Chapter 7

1. Fama and French claim that after controlling for firm size and the ratio of firm's book value to market value, beta is _____.

I. highly significant in predicting future stock returns
II. relatively useless in predicting future stock returns
III. a good predictor of firm's specific risk

A. I only
B. II only
C. I and III only
D. I, II and III

2. When all investors analyze securities in the same way and share the same economic view of the world, we say they have _____.

A. heterogeneous expectations
B. equal risk aversion
C. asymmetric information
D. homogeneous expectations

3. If enough investors decide to purchase stocks, they are likely to drive up stock prices, thereby causing _____ and _____.

A. expected returns to fall; risk premiums to fall
B. expected returns to rise; risk premiums to fall
C. expected returns to rise; risk premiums to rise
D. expected returns to fall; risk premiums to rise

4. Consider the CAPM. The risk-free rate is 6%, and the expected return on the market is 18%. What is the expected return on a stock with a beta of 1.3?

A. 6%
B. 15.6%
C. 18%
D. 21.6%

5. If all investors become more risk averse, the SML will _____ and stock prices will _____.

A. shift upward; rise
B. shift downward; fall
C. have the same intercept with a steeper slope; fall
D. have the same intercept with a flatter slope; rise

6. Arbitrage is based on the idea that _____.

A. assets with identical risks must have the same expected rate of return
B. securities with similar risk should sell at different prices
C. the expected returns from equally risky assets are different
D. markets are perfectly efficient

7. Investors require a risk premium as compensation for bearing _____.

A. unsystematic risk
B. alpha risk
C. residual risk
D. systematic risk

8. According to the capital asset pricing model, fairly priced securities have _____.

A. negative betas
B. positive alphas
C. positive betas
D. zero alphas

9. According to the capital asset pricing model, in equilibrium _____.

A. all securities' returns must lie below the capital market line
B. all securities' returns must lie on the security market line
C. the slope of the security market line must be less than the market risk premium
D. any security with a beta of 1 must have an excess return of zero

10. Security X has an expected rate of return of 13% and a beta of 1.15. The risk-free rate is 5%, and the market expected rate of return is 15%. According to the capital asset pricing model, security X is _____.

A. fairly priced
B. overpriced
C. underpriced
D. none of these answers

11. Consider the multifactor APT with two factors. Portfolio A has a beta of .5 on factor 1 and a beta of 1.25 on factor 2. The risk premiums on the factor 1 and 2 portfolios are 1% and 7%, respectively. The risk-free rate of return is 7%. The expected return on portfolio A is _____ if no arbitrage opportunities exist.

A. 13.5%
B. 15%
C. 16.25%
D. 23%

12. The possibility of arbitrage arises when _____.

A. there is no consensus among investors regarding the future direction of the market, and thus trades are made arbitrarily
B. mispricing among securities creates opportunities for riskless profits
C. two identically risky securities carry the same expected returns
D. investors do not diversify

13. In a single-factor market model the beta of a stock _____.

A. measures the stock's contribution to the standard deviation of the market portfolio
B. measures the stock's unsystematic risk
C. changes with the variance of the residuals
D. measures the stock's contribution to the standard deviation of the stock

14. According to the CAPM, the risk premium an investor expects to receive on any stock or portfolio is _____.

A. directly related to the risk aversion of the particular investor
B. inversely related to the risk aversion of the particular investor
C. directly related to the beta of the stock
D. inversely related to the alpha of the stock

15. The SML is valid for _____, and the CML is valid for _____.

A. only individual assets; well-diversified portfolios only
B. only well-diversified portfolios; only individual assets
C. both well-diversified portfolios and individual assets; both well-diversified portfolios and individual assets
D. both well-diversified portfolios and individual assets; well-diversified portfolios only

16. Arbitrage is _____.

A. an example of the law of one price
B. the creation of riskless profits made possible by relative mispricing among securities
C. a common opportunity in modern markets
D. an example of a risky trading strategy based on market forecasting

17. According to the CAPM, what is the market risk premium given an expected return on a security of 13.6%, a stock beta of 1.2, and a risk-free interest rate of 4%?

A. 4%
B. 4.8%
C. 6.6%
D. 8%

18. According to the CAPM, what is the expected market return given an expected return on a security of 15.8%, a stock beta of 1.2, and a risk-free interest rate of 5%?

A. 5%
B. 9%
C. 13%
D. 14%

19. Using the index model, the alpha of a stock is 3%, the beta is 1.1, and the market return is 10%. What is the residual given an actual return of 15%?

A. 0%
B. 1%
C. 2%
D. 3%

20. The risk premium for exposure to exchange rates is 5%, and the firm has a beta relative to exchange rates of .4. The risk premium for exposure to the consumer price index is -6%, and the firm has a beta relative to the CPI of .8. If the risk-free rate is 3%, what is the expected return on this stock?

A. .2%
B. 1.5%
C. 3.6%
D. 4%

21. One can profit from an arbitrage opportunity by

A. taking a long position in the cheaper market and a short position in the expensive market.

B. taking a short position in the cheaper market and a long position in the expensive market.

C. taking a long position in both markets.

D. taking a short position in both markets.

22. The market portfolio has a beta of _____.

A. -1.0

B. 0

C. 0.5

D. 1.0

23. Consider the CAPM. The expected return on the market is 18%. The expected return on a stock with a beta of 1.2 is 20%. What is the risk-free rate?

A. 2%

B. 6%

C. 8%

D. 12%

24. You have a $50,000 portfolio consisting of Intel, GE and Con Edison. You put $20,000 in Intel, $12,000 in GE and the rest in Con Edison. Intel, GE and Con Edison have betas of 1.3, 1.0 and 0.8 respectively. What is your portfolio beta?

A. 1.048

B. 1.033

C. 1.000

D. 1.037

25. Assume that both X and Y are well-diversified portfolios and the risk-free rate is 8%. Portfolio X has an expected return of 14% and a beta of 1.00. Portfolio Y has an expected return of 9.5% and a beta of 0.25. In this situation, you would conclude that portfolios X and Y _____.

A. are in equilibrium

B. offer an arbitrage opportunity

C. are both underpriced

D. are both fairly priced

1	2	3	4	5
B	D	A	D	C
6	7	8	9	10
A	D	D	B	B
11	12	13	14	15
C	B	A	C	D
16	17	18	19	20
B	D	D	B	A
21	22	23	24	25
A	D	C	A	A

4.

$E[r_S] = 6\% + [18\% - 6\%](1.3) = 21.6\%$

10.

In equilibrium, $E[r_X] = 5\% + 1.15(15\% - 5\%) = 16.5\%$.

11.

$E[r_A] = 7\% + 0.5(1\%) + 1.25(7\%) = 16.25\%$

17.

$13.6\% = 4\% + 1.2 \times (\text{MRP})$; MRP = 8%

18.

$15.8\% = 5\% + 1.2 \times (\text{MRP})$; MRP = 9%; Expected market return = 5% + 9% = 14%

19.

Residual = $15\% - (3\% + 1.1 \times 10\%) = 1\%$

20.

Return = .03 + .4(.05) + .8(-.06) = .002

23.

$20\% = r_f + (18\% - r_f)(1.2)$; $r_f = 8\%$

24.

$$\left(\frac{20}{50}\right)(1.3)+\left(\frac{12}{50}\right)(1.0)+\left(\frac{18}{50}\right)(0.8)=1.048$$

25.

$$Prem_x = \frac{14-8}{1} = 6 \quad Prem_y = \frac{9.5-8}{0.25} = 6$$

Thus, there are no arbitrage opportunities, and X and Y are in equilibrium.