

## Seminar 10

### Portfolio Risk and Return

1. The line depicting the risk and return of portfolio combinations of a risk-free asset and any risky asset is the:
  - A. Security market line.
  - B. Capital allocation line.
  - C. Security characteristic line.
  
2. The portfolio of a risk-free asset and a risky asset has a better risk–return tradeoff than investing in only one asset type because the correlation between the risk-free asset and the risky asset is equal to:
  - A. 21.0.
  - B. 0.0.
  - C. 1.0.
  
3. With respect to capital market theory, an investor’s optimal portfolio is the combination of a risk-free asset and a risky asset with the highest:
  - A. Expected return.
  - B. Indifference curve.
  - C. Capital allocation line slope.
  
4. Highly risk-averse investors will most likely invest the majority of their wealth in:
  - A. Risky assets.
  - B. Risk-free assets.
  - C. The optimal risky portfolio.
  
5. The capital market line, CML, is the graph of the risk and return of portfolio combinations consisting of the risk-free asset and:
  - A. Any risky portfolio.
  - B. The market portfolio.
  - C. The leveraged portfolio.
  
6. Which of the following statements most accurately defines the market portfolio in capital market theory? The market portfolio consists of all:
  - A. Risky assets.
  - B. Tradable assets.
  - C. Investable assets.
  
7. With respect to capital market theory, the optimal risky portfolio:
  - A. Is the market portfolio.
  - B. Has the highest expected return.
  - C. Has the lowest expected variance.
  
8. Relative to portfolios on the CML, any portfolio that plots above the CML is considered:
  - A. Inferior.
  - B. Inefficient.
  - C. Unachievable.
  
9. A portfolio on the capital market line with returns greater than the returns on the market portfolio represents a(n):
  - A. Lending portfolio.
  - B. Borrowing portfolio.
  - C. Unachievable portfolio.

10. With respect to the capital market line, a portfolio on the CML with returns less than the returns on the market portfolio represents a(n):

- A. Lending portfolio.
- B. Borrowing portfolio.
- C. Unachievable portfolio.

11. Which of the following types of risk is most likely avoided by forming a diversified portfolio?

- A. Total risk.
- B. Systematic risk.
- C. Nonsystematic risk.

12. Which of the following events is most likely an example of nonsystematic risk?

- A. A decline in interest rates.
- B. The resignation of chief executive officer.
- C. An increase in the value of the U.S. dollar.

13. With respect to the pricing of risk in capital market theory, which of the following statements is most accurate?

- A. All risk is priced.
- B. Systematic risk is priced.
- C. Nonsystematic risk is priced.

14. Investors should use a portfolio approach to:

- A. Reduce risk.
- B. Monitor risk.
- C. Eliminate risk.

15. Which of the following is the best reason for an investor to be concerned with the composition of a portfolio?

- A. Risk reduction.
- B. Downside risk protection.
- C. Avoidance of investment disasters.

16. With respect to the formation of portfolios, which of the following statements is most accurate?

- A. Portfolios affect risk less than returns.
- B. Portfolios affect risk more than returns.
- C. Portfolios affect risk and returns equally.

17. Which of the following institutions will on average have the greatest need for liquidity?

- A. Banks.
- B. Investment companies.
- C. Non-life insurance companies.

11. An analyst gathers the following information for the asset allocations of three portfolios:

Portfolio	Fixed Income	Equity	Alternative Assets
1	25%	60%	15%
2	60%	25%	15%
3	15%	60%	25%

Which of the portfolios is *most likely* appropriate for a client who has a high degree of risk tolerance?

- A. Portfolio 1.
- B. Portfolio 2.
- C. Portfolio 3.

1. An investor purchased 100 shares of a stock for \$34.50 per share at the beginning of the quarter. If the investor sold all of the shares for \$30.50 per share after receiving a \$51.55 dividend payment at the end of the quarter, the holding period return is *closest* to:
- A. -13.0%.
  - B. -11.6%.
  - C. -10.1%.
2. An analyst obtains the following annual rates of return for a mutual fund:

Year	Return
2008	14%
2009	-10%
2010	-2%

The fund's holding period return over the three-year period is *closest* to:

- A. 0.18%.
  - B. 0.55%.
  - C. 0.67%.
3. An analyst observes the following annual rates of return for a hedge fund:

Year	Return
2008	22%
2009	-25%
2010	11%

The hedge fund's annual geometric mean return is *closest* to:

- A. 0.52%.
- B. 1.02%.
- C. 2.67%.

7. A portfolio manager creates the following portfolio:

Security	Security Weight	Expected Standard Deviation
1	30%	20%
2	70%	12%

If the correlation of returns between the two securities is 0.40, the expected standard deviation of the portfolio is *closest* to:

- A. 10.7%.
- B. 11.3%.
- C. 12.1%.

Use the following data to answer Questions 20 through 23.

A financial planner has created the following data to illustrate the application of utility theory to portfolio selection:

Investment	Expected Return	Expected Standard Deviation
1	18%	2%
2	19%	8%
3	20%	15%
4	18%	30%

20. A risk-neutral investor is *most likely* to choose:

- A. Investment 1.
- B. Investment 2.
- C. Investment 3.

21. If an investor's utility function is expressed as  $U = E(r) - \frac{1}{2}A\sigma^2$  and the measure for risk aversion has a value of  $-2$ , the risk-seeking investor is *most likely* to choose:

- A. Investment 2.
- B. Investment 3.
- C. Investment 4.

Use the following data to answer Questions 9 and 10.

A portfolio manager creates the following portfolio:

Security	Security Weight	Expected Standard Deviation
1	30%	20%
2	70%	12%

9. If the standard deviation of the portfolio is 14.40%, the correlation between the two securities is equal to:
- A. -1.0.
  - B. 0.0.
  - C. 1.0.
10. If the standard deviation of the portfolio is 14.40%, the covariance between the two securities is equal to:
- A. 0.0006.
  - B. 0.0240.
  - C. 1.0000.

Use the following data to answer Questions 26 through 28.

A portfolio manager creates the following portfolio:

Security	Expected Annual Return	Expected Standard Deviation
1	16%	20%
2	12%	20%

26. If the portfolio of the two securities has an expected return of 15%, the proportion invested in security 1 is:

- A. 25%.
- B. 50%.
- C. 75%.

27. If the correlation of returns between the two securities is  $-0.15$ , the expected standard deviation of an equal-weighted portfolio is *closest* to:
- A. 13.04%.
  - B. 13.60%.
  - C. 13.87%.
28. If the two securities are uncorrelated, the expected standard deviation of an equal-weighted portfolio is *closest* to:
- A. 14.00%.
  - B. 14.14%.
  - C. 20.00%.

**Use the following data to answer Questions 11 through 14.**

An analyst observes the following historic geometric returns:

Asset Class	Geometric Return
Equities	8.0%
Corporate Bonds	6.5%
Treasury Bills	2.5%
Inflation	2.1%

11. The real rate of return for equities is closest to:
- A. 5.4%.
  - B. 5.8%.
  - C. 5.9%.
12. The real rate of return for corporate bonds is closest to:
- A. 4.3%.
  - B. 4.4%.
  - C. 4.5%.
13. The risk premium for equities is closest to:
- A. 5.4%.
  - B. 5.5%.
  - C. 5.6%.
14. The risk premium for corporate bonds is closest to:
- A. 3.5%.
  - B. 3.9%.
  - C. 4.0%.