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1.

One of the four most fundamental factors that affect the cost of money as discussed in the text is the risk inherent in a given security. The higher the risk, the higher the security's required return, other things held constant.

- ☐ a. True ☐ b. False

2.

If an investor buys enough stocks, he or she can, through diversification, eliminate all of the market risk inherent in owning stocks, but as a general rule it will not be possible to eliminate all diversifiable risk.

- ☐ a. True ☐ b. False

3.

The slope of the SML is determined by the value of beta.

- ☐ a. True ☐ b. False

4.

If you plotted the returns of a company against those of the market and found that the slope of your line was negative, the CAPM would indicate that the required rate of return on the stock should be less than the risk-free rate for a well-diversified investor, assuming that the observed relationship is expected to continue in the future.

- ☐ a. True ☐ b. False

5.

The CAPM is a multi-period model that takes account of differences in securities' maturities, and it can be used to determine the required rate of return for any given level of systematic risk.

- ☐ a. True ☐ b. False

6.

Assume that inflation is expected to decline steadily in the future, but that the real risk-free rate, r^* , will remain constant. Which of the following statements is CORRECT, other things held constant?

- ☐ a. If the pure expectations theory holds, the Treasury yield curve must be downward sloping.
- ☐ b. If inflation is expected to decline, there can be no maturity risk premium.
- ☐ c. The expectations theory cannot hold if inflation is decreasing.
- ☐ d. If the pure expectations theory holds, the corporate yield curve must be downward sloping.
- ☐ e. If there is a positive maturity risk premium, the Treasury yield curve must be upward sloping.

7.

A bond trader observes the following information:

- The Treasury yield curve is downward sloping.
- Empirical data indicate that a positive maturity risk premium applies to both Treasury and corporate bonds.
- Empirical data also indicate that there is no liquidity premium for Treasury securities but that a positive liquidity premium is built into corporate bond yields.

On the basis of this information, which of the following statements is most CORRECT?

- ☐ a. A 5-year corporate bond must have a higher yield than a 10-year Treasury bond.
- ☐ b. Since the Treasury yield curve is downward sloping, the corporate yield curve must also be downward sloping.
- ☐ c. The corporate yield curve must be flat.
- ☐ d. A 10-year Treasury bond must have a higher yield than a 10-year corporate bond.
- ☐ e. A 10-year corporate bond must have a higher yield than a 5-year Treasury bond.

8.

The real risk-free rate is expected to remain constant at 3% in the future, a 2% rate of inflation is expected for the next 2 years, after which inflation is expected to increase to 4%, and there is a positive maturity risk premium that increases with years to maturity. Given these conditions, which of the following statements is CORRECT?

- ☐ a. The yield on a 7-year Treasury bond must exceed that of a 5-year corporate bond.
- ☐ b. The yield on a 2-year T-bond must exceed that on a 5-year T-bond.
- ☐ c. The yield on a 5-year Treasury bond must exceed that on a 2-year Treasury bond.
- ☐ d. The conditions in the problem cannot all be true--they are internally inconsistent.
- ☐ e. The Treasury yield curve under the stated conditions would be humped rather than have a consistent positive or negative slope.

9.

Which of the following statements is CORRECT?

- ☐ a. Most evidence suggests that the maturity risk premium is zero.
- ☐ b. The pure expectations theory states that the maturity risk premium for long-term Treasury bonds is zero and that differences in interest rates across different Treasury maturities are driven by expectations about future interest rates.
- ☐ c. The yield on a 3-year Treasury bond cannot exceed the yield on a 10-year Treasury bond.
- ☐ d. Liquidity premiums are higher for Treasury than for corporate bonds.
- ☐ e. The real risk-free rate is higher for corporate than for Treasury bonds.

10.

Inflation is expected to increase steadily over the next 10 years, there is a positive maturity risk premium on both Treasury and corporate bonds, and the real risk-free rate of interest is expected to remain constant. Which of the following statements is CORRECT?

- ☐ a. The Treasury yield curve under the stated conditions would be humped rather than have a consistent positive or negative slope.
- ☐ b. The yield on 10-year Treasury securities must exceed the yield on 7-year Treasury securities.
- ☐ c. The yield on any corporate bond must exceed the yields on all Treasury bonds.
- ☐ d. The stated conditions cannot all be true – they are internally inconsistent.
- ☐ e. The yield on 7-year corporate bonds must exceed the yield on 10-year Treasury bonds.

11.

Suppose the real risk-free rate is 3.50% and the future rate of inflation is expected to be constant at 4.80%. What rate of return would you expect on a 1-year Treasury security, assuming the pure expectations theory is valid? Disregard cross-product terms, i.e., if averaging is required, use the arithmetic average.

- ☐ a. 9.79%
- ☐ b. 8.30%
- ☐ c. 9.38%
- ☐ d. 8.38%
- ☐ e. 8.80%

12.

Suppose 10-year T-bonds have a yield of 5.30% and 10-year corporate bonds yield 6.65%. Also, corporate bonds have a 0.25% liquidity premium versus a zero liquidity premium for T-bonds, and the maturity risk premium on both Treasury and corporate 10-year bonds is 1.15%. What is the default risk premium on corporate bonds?

- ☐ a. 1.20%
- ☐ b. 0.86%
- ☐ c. 1.10%
- ☐ d. 1.22%
- ☐ e. 1.34%

13.

Suppose the real risk-free rate is 3.50%, the average future inflation rate is 2.50%, a maturity premium of 0.20% per year to maturity applies, i.e., $MRP = 0.20\%(t)$, where t is the number of years to maturity. Suppose also that a liquidity premium of 0.50% and a default risk premium of 2.70% applies to A-rated corporate bonds. What is the difference in the yields on a 5-year A-rated corporate bond and on a 10-year Treasury bond? Here we assume that the pure expectations theory is NOT valid, and disregard any cross-product terms, i.e., if averaging is required, use the arithmetic average.

- ☐ a. 2.13
- ☐ b. 2.27
- ☐ c. 2.20
- ☐ d. 1.91
- ☐ e. 1.78

14.

You have the following data on three stocks:

<u>Stock</u>	<u>Standard Deviation</u>	<u>Beta</u>
A	20%	0.59
B	10%	0.61
C	12%	1.29

If you are a strict risk minimizer, you would choose Stock ____ if it is to be held in isolation and Stock ____ if it is to be held as part of a well-diversified portfolio.

- ☐ a. C; B.
- ☐ b. C; A.
- ☐ c. A; A.
- ☐ d. A; B.
- ☐ e. B; A.

15.

Stock A's beta is 1.5 and Stock B's beta is 0.5. Which of the following statements must be true, assuming the CAPM is correct.

- ☐ a. In equilibrium, the expected return on Stock B will be greater than that on Stock A.
- ☐ b. When held in isolation, Stock A has more risk than Stock B.
- ☐ c. Stock A would be a more desirable addition to a portfolio than Stock B.
- ☐ d. Stock B would be a more desirable addition to a portfolio than A.
- ☐ e. In equilibrium, the expected return on Stock A will be greater than that on B.

16.

Which of the following statements is CORRECT?

- ☐ a. If you add enough randomly selected stocks to a portfolio, you can completely eliminate all of the market risk from the portfolio.
- ☐ b. A large portfolio of stocks whose betas are greater than 1.0 will have less market risk than a single stock with a beta = 0.8.
- ☐ c. A large portfolio of randomly selected stocks will always have a standard deviation of returns that is less than the standard deviation of a portfolio with fewer stocks, regardless of how the stocks in the smaller portfolio are selected.
- ☐ d. A large portfolio of randomly selected stocks will have a standard deviation of returns that is greater than the standard deviation of a 1-stock portfolio if that one stock has a beta less than 1.0.
- ☐ e. Diversifiable risk can be reduced by forming a large portfolio, but normally even highly-diversified portfolios are subject to market (or systematic) risk.

17.

Consider the following information for three stocks, A, B, and C. The stocks' returns are positively but not perfectly positively correlated with one another, i.e., the correlations are all between 0 and 1.

<u>Stock</u>	<u>Expected Return</u>	<u>Standard Deviation</u>	<u>Beta</u>
A	10%	20%	1.0
B	10%	10%	1.0
C	12%	12%	1.4

Portfolio AB has half of its funds invested in Stock A and half in Stock B. Portfolio ABC has one third of its funds invested in each of the three stocks. The risk-free rate is 5%, and the market is in equilibrium, so required returns equal expected returns. Which of the following statements is CORRECT?

- ☐ a. Portfolio AB has a standard deviation of 20%.
- ☐ b. Portfolio AB's required return is greater than the required return on Stock A.
- ☐ c. Portfolio AB's coefficient of variation is greater than 2.0.
- ☐ d. Portfolio ABC's expected return is 10.66667%.
- ☐ e. Portfolio ABC has a standard deviation of 20%.

18.

Which of the following statements is CORRECT?

- ☐ a. Other things held constant, if investors suddenly become convinced that there will be deflation in the economy, then the required returns on all stocks should increase.
- ☐ b. If the risk-free rate rises by 0.5% but the market risk premium declines by that same amount, then the required rates of return on stocks with betas less than 1.0 will decline while returns on stocks with betas above 1.0 will increase.
- ☐ c. If the risk-free rate rises by 0.5% but the market risk premium declines by that same amount, then the required rate of return on an average stock will remain unchanged, but required returns on stocks with betas less than 1.0 will rise.
- ☐ d. If a company's beta were cut in half, then its required rate of return would also be halved.
- ☐ e. If a company's beta doubles, then its required rate of return will also double.

19.

Which of the following statements is CORRECT?

- ☐ a. Diversifiable risk cannot be completely diversified away.
- ☐ b. Two securities with the same stand-alone risk must have the same betas.
- ☐ c. Lower beta stocks have higher required returns.
- ☐ d. A stock's beta indicates its diversifiable risk.
- ☐ e. The slope of the security market line is equal to the market risk premium.

20.

Stock X has a beta of 0.6, while Stock Y has a beta of 1.4. Which of the following statements is CORRECT?

- ☐ a. If expected inflation declines but the market risk premium is unchanged, then the required return on both stocks will decrease but the decrease will be greater for Stock Y.
- ☐ b. If the market risk premium declines but expected inflation is unchanged, the required return on both stocks will decrease, but the decrease will be greater for Stock Y.
- ☐ c. A portfolio consisting of \$50,000 invested in Stock X and \$50,000 invested in Stock Y will have a required return that exceeds that of the overall market.
- ☐ d. If expected inflation increases but the market risk premium is unchanged, then the required return on both stocks will fall by the same amount.
- ☐ e. Stock Y must have a higher expected return and a higher standard deviation than Stock X.

21.

Stock A has a beta of 0.7, whereas Stock B has a beta of 1.3. Portfolio P has 50% invested in both A and B. Which of the following would occur if the market risk premium increased by 1% but the risk-free rate remained constant?

- ☐ a. The required return for Stock A would fall, but the required return for Stock B would increase.
- ☐ b. The required return on both stocks would increase by 1%.
- ☐ c. The required return on Portfolio P would remain unchanged.
- ☐ d. The required return on Stock A would increase by more than 1%, while the return on Stock B would increase by less than 1%.
- ☐ e. The required return on Portfolio P would increase by 1%.

22.

Which of the following statements is CORRECT?

- ☐ a. If investors become less risk averse, the slope of the Security Market Line will increase.
- ☐ b. If a company increases its use of debt, this is likely to cause the slope of its SML to increase, indicating a higher required return on the stock.
- ☐ c. The slope of the SML is determined by the value of beta.
- ☐ d. Suppose you plotted the returns of a given stock against those of the market, and you found that the slope of the regression line was negative. The CAPM would indicate that the required rate of return on the stock should be less than the risk-free rate for a well diversified investor, assuming investors expect the observed relationship to continue on into the future.
- ☐ e. The SML shows the relationship between companies' required returns and their diversifiable risks. The slope and intercept of this line cannot be influenced by a firm's managers, but the position of the company on the line can be influenced by its managers.

23.

The risk-free rate is 6% and the market risk premium is 5%. Your \$1 million portfolio consists of \$700,000 invested in a stock that has a beta of 1.2 and \$300,000 invested in a stock that has a beta of 0.8. Which of the following statements is CORRECT?

- ☐ a. If the market risk premium remains unchanged but expected inflation increases by 2%, your portfolio's required return will increase by more than 2%.
- ☐ b. If the stock market is efficient, your portfolio's expected return should equal the expected return on the market, which is 11%.
- ☐ c. If the risk-free rate remains unchanged but the market risk premium increases by 2%, your portfolio's required return will increase by more than 2%.
- ☐ d. The required return on the market is 10%.
- ☐ e. The portfolio's required return is less than 11%.

24.

Dothan Inc.'s stock has a 25% chance of producing a 16% return, a 50% chance of producing a 12% return, and a 25% chance of producing a -18% return. What is the firm's expected rate of return? Do not round your intermediate calculations.

- ☐ a. 4.51%
- ☐ b. 5.50%
- ☐ c. 4.29%
- ☐ d. 6.38%
- ☐ e. 4.68%

25.

Cheng Inc. is considering a capital budgeting project that has an expected return of 24% and a standard deviation of 30%. What is the project's coefficient of variation? Do not round your intermediate calculations. Round the final answer to 2 decimal places.

- ☐ a. 1.08
- ☐ b. 0.99
- ☐ c. 1.03
- ☐ d. 1.40
- ☐ e. 1.25

26.

Tom O'Brien has a 2-stock portfolio with a total value of \$100,000. \$47,500 is invested in Stock A with a beta of 0.75 and the remainder is invested in Stock B with a beta of 1.42. What is his portfolio's beta? Do not round your intermediate calculations. Round your final answer to 2 decimal places.

- ☐ a. 1.06
- ☐ b. 1.04
- ☐ c. 1.05
- ☐ d. 1.09
- ☐ e. 1.10

27.

Cooley Company's stock has a beta of 1.28, the risk-free rate is 2.25%, and the market risk premium is 5.50%. What is the firm's required rate of return? Do not round your intermediate calculations.

- ☐ a. 8.55%
- ☐ b. 9.94%
- ☐ c. 9.29%
- ☐ d. 10.96%
- ☐ e. 11.52%

28.

Tom Noel holds the following portfolio:

Stock	Investment	Beta
A	\$150,000	1.40
B	\$50,000	0.80
C	\$100,000	1.00
D	\$75,000	1.20
Total	<u>\$375,000</u>	

Tom plans to sell Stock A and replace it with Stock E, which has a beta of 0.80. By how much will the portfolio beta change? Do not round your intermediate calculations.

- ☐ a. -0.240
- ☐ b. -0.271
- ☐ c. -0.230
- ☐ d. -0.290
- ☐ e. -0.194

29.

Company A has a beta of 0.70, while Company B's beta is 1.45. The required return on the stock market is 9.00%, and the risk-free rate is 2.25%. What is the difference between A's and B's required rates of return? (Hint: First find the market risk premium, then find the required returns on the stocks.) Do not round your intermediate calculations.

- ☐ a. 4.30%
- ☐ b. 4.71%
- ☐ c. 5.01%
- ☐ d. 4.25%
- ☐ e. 5.06%

30.

Kollo Enterprises has a beta of 0.70, the real risk-free rate is 2.00%, investors expect a 3.00% future inflation rate, and the market risk premium is 4.70%. What is Kollo's required rate of return? Do not round your intermediate calculations.

- ☐ a. 8.29%
- ☐ b. 7.30%
- ☐ c. 6.96%
- ☐ d. 7.96%
- ☐ e. 6.47%

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ANSWER KEY

Ch 6 & 8 Sample Questions

1 True
2 False
3 False
4 True
5 False
6 a
7 a
8 c
9 b
10 b
11 b
12 c
13 c
14 e
15 e
16 e
17 d
18 c
19 e
20 b
21 e
22 d
23 c
24 b
25 e
26 e
27 c
28 a
29 e
30 a