue/Black), **NOT with a pencil. If you write your answers in pencil, you will lose the right to have your exam regraded.**
3. **Do not detach any sheet(s)** from this question paper.
4. This is a **closed book** examination.
5. Total duration for this exam is **120 minutes** and total points are **100**.
6. In sections I and II, **clearly encircle one and only one** alternative, which you feel is **the most correct answer**. Optionally, you can write a **one-line** (*strictly one line*) explanation of your answer on the line provided. *If your answer is wrong but the explanation is right*, you might get partial, or even full credit for that question, depending on how correct your explanation is. However, *if your answer is right, but your explanation is wrong*, you will not get any credit for that question. *If your answer is right and no explanation is given*, you will still get full credit for that question.
7. In **Section III**, you need to show your work. **Just writing an answer will earn you zero points.**
8. In answering questions you can refer to the one sheet of paper that you are allowed to bring with you.
9. Don't waste too much time on any one question - the questions in this exam are of varying levels of difficulty, so at least try to answer all the easier questions, then come back to the difficult ones.
10. You should write your answers **on the question paper itself**.
11. Please do not try to communicate with any of your fellow students - if you have a question, ask me. **Any communication with any student during the course of this exam would be construed as a violation of the school's honor code.**

**GOOD LUCK!**

Section Number	Question Number (s )	Points
<b>I</b>	<b>1-10</b>	
<b>II</b>	<b>1-10</b>	
<b>III</b>	<b>1</b>	
<b>TOTAL</b>		

**SECTION I (True or False): There are 10 questions; 10 x 3 =30 points**  
**(SUGGESTED TIME: 30 MINUTES)**

1. Stock A has an expected return of 13% and standard deviation of returns of 15%. Stock B has an expected return of 19% and standard deviation of returns of 27%. The correlation of returns between stock A and Stock B is -0.35. Therefore, the standard deviation of returns of a portfolio of 25%A and 75%B will be 18%.

TRUE

FALSE

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2. The effect of leverage is to increase beta (i.e., higher leverage implies higher equity betas, *ceteris paribus*)

TRUE

FALSE

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3. If CAPM is correct, all securities should plot on the Security Market Line (SML), hence they will have the same expected returns.

TRUE

FALSE

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***There will be 10 questions like this in the exam.***

**SECTION II (Multiple Choice): 8 x 5=40 points**  
**(SUGGESTED TIME: 50 MINUTES)**

1. Suppose the market risk premium is 7.5% and the risk free rate is 3.7%. The expected return of XYZ stock is 14.2%. What is its beta?
  - a) 0.89
  - b) 1.34
  - c) 1.96
  - d) 2.76
  - e) **None of the above (its 1.40)**

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2. The book value of ABC company's debt is \$60 million. Currently, the debt is trading at 120% of book value and is priced to yield 12%. The 5 million outstanding shares of ABC stock are selling for \$20 per share. The required return on ABC stock is 18%. The tax rate is 25%. What is the WACC for ABC?
  - a) 12%
  - b) 14.35%
  - c) 16.71%
  - d) 18%
  - e) **None of the above (its 14.23%)**

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3. A company has an equity beta of 1.20, with an existing debt-to-equity ratio of 0.25. They plan to invest in a new project, for which they would raise the money through an equity issue as well as through loans from a bank. This financing arrangement will increase their debt-to-equity ratio to 0.6. What will be the new beta for their stock? Assume a tax rate of 35%.
  - a) 1.31
  - b) 0.95
  - c) 1.16
  - d) **1.43**
  - e) None of the above

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***There will be eight questions like this in the exam.***

**SECTION III (PROBLEM): 30 POINTS**  
**(SUGGESTED TIME: 40 MINUTES)**

Novell, which had a market value of equity of \$2 billion and a beta of 1.50, announced that it was acquiring WordPerfect, which had a market value of equity of \$1 billion, and a beta of 1.30. Neither firm had any debt in its financial structure at the time of the acquisition, and the corporate tax rate was 40%.

- a) Estimate the beta for Novell after the acquisition, assuming that the entire acquisition was financed with equity.
- b) Assume that Novell had to borrow the \$1 billion to acquire WordPerfect. Estimate the beta after the acquisition.

*There will be one problem like this in the exam, but longer, with 5-6 parts.*

- a)     **Unlevered beta for Novell = 1.50 (since they have no debt)**  
          **Unlevered beta for WP = 1.30 (no debt)**  
          **Hence, unlevered beta for combined firm =  $(2/3) \times 1.50 + (1/3) \times 1.30 = 1.43$**
- b)     **New D/E ratio =  $\frac{1}{2}$**   
          **Hence, new beta =  $1.43(1 + (1 - 0.4)0.5) = 1.86$**