**Securities Analysis**

**Homework 1**

**Chapters 7 & 8**

**Following are 17 open questions, points per question noted.**

**Chapter 7: Introduction to Portfolio Management**

Part 1: five points each

1. Why do most investors hold diversified portfolios?

2. What is covariance, and why is it important in portfolio theory?

Part II: six points each

3. Why do most assets of the same type show positive covariances of returns with each other? Would you expect positive covariances of returnsbetween different types of assetssuch as returns on Treasury bills, General Electric common stock, and commercial real estate? Why or whynot?

4. What is the relationship between covariance and the correlation coefficient?

5. Explain the shape of the efficient frontier.

6. Draw a properly labeled graph of the Markowitz efficient frontier. Describe the efficient frontier in exact terms. Discuss the concept of dominant portfolios, and show an example of one on your graph. 7. Assume you want to run a computer program to derive the efficient frontier for your feasible set of stocks. What information must you input to the program?

8. Why are investors’ utility curves important in portfolio theory?

9. Explain how a given investor chooses an optimal portfolio. Will this choice always be a diversified portfolio, or could it be a single asset? Explain your answer.

10. Assume that you and a business associate develop an efficient frontier for a set of investments. Why might the two of you select different portfolios on the frontier?

12. Stocks K, L, and M each has the same expected return and standard deviation. The correlation coefficients between each pair of these stocks are: K and L correlation coefficient = +0.8 K and M correlation coefficient = +0.2 L and M correlation coefficient = −0.4 Given these correlations, a portfolio constructed of which pair of stocks will have the lowest standard deviation? Explain.

**Chapter 8: An Introduction to Asset Pricing Models**

Part 3: Six points each

1. Draw a graph that shows what happens to the Markowitz efficient frontier when you combine a risk-free asset with alternative risky asset portfolios on the Markowitz efficient frontier. Explain why the line from the RFR that is tangent to the efficient frontier defines the dominant set of portfolio possibilities.

2. What changes would you expect in the standard deviation for a portfolio of between 4 and 10 stocks, between 10 and 20 stocks, and between 50 and 100 stocks?

3. The capital asset pricing model (CAPM) contends that there is systematic and unsystematic risk for an individual security. Which is the relevant risk variable and why is it relevant? Why is the other risk variable not relevant?

4. What are the similarities and differences between the CML and SML as models of the riskreturn trade-off?

9. According to the CAPM, what assets are included in the market portfolio, and what are the relative weightings? In empirical studies of the CAPM, what are the typical proxies used for the market portfolio? Assuming that the empirical proxy for the market portfolio is not a good proxy, what factors related to the CAPM will be affected?

10. Some studies related to the efficient market hypothesis generated results that implied additional factors beyond beta should be considered to estimate expected returns. What are these other variables and why should they be considered?