Financial Management
Homework 2

Given: Nov. 6, 2008
Due: Nov. 18, 2008

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Multiple Choice Questions

1. *(p. 158)* A project requires an initial investment of $200,000 and is expected to produce a cash flow before taxes of 120,000 per year for two years. [i.e. cash flows will occur at t = 1 and t = 2]. The corporate tax rate is 30%. The assets will be depreciated using MACRS - 3 year schedule:(t = 1, 33%); (t = 2: 45%); (t = 3: 15%); (t = 4: 7%). The company's tax situation is such that it can make use of all applicable tax shields. The opportunity cost of capital is 12%. Assume that the asset can be sold for book value. Calculate the NPV of the project: (Approximately)
a. $22,463
B. $19,315
c. $16,244
d. None of the above

2. *(p. 162)* OM Construction Company must choose between two types of cranes. Crane A costs $600,000, will last for 5 years, and will require $60,000 in maintenance each year. Crane B costs $750,000 and will last for seven years and will require $30,000 in maintenance each year. Maintenance costs for cranes A and B are incurred at the end of each year. The appropriate discount rate is 12% per year. Which machine should OM Construction purchase?
a. Crane A as EAC is $226,444
B. Crane B as EAC is $194,336
c. Crane A as the PV is $816,286
d. Cannot be calculated as the revenues for the project are not given

3. . *(p. 198)* If the covariance between stock A and stock B is 100, the standard deviation of stock A is 10% and that of stock B is 20%, calculate the correlation coefficient between the two securities.
a. -0.5
b. +1.0
C. +0.5
d. None of the above

4. . *(p. 204)* The annual return for three years for stock B comes out to be 0%, 10% and 26%. Annual returns for three years for the market portfolios are +6%, 18%, 24%. Calculate the beta for the stock.
a. 0.74
B. 1.36
c. 1.0
d. None of the above

5. *(p. 223)* The security market line (SML) is the graph of:
a. Expected rate on investment (Y-axis) vs. variance of return
b. Expected return on investment vs. standard deviation of return
C. Expected rate of return on investment vs. beta
d. A and B

6. *(p. 224)* If the beta of Amazon.com is 2.2, risk-free rate is 5.5% and the market risk premium is 8%, calculate the expected rate of return for Amazon.com stock:
a. 15.8%
B. 14.3%
c. 35.2%
d. 23.1%

7. *(p. 224)* A stock with a beta of zero would be expected to:
a. Have a rate of return equal to zero
b. Have a rate of return equal to the market risk premium
C. Have a rate of return equal to the risk-free rate
d. Have a rate of return equal to the market rate of return

8. . *(p. 225)* A stock with a beta of 1. 25 would be expected to:
A. Increase in returns 25% faster than the market in up markets
b. Increase in returns 25% faster than the market in down markets
c. Increase in returns 125% faster than the market in up markets
d. Increase in returns 125% faster than the market in down markets

9. *(p. 226)* If a stock is under priced it would plot:
A. Above the security market line
b. Below the security market line
c. On the security market line
d. On the Y-axis

10. *(p. 226)* Given the following data for a stock: beta = 0.9; risk-free rate = 4%; market rate of return = 14%; and Expected rate of return on the stock = 13%. Then the stock is:
a. Overpriced
b. Under priced
C. Correctly priced
d. Cannot be determined

11. *(p. 233)* Given the following data for a stock: risk-free rate = 4%; factor-1 beta = 1.5; factor-2 beta = 0.5 factor-1 risk-premium = 8%; factor-2 risk-premium = 2%. Calculate the expected rate of return on the stock using the two-factor APT model.
a. 13%
B. 17%
c. 10%
d. None of the above

12. *(p. 237)* Given the following data for the a stock: risk-free rate = 5%; beta (market) = 1.4; beta (size) = 0.4; beta (book-to-market) = -1.1; market risk premium = 7%; size risk premium = 3.7%; and book-to-market risk premium = 5.2%. Calculate the expected return on the stock using the Fama-French three-factor model.
a. 22.3%
b. 7.8%
C. 10.6%
d. None of the above