Tutorial 4

#1:
In broad terms, why is some risk diversifiable? Why are some risks non-diversifiable? Does it follow that an investor can control the level of unsystematic risk in a portfolio, but not the level of systematic risk?

#2:
Indicate whether the following events might cause stocks in general to change price, and whether they might cause Big Widget Corp.'s stock to change price:

a. The government announces that inflation unexpectedly jumped by 2 percent last month.
b. Big Widget's quarterly earnings report, just issued, generally fell in line with analysts' expectations.
c. The government reports that economic growth last year was at 3 percent, which was generally agreed with most economists' forecasts.
d. The directors of Big Widget die in a plane crash.
e. Congress approves changes to the tax code that will increase the top marginal corporate tax rate. The legislation had been debated for the previous six months.

#3:
Stock Y has a beta of 1.3 and an expected return of 18.5 percent. Stock Z has a beta of 0.70 and an expected return of 12.1 percent. If the risk-free rate is 8 percent and the market risk premium is 7.5 percent, are these stock correctly priced?

#4:
A stock has a beta of 1.35 and an expected return of 16%. A risk-free asset currently earns 4.8%.

a. What is the expected return on a portfolio that is equally invested in the two assets?
b. If a portfolio of the two assets has a beta of 0.95, what are the portfolio weights?
c. If a portfolio of the two assets has an expected return of 8%, what is its beta?
d. If a portfolio of the two assets has a beta of 2.70, what are the portfolio weights? How do you interpret the weights for the two assets in this case? Explain.

#5:
Consider the following information about Stock I and II:

State of Economy	Probability of State of Economy	Rate of Return if State Occurs	
		Stock I	Stock II
Recession	0.25	0.11	-0.40
Normal	0.50	0.29	0.10
Irrational exuberance	0.25	0.13	0.56

The market risk premium is 8 percent, and the risk-free rate is 4 percent. Which stock has the most systematic risk? Which one has the most unsystematic risk? Which stock is "riskier"? Explain.

#6:
Suppose you observe the following situation:

Security	Beta	Expected Return
Pete Corp	1.35	0.132
Repete Co.	0.80	0.101

Assume these securities are correctly priced. Based on the CAPM, what is the expected return on the market? What is the risk-free rate?

#7:
You are managing a portfolio of 6 stocks, which are held in equal dollar amounts. The current beta of the portfolio is 1.4, and the beta's of Stock A is 1.8 and of Stock B is 2.0, respectively. If Stock A and Stock B are sold and the proceeds used to purchase 2 replacement stocks, what does the average beta of these 2 replacement stocks have to be to reduce the portfolio beta to 1.25?