

Chapter Two

Valuation, Risk, Return, and Uncertainty

- A** 1. An ordinary annuity is a _____ series of _____ cash.
- finite, constant
 - finite, growing
 - infinite, constant
 - infinite, growing
- B** 2. The winner of a state lottery usually receives a(n)
- ordinary annuity
 - annuity due
 - growing annuity
 - perpetuity
- B** 3. Using a discount rate of 8% per year, what is the present value of an ordinary annuity of \$100 per year for 10 years?
- \$1,000
 - \$671
 - \$887
 - \$557
- A** 4. Using a discount rate of 8% per year, what is the present value of an annuity due of \$100 per year with 10 payments?
- \$725
 - \$559
 - \$793
 - \$772
- D** 5. Using a discount rate of 8% per year (compounded quarterly), what is the present value of an ordinary annuity of \$100 per year for 10 years?
- \$726
 - \$662
 - \$811
 - \$684

- C** 6. A perpetual cash flow stream makes its first payment of \$500 in one year. Using a 7% annual discount rate and a 3% growth rate in the value of subsequent payments, what is the present value of this growing perpetuity?
- a. \$2,000
 - b. \$20,000
 - c. \$12,500
 - d. \$125,000
- B** 7. A perpetuity makes annual payments of \$250. The perpetuity is valued using a 10% discount rate. What is the value of the perpetuity if the first payment is made immediately?
- a. \$2,500
 - b. \$2,750
 - c. \$25,000
 - d. \$2,525
- A** 8. The fact that most investors are risk averse means they will
- a. only take risks for which they are properly rewarded
 - b. not take a risk
 - c. not voluntarily take a risk
 - d. not take a risk unless they know the outcome in advance
- B** 9. Which of the following statements is true?
- a. Some people are risk averse and others are not
 - b. Some people are more risk averse than others
 - c. Risk averse people will not take a risk
 - d. Risk averse people are willing to settle for less return than risk neutral people
- A** 10. Risk must involve
- a. a chance of loss
 - b. an unknown probability distribution
 - c. actual dollars
 - d. negative expected returns
- C** 11. Overall variability of returns is called
- a. systematic risk
 - b. unsystematic risk
 - c. total risk
 - d. undiversifiable risk

- B** 12. Risk is often measured as
- a. central tendency of returns
 - b. dispersion of returns
 - c. expected value of returns
 - d. possibility of negative returns
- A** 13. Riskier securities have _____ returns.
- a. higher expected
 - b. lower realized
 - c. higher instantaneous
 - d. lower long-term
- B** 14. The market rewards investors for bearing _____ risk.
- a. diversifiable
 - b. undiversifiable
 - c. unsystematic
 - d. total
- B** 15. The diminishing marginal utility of money explains why
- a. some stocks sell for more than others
 - b. most people will not take a fair bet
 - c. people view the stock market as risky
 - d. people tend to pay too much
- C** 16. The text described an example of the diminishing marginal utility of money with a statement made by a _____ player.
- a. hockey
 - b. football
 - c. tennis
 - d. basketball
- C** 17. Individual investment behavior is more a function of _____ than _____.
- a. risk, expected return
 - b. expected return, utility
 - c. utility, expected return
 - d. expected return, risk
- B** 18. The St. Petersburg paradox explains why
- a. some stocks sell for more than others
 - b. most people will not take a fair bet
 - c. people view the stock market as risky
 - d. people tend to pay too much

- A** 19. In economic theory, if money is not saved, it is
- a. consumed
 - b. invested
 - c. unrealized
 - d. deferred
- D** 20. Wearing a Rolex watch is an example of someone getting
- a. psychic return
 - b. utility
 - c. satisfaction
 - d. all of the above
- B** 21. Two large classes of risk are
- a. systematic and undiversifiable
 - b. price and convenience
 - c. realized and psychic
 - d. market and intermarket
- C** 22. Individual consumption decisions are a major factor in determining
- a. credit ratings of corporations
 - b. dividend rates
 - c. market interest rates
 - d. levels of perceived risk
- B** 23. If a stock has a higher than average expected return, you would logically expect it is
- a. widely held by investors
 - b. riskier than average
 - c. in an industry with good prospects
 - d. a well-managed company
- D** 24. What is the present value of a growing perpetuity with an initial cash flow of 1000 (C_0), a growth rate of 3% per year (g), and a required rate of return of 8% (R)?
- a. \$7777.64
 - b. \$12,500
 - c. \$20,000
 - d. \$20,600

- C** 25. Most investors would not be interested in a fair bet because
- a. they would be concerned whether it is really fair
 - b. investors do not willingly take a risk when it is possible to lose money
 - c. losing a given amount of money would reduce utility more than winning the same amount would increase utility
 - d. they accept only bets with a sure outcome
- B** 26. The holding period return is calculated as
- a. $\frac{P_1 - P_0}{P_0}$
 - b. $\frac{P_1 - P_0 + \text{income}}{P_0}$
 - c. $\frac{P_0 - P_1 + \text{income}}{P_0}$
 - d. $\frac{P_1 - P_0 - \text{income}}{P_0}$
- C** 27. You bought 100 shares of stock at \$35, received \$3 per share in dividends, and sold the shares for \$50. Your holding period return is
- a. 36%
 - b. \$1,503
 - c. 51.4%
 - d. \$5,300
- B** 28. Which of the following is true of the holding period return?
- a. It considers the time value of money
 - b. It is independent of the passage of time
 - c. It explicitly considers risk
 - d. It only considers capital gains or losses
- C** 29. A holding period return should only be compared with returns calculated
- a. over shorter periods
 - b. over longer periods
 - c. over periods of the same length
 - d. over periods of the same length or less
- D** 30. A stock's return is 15.5%. The return relative is
- a. 0.845
 - b. -0.845
 - c. 0.155
 - d. 1.155

- D** 31. Return relatives are calculated primarily to deal with the potential problem of
- a. changing returns
 - b. large returns
 - c. zero returns
 - d. negative returns
- A** 32. A stock has monthly returns of 4%, 5%, 2%, and -3%. Its arithmetic average return is
- a. 2%
 - b. 3%
 - c. 4%
 - d. 5%
- A** 33. A stock has monthly returns of 4%, 5%, 2%, and -3%. Its geometric average return is
- a. 1.9%
 - b. 2.1%
 - c. 3.3%
 - d. cannot be determined
- B** 34. You buy a stock for \$50 per share. Over the next four months, it has monthly returns of 4%, 5%, 2%, and -3%. The value of a share at the end of the fourth month is
- a. \$51.20
 - b. \$54.02
 - c. \$54.12
 - d. \$56.45
- A** 35. Suppose a stock pays no dividends. Another method of calculating the return relative is
- a. $\frac{P_1}{P_0}$
 - b. $\frac{P_0}{P_1}$
 - c. $\frac{P_1 - P_0}{P_0}$
 - d. $\frac{P_0 - P_1}{P_1}$

- A** 36. The arithmetic mean is always _____ the geometric mean.
- a. greater than or equal to
 - b. greater than
 - c. less than or equal to
 - d. less than
- A** 37. The _____ the dispersion in a series of numbers, the _____ the gap between the arithmetic and geometric mean.
- a. greater, greater
 - b. greater, smaller
 - c. smaller, greater
 - d. more predictable, less predictable
- A** 38. Technically, _____ refers to the past; _____ refers to the future.
- a. return, expected return
 - b. realized return, return
 - c. return relative, return
 - d. return, return relative
- C** 39. According to the book, which of the following terms can mean different things to different people?
- a. Return on assets
 - b. Return on equity
 - c. Return on investment
 - d. Return of principal
- B** 40. The use of _____ can dramatically affect an investor's return.
- a. historical data
 - b. leverage
 - c. arithmetic averages
 - d. variance calculations
- D** 41. Total risk can be measured by all of the following EXCEPT
- a. variance
 - b. standard deviation
 - c. semi-variance
 - d. arithmetic mean
- D** 42. The variance of x is 25. What is the variance of $2x$?
- a. 25
 - b. 50
 - c. 75
 - d. 100

- B** 43. Semi-variance only considers
- a. extreme variation
 - b. adverse variation
 - c. unexpected variation
 - d. anticipated variation
- C** 44. Discrete random variables are ____; continuous random variables are ____.
- a. quantifiable, unquantifiable
 - b. objective, subjective
 - c. counted, measured
 - d. dependent, independent
- B** 45. A variable whose value is based on the value of other variables is a(n)
- a. independent variable
 - b. dependent variable
 - c. stochastic variable
 - d. estimated variable
- A** 46. Random variables reside in a population
- a. sample
 - b. continuous set
 - c. discrete set
- A** 47. A jar contains a mixture of coins; you need a quarter. From your perspective, the distribution of coins in the jar is univariate
- a. bivariate
 - b. trivariate
 - c. multivariate
- D** 48. If a distribution shows more possible outcomes on one side of the mean than the other, the distribution shows
- a. uniformity
 - b. normal characteristics
 - c. random characteristics
 - d. skewness

- D** 49. A coin-flipping experiment in which you measure heads or tails takes observations from a _____ distribution.
- a. chi-square
 - b. exponential
 - c. Poisson
 - d. binomial
- D** 50. Which of the following is a measure of central tendency?
- a. Skewness
 - b. Variance
 - c. Kurtosis
 - d. Mean
- D** 51. The expected value of a random variable is also called the
- a. skewness
 - b. variance
 - c. kurtosis
 - d. mean
- D** 52. A jar contains 100 quarters, 50 dimes, and 50 nickels. What is the expected value of a single observation from this coin population?
- a. \$0.375
 - b. \$0.200
 - c. \$0.133
 - d. \$0.163
- D** 53. Which of the following can help reduce the effect of outliers?
- a. Rounding
 - b. Regression
 - c. Interpolation
 - d. Logarithms
- C** 54. The expected value of x is 5%. What is $E(6x)$?
- a. 0.833%
 - b. 5%
 - c. 30%
 - d. Cannot be determined

- A** 55. The correlation coefficient is equal to
- a. $\frac{\text{cov}(\tilde{a}, \tilde{b})}{\sigma_a \sigma_b}$
 - b. $\text{cov}(\tilde{a}, \tilde{b}) \sigma_a \sigma_b$
 - c. $\frac{\text{cov}(\tilde{a}, \tilde{b}) \sigma_a}{\sigma_b}$
 - d. $1 - \left[\frac{\text{cov}(\tilde{a}, \tilde{b})}{\sigma_a \sigma_b} \right]$
- A** 56. The minimum value of the correlation coefficient is
- a. -1
 - b. 0
 - c. +1
 - d. there is no minimum value
- D** 57. The minimum value of covariance is
- a. -1
 - b. 0
 - c. +1
 - d. there is no minimum value
- A** 58. R squared is a measure of
- a. goodness of fit
 - b. partial dispersion
 - c. central tendency
 - d. skewness
- B** 59. A sample of 100 observations has a standard deviation of 25. What is the standard error?
- a. 5
 - b. 2.5
 - c. .25
 - d. Cannot be determined
- C** 60. A sample of 100 observations has a standard deviation of 25 and a mean of 75. What is the 95% confidence interval?
- a. $50 \leq \bar{x} \leq 75$
 - b. $73 \leq \bar{x} \leq 77$
 - c. $70 \leq \bar{x} \leq 80$
 - d. $74.5 \leq \bar{x} \leq 75.5$

- B** 61. The expected return on A is 12%; the expected return on B is 15%. What is the expected return of a portfolio that contains one-third A and the remainder B ?
- a. 12%
 - b. 14%
 - c. 15%
 - d. 13.5%
- A** 62. A tilde ($\sim$) over a symbol indicates it is a
- a. random variable
 - b. constant
 - c. continuous random variable
 - d. discrete random variable
- B** 63. If two securities are negatively correlated, their covariance is
- a. positive
 - b. negative
 - c. zero
 - d. cannot be determined
- C** 64. The covariance between a random variable and a constant is
- a. negative
 - b. positive
 - c. zero
 - d. non-negative
- A** 65. Return is the
- a. benefit associated with an investment
 - b. realized gain from an investment
 - c. realized and unrealized gain from an investment
 - d. measurable gain from an investment
- C** 66. Assume the risk-free rate is constant over time. The correlation between the return on security x and the return on the risk-free asset is
- a. negative
 - b. positive
 - c. zero
 - d. cannot be determined without further information

- A** 67. The correct method for measuring the average return over several periods in the past is with a(n)
- a. geometric mean
 - b. arithmetic mean
 - c. statistical mean
 - d. multiple variation mean
- B** 68. Using semivariance to measure risk is appropriate if the return distribution is
- a. symmetrical
 - b. not symmetrical
 - c. normally distributed
 - d. uniformly distributed
- C** 69. The median of a distribution is the
- a. arithmetic average
 - b. geometric average
 - c. point where half of the observations lie on either side
 - d. value that occurs most frequently
- D** 70. If the variance of x is 0.10, what is the variance of $2x$?
- a. 0.05
 - b. 0.10
 - c. 0.20
 - d. 0.40
- B** 71. If the standard deviations of Stock A and B are 0.20 and 0.30 respectively and the $\text{COV}(A,B)$ equals 0.012, what is the correlation coefficient?
- a. 0.00072
 - b. 0.20
 - c. 0.30
 - d. 2