

# SMN224 Tutorial assignment for topic 6

## Topic 6 Risk and Return

1. The excess return you earn by moving from a relatively risk-free investment to a risky investment is called the:
  - A. geometric average return.
  - B. inflation premium.
  - C. risk premium.
  - D. time premium.
  - E. arithmetic average return.
2. The capital gains yield plus the dividend yield on a security is called the:
  - A. variance of returns.
  - B. geometric return.
  - C. average period return.
  - D. current yield.
  - E. total return.
3. Which one of the following is a correct ranking of securities based on their volatility over the period of 1926 to 2005? Rank from highest to lowest.
  - A. large company stocks, U.S. Treasury bills, long-term government bonds
  - B. small company stocks, long-term corporate bonds, large company stocks
  - C. small company stocks, long-term government bonds, long-term corporate bonds
  - D. small company stocks, large company stocks, long-term corporate bonds
  - E. long-term corporate bonds, large company stocks, U.S. Treasury bills
4. Which one of the following is a correct statement concerning risk premium?
  - A. The greater the volatility of returns, the greater the risk premium.
  - B. The lower the volatility of returns, the greater the risk premium.
  - C. The lower the average rate of return, the greater the risk premium.
  - D. The risk premium is not correlated to the average rate of return.
  - E. The risk premium is not affected by the volatility of returns.
5. The risk premium is computed by \_\_\_\_\_ the average return for the investment.
  - A. subtracting the inflation rate from
  - B. adding the inflation rate to
  - C. subtracting the average return on the U.S. Treasury bill from
  - D. adding the average return on the U.S. Treasury bill to
  - E. subtracting the average return on long-term government bonds from
6. Which of the following statements concerning the standard deviation are correct?
  - (I) The greater the standard deviation, the lower the risk.
  - (II) The standard deviation is a measure of volatility.
  - (III) The higher the standard deviation, the less certain the rate of return in any one given year.

(IV) The higher the standard deviation, the higher the expected return.

- A. I and III only
- B. II, III, and IV only
- C. I, III, and IV only
- D. I, II, and III only
- E. I, II, III, and IV

7. A capital gain occurs when:

- A. the selling price is less than the purchase price.
- B. the purchase price is less than the selling price.
- C. there is no dividend paid.
- D. there is no income component of return.
- E. never, as they cannot exist.

8. A year ago, you purchased 300 shares of IXC Technologies, Inc. stock at a price of £9.03 per share. The stock pays an annual dividend of £.10 per share. Today, you sold all of your shares for £28.14 per share. What is your total return on this investment?

- A. £5,703
- B. £5,733
- C. £5,753
- D. £5,763
- E. £5,853

9. The prices for IMB over the last 3 years are given below. Assuming no dividends were paid, what was the 3-year holding period return? Given the following information: Year 1 return = 10%, Year 2 return = 15%, Year 3 return = 12%.

- A. 12.3%
- B. 13.9%
- C. 15.8%
- D. 41.7%
- E. 46.5%

10. Excelsior share are currently selling for £25 each. You bought 200 shares one year ago at £24 and received dividend payments of £1.50 per share. What was your total rate of return?

- A. 4.17%
- B. 6.25%
- C. 10.42%
- D. 104.67%
- E. 110.42%

11. The returns on your portfolio over the last 5 years were -5%, 20%, 0%, 10% and 5%. What is the standard deviation of your return?

- A. 2.74%
- B. 5.21%
- C. 8.60%
- D. 10.12%
- E. 12.70%

12. The return pattern on your favorite stock has been 5%, 8%, -12%, 15%, 21% over the last five years. What has your average return and holding period return over the last 5 years?

- A. 4.5%; 6.5%
- B. 7.4%; 38.9%
- C. 7.4%; 7.76%
- D. 7.4%; 76.73%
- E. None of the above.

13. If the covariance of stock 1 with stock 2 is -.0065, then what is the covariance of stock 2 with stock 1?

- A. -.0065
- B. +.0065
- C. greater than +.0065
- D. less than -.0065
- E. Need additional information.

14. A portfolio is:

- A. a group of assets, such as stocks and bonds, held as a collective unit by an investor.
- B. the expected return on a risky asset.
- C. the expected return on a collection of risky assets.
- D. the variance of returns for a risky asset.
- E. the standard deviation of returns for a collection of risky assets.

15. The percentage of a portfolio's total value invested in a particular asset is called that asset's:

- A. portfolio return.
- B. portfolio weight.
- C. portfolio risk.
- D. rate of return.
- E. investment value.

16. If a stock portfolio is well diversified, then the portfolio variance:

- A. will equal the variance of the most volatile stock in the portfolio.
- B. may be less than the variance of the least risky stock in the portfolio.
- C. must be equal to or greater than the variance of the least risky stock in the portfolio.
- D. will be a weighted average of the variances of the individual securities in the portfolio.
- E. will be an arithmetic average of the variance of the individual securities in the portfolio.

17. The expected return on a portfolio:

- A. can be greater than the expected return on the best performing security in the portfolio.
- B. can be less than the expected return on the worst performing security in the portfolio.
- C. is independent of the performance of the overall economy.
- D. is limited by the returns on the individual securities within the portfolio.
- E. is an arithmetic average of the returns of the individual securities when the weights of those securities are unequal.

18. Suppose the following represents the historical returns for Microsoft and Lotus Development Corporation:

Year	Historical Return	
	Microsoft	Lotus
1	10%	9%
2	15%	12%
3	-12%	-7%
4	20%	18%
5	7%	5%

- a. What is the mean return for Microsoft? For Lotus?
- b. What is the standard deviation of returns for Microsoft? For Lotus?
- c. Suppose the returns for Microsoft and Lotus have normally distributed returns with means and standard deviations calculated above. For each stock, determine the range of returns within one expected standard deviation of the mean and within two standard deviations of the mean.