

CHAPTER 7

CONCEPT REVIEW QUESTIONS

1. What is the difference between an asset's *expected return* and its actual return? Why are expected returns so important to investors and managers?

The expected return is a best guess of what the actual return will be, but of course there is no guarantee that actual returns will equal expected returns. Expected returns are important because managers and investors must make decisions in a world of uncertainty. They cannot know for sure what outcomes will occur, but they need to make educated guesses. So the expected return on an investment is of vital importance.

2. Contrast the historical approach to estimating expected returns with the probabilistic approach.

The historical approach begins with an estimate of the historical risk premium on a particular asset. To that an analyst could add the current return on a risk-free instrument like a Treasury bill to arrive at an estimate of expected return. This approach assumes that the historical risk premium is a good estimate of the future risk premium. The probabilistic approach assumes that an analyst can construct a list of outcomes that might occur and attach a probability to each outcome. Estimating the expected return on a stock means listing the returns that the stock might earn and multiplying each possible return by the appropriate probability. These probabilities may be derived from historical data, but they do not have to be.

3. Why should *shares betas* and expected returns be related, while no such relationship exists between shares standard deviations and expected returns?

Expected returns are driven by systematic risk. Standard deviation measures both systematic and unsystematic risk, and therefore it is unreliably related to returns. Beta focuses only on a share's systematic risk, so a positive relationship should hold between betas and returns.

4. Why is the risk-based approach the best method for estimating a share's expected return?

The risk based method has the advantage of taking account of the difference between systematic and unsystematic risk and allows making firm-specific forecasts.

5. How can the weight given to a particular share in a portfolio exceed 100 percent?

If an investor borrows money by selling short one asset and then invests the money in another asset, the weight of the second asset can exceed 100 percent.

6. Why is the standard deviation of a portfolio typically less than the weighted average of the standard deviations of the assets in the portfolio, while a portfolio's beta equals the weighted average of the betas of the shares in the portfolio?

Standard deviation reflects both systematic and unsystematic risk factors. When individual stocks are combined in a portfolio, some of the unsystematic risk disappears, so the portfolio's standard deviation is less than the average of the stocks' standard deviations. On the other hand, a stock's beta measures only its systematic risk. This type of risk does not vanish in a portfolio, so the portfolio beta equals the average of the stock betas.

7. List the three factors that influence a share's expected return according to the CAPM.

The three factors are the risk-free rate, the beta, and the market risk premium.

8. If a particular share had no systematic risk, only unsystematic risk, what would be its expected return?

A stock with no systematic risk has a beta of zero. From the equation of the Security Market Line, we see that a stock with a beta of zero has an expected return equal to the risk-free rate. This makes sense because even if a stock has some unsystematic risk, investors can eliminate all of that through diversification. Therefore, in a portfolio this stock is essentially risk free.

9. If the stock market is *efficient*, what makes it efficient?

Competition for information. It is the actions of traders who are trying to gain an informational advantage on everyone else that makes that very advantage so hard to obtain.

10. If prices move almost at random, then why should we place any value on the CAPM, which makes predictions about expected asset returns?

The CAPM is designed to establish a link between the risk of an asset and its expected return. We expect that assets with higher betas will, on average, earn higher returns than assets with low betas. This may be true even if on a year-to-year basis, actual returns are unforecastable