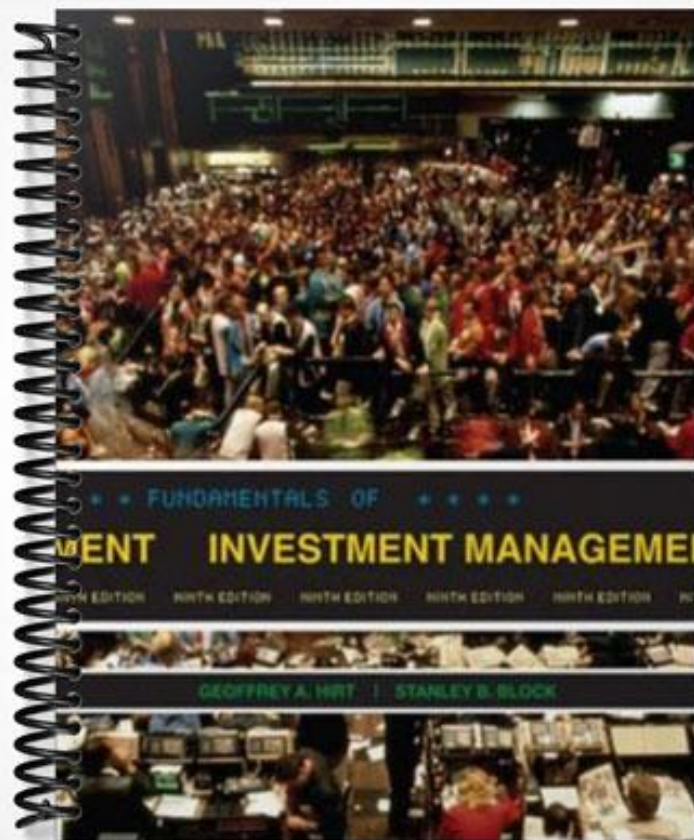


SOLUTIONS MANUAL



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CHAPTER 01

THE INVESTMENT SETTING

Answers to Text Discussion Questions

1. How is an investment defined?

1-1. An investment is the commitment of current funds in anticipation of receiving a larger flow of funds in the future.

2. What are the differences between financial and real assets?

1-2. A financial asset represents a financial claim on an asset that is usually documented by some form of legal representation such as a stock or bond. A real asset is an actual tangible item such as real estate, gold, antiques, jewels, etc.

3. List some key areas relating to investment objectives.

1-3. Key areas relating to investment objectives include risk and safety of principal, current income versus capital appreciation, liquidity considerations, short-term versus long-term orientation in measurement, tax factors, ease of management, and retirement and estate planning considerations.

4. Explain the concepts of direct equity and indirect equity.

1-4. Direct equity represents actual ownership of shares in a firm or the instruments that can be used to purchase the shares (such as warrants or options). Indirect equity is ownership of shares of an investment company that in turn owns an equity position in other firms.

5. How are equity and creditor claims different?

1-5. Equity claims represent ownership in something whereas creditor claims are represented by a debt instrument.

6. Do those wishing to assume low risks tend to invest long term or short term? Why?

1-6. Risk averters tend to invest short term because liquidity tends to be greater and changes in prices of assets tend to be less over the short term.

7. How is liquidity measured?

1-7. Liquidity is measured by the ability to convert an asset into cash within a relatively short period of time with a minimum capital loss from the transaction. Liquidity can also be measured indirectly by the transactions costs or commissions involved in the transfer of ownership.

8. Explain why conservative investors who tend to buy short-term assets differ from short-term traders.

1-8. Conservative investors tend to buy short term and hold to maturity, and do not necessarily seek critical timing decisions. Short-term traders may buy long or short term, but do not expect to hold the assets indefinitely, so timing to obtain the lower purchase price and highest selling price is critical.

9. How does the Tax Relief Act of 2003 affect the relative attractiveness of long-term capital gains versus dividend income? (A general statement will suffice.)

1-9. There is no longer a strong preference for long-term capital gains over dividends. Both long-term capital gains and dividends are taxed at a maximum rate of 15 percent.

10. Why is there a minimum amount of time that must be committed to any investment program?

1-10. Even when someone else manages your investments, you must monitor the managers' activities and choose the best managers.

11. In a highly inflationary environment, would an investor tend to favor real or financial assets? Why?

1-11. Real assets, because they have a replacement value reflecting increasing prices. In a more moderate inflationary environment, stocks or bonds may be preferred.

12. What two primary components are used to measure the rate of return achieved from an investment?

1-12. The two primary components of return are capital gains (or increase in value) and current income (for a stock, this would be represented by dividends).

13. Many people think of risk as the danger of losing money. Is this the same way that risk is defined in finance?

1-13. In finance, risk is not viewed as simply the danger of losing money, but rather as the uncertainty associated with the outcomes from an investment. The greater the dispersion of possible outcomes, the greater is the risk.

14. What are the three elements that determine the return an investor should require from an investment?

1-14. The three elements that determine required return are: the real rate of return, the anticipated inflation factor, and the risk premium.

15. Explain how an investor receiving a 2 or 3 percent quoted return in an inflationary environment may actually experience a negative real rate of return.

1-15. If the rate of inflation exceeds the quoted rate of return on an investment, the investor will experience a negative real return. He or she is "paying" the borrower to use the funds. 1-16. In Figure 1-4, the Ibbotson values show that the highest return category was small company stocks and the lowest was U.S. Treasury Bills. Not coincidentally, small stocks had the highest risk and Treasury bills the lowest risk.

16. In Figure 1–4, what has been the highest return investment category over the 79-year period? What has been the lowest? Assuming risk is measured by the standard deviation, what can you say about the relationship of risk to return in Figure 1–4?

1-16. In Figure 1-4, the Ibbotson values show that the highest return category was small company stocks and the lowest was U.S. Treasury Bills. Not coincidentally, small stocks had the highest risk and Treasury bills the lowest risk.

PROBLEMS

Rate of return

1. The stock of Clarkson Corporation went from \$50 to \$56 last year. The firm also paid \$2 in dividends. Compute the rate of return.

$$\begin{aligned} \mathbf{1-1.} \quad \text{Rate of return} &= \frac{(P_1 - P_0) + D_1}{P_0} \\ &= \frac{(\$56 - \$50) + \$2}{\$50} = \frac{\$6 + \$2}{\$50} = \frac{\$8}{\$50} = 16\% \end{aligned}$$

Rate of return

2. In the following year, the dividend was raised to \$2.25. However, a bear market developed toward the end of the year, and the stock price declined from \$56 at the beginning of the year to \$48 at the end of the year. Compute the rate of return or (loss) to stockholders.

$$\mathbf{1-2.} \quad \frac{(\$48 - \$56) + \$2.25}{\$56} = \frac{-\$8 + \$2.25}{\$56} = \frac{-\$5.75}{\$56} = -10.27\%$$

Risk-free rate

3. Assume the real rate of return in the economy is 2.5 percent, the expected rate of inflation is 5 percent, and the risk premium is 5.8 percent. Compute the risk-free rate (Formula 1-3) and required rate of return.

1-3. Risk-free rate = $(1 + \text{Real rate}) \times (1 + \text{Expected rate of inflation}) - 1$

$$(1.025)(1.05) - 1 = 1.0763 - 1 = .0763 = 7.63\%$$

$$\text{Required rate of return} = \text{Risk-free rate} + \text{Risk premium}$$

$$= 7.63\% + 5.8\%$$

$$= 13.43\%$$

Required return

4. Assume the real return in the economy is 4 percent. It is anticipated that the consumer price index will go from 200 to 210. Shares in common stock are assumed to have a required return one-third higher than the risk-free rate. Compute the required return on common stock.

1-4. Real rate = 4.0%

$$\text{Expected rate of inflation} = 210/200 = 1.05 \text{ or } 5\%$$

The risk-free rate is:

$$(1.04)(1.05) - 1 = 1.092 - 1 = .092 = 9.2\%$$

The required rate of return is:

$$9.2\% \times 1.33 = 12.24\%$$