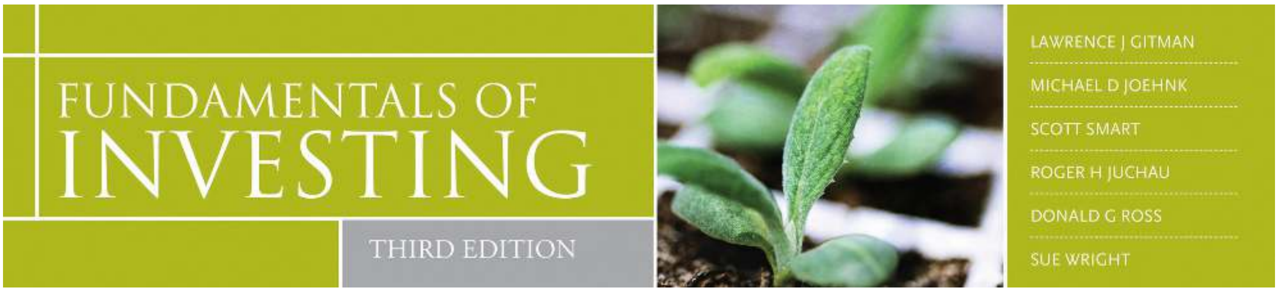
PEARSON ALWAYS LEARNING



Part One

Preparing to Invest

Part One Includes

Chapter 1

The Investment Environment

■ Outline

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1.2 Preparing Carolyn Bowen's Investment Plan

Excel with Spreadsheets

■ Key Concepts

1. The meaning of the term *investment* and the implications it has for individual investors
2. Review the factors used to differentiate between different types of investments
3. The importance of, and basic steps involved in, the investment process
4. Popular types of investment vehicles, including short-term investments, ordinary shares, and fixed-income securities such as bonds, convertible securities, and preference shares
5. Managed funds, hedge funds, and derivative securities such as options and futures
6. Other popular investment vehicles such as real estate and tangibles
7. Investment goals including retirement, income, major expenditures, and sheltering income from taxes
8. Building a diversified portfolio consistent with investment goals
9. Sources of taxation, types of taxable income, and the effect of taxes on the investor
10. Developing an investment program that considers differing economic environments and life-cycle stages
11. The use of short-term securities in meeting liquidity needs
12. The merits and suitability of various short-term investment vehicles

■ Overview

This chapter provides an overview of the scope and content of the text.

1. The term *investment* is defined, and the alternative investment opportunities available to investors are classified by types. *Returns* are defined as rewards for investing. Returns to an investor take two forms—current income and increased value of the investment over time. In this section, the instructor need only define return, since there will be another opportunity to develop the concept of return in Chapter 4; however, providing information about recent investment returns is always well received by students.

2. An examination of the structure of the investment process is presented. This section explains how suppliers and demanders of investment funds are brought together in the marketplace. The key participants in the investment process—government, business, and individuals—are described, as are institutional and individual investors.

3. Next, the following investment vehicles available to individual investors are discussed: short-term investments, ordinary shares, fixed-income securities, managed funds, hedge funds, options, futures, real estate, and tangibles. The text describes their risk-return characteristics in a general way. The instructor may want to expand on the advantages and disadvantages of investing in each, although they will be treated in greater detail in subsequent chapters. It is vital for any investor to establish investment goals that are consistent with his or her overall financial objectives.

4. Once the investment goals have been well specified, the investor can adopt an investment plan consistent with these goals, evaluate and select suitable investments, and then construct and manage a diversified portfolio.

5. Personal taxes are discussed in terms of types of income and tax rates. The investment process is affected by current tax laws. Tax planning is discussed.

6. Once investment goals are established, it is important to understand how the investment process is affected by different economic environments. The chapter discusses how investments are affected by the business cycle and interest rates.

7. Liquidity is defined, and short-term securities that can be used to meet liquidity requirements are described. The discussion includes a look at short-term interest rates and the risk characteristics of various short-term securities. Producing information on current rates helps bring realism into the classroom and enhances student perception of the lecturer as a knowledgeable instructor.

8. The final section covers careers in finance, including in commercial and investment banking, corporate finance, financial planning, insurance, and investment management.

■ Answers to Concepts in Review

1. An *investment* is any asset into which funds can be placed with the expectation of preserving or increasing value and earning a positive rate of return. An investment can be a security or a property. Individuals invest because an investment has the *potential* to preserve or increase value and to earn income. It is important to stress that this does *not* imply that an investment will in fact preserve value or earn income. Bad investments do exist.

2. (a) Securities and property are simply two classes of investments. *Securities* are investments, commonly evidenced by certificates, that represent a legal claim. For example, a bond represents a legal claim on debt, and a share represents a proportionate ownership in the firm. An option, on the other hand, represents the legal right to either buy or sell an asset at a predetermined price within a specified time period. *Property* constitutes investments in either real estate (land and buildings) or tangible personal property (Rembrandt paintings, Ming vases, or antique cars).

   (b) With a *direct investment*, an individual acquires a direct claim on a security or property. For example, an investment in one CBA share directly provides the shareholder a proportionate ownership in the Commonwealth Bank of Australia. An *indirect investment* provides an indirect claim on a security or property. For example, if you bought one share of Fidelity Australian Equities Fund (a managed fund), you are in effect buying a portion of a portfolio of securities owned by the fund. Thus, you will have a claim on a fraction of an entire portfolio of securities.

(c) An investment in *debt* represents funds loaned in exchange for the receipt of interest income and repayment of the loan at a given future date. The bond, a common debt instrument, pays specified interest over a specified time period, then repays the face value of the loan. (Chapters 10 and 11 cover bonds in detail.) An *equity investment* provides an investor an ongoing fractional ownership interest in a firm. The most common example is an investment in a company's ordinary shares. We will study equity instruments in greater detail in Chapters 6 through 8. *Derivative securities* are securities derived from debt or equity securities and structured to exhibit characteristics different from the underlying securities. *Options* are derivative securities that allow an investor to sell or buy another security or asset at a specific price over a given time period. For example, an investor might purchase an option to buy CBA shares for $50 within nine months.

(d) *Short-term investments* typically mature within one year while *long-term investments* have longer maturities, including ordinary shares, which have no maturity at all. However, long-term investments can be used to satisfy short-term financial goals.

3. In finance, *risk* refers to the chance that the return from an investment will differ from its expected value. The broader the range of possible values (dispersion), the greater the risk of the investment. *Low-risk investments* are those considered safe with respect to the return of funds invested and the receipt of a positive rate of return. *High-risk investments* are those which have more uncertain future values and levels of earnings.

4. *Foreign investments* are investments in the debt, equity, derivative securities of foreign-based companies, and property in a foreign country. Both direct and indirect foreign investments provide investors more attractive returns or lower-risk investments compared to purely domestic investments. They are useful instruments to diversify a pure domestic portfolio.

5. The *investment process* brings together suppliers and demanders of funds. This may occur directly (as with property investments). More often the investment process is aided by a *financial institution* (such as a bank, credit union, insurance company, or superannuation fund) that channels funds to investments and/or a *financial market* (either the money market or the capital market) where transactions occur between suppliers and demanders of funds.

6. (a) The various levels of government (federal, state, and local) require more funds for projects and debt repayment than they receive in revenues. Thus, governments are *net demanders* of funds. Governments also demand funds when the timing of their revenues does not match their expenditures. The term *net* refers to the fact that, while governments both supply and demand funds in the investment process, on balance they demand more than they supply.

   (b) Businesses are also *net demanders,* requiring funds to cover short- and long-term operating needs. While businesses often supply funds, on balance they also demand more than they supply.

   (c) Individuals are the *net suppliers* of funds to the investment process. They put more funds into the investment process than they take out. Individuals play an important role in the investment process—supplying the funds needed to finance economic growth and development.

7. *Institutional investors* are investment professionals who are paid to manage other people's money. They are employed by financial institutions like banks and insurance companies, by nonfinancial businesses, and by individuals. *Individual investors* manage their own personal funds in order to meet their financial goals. Generally, institutional investors tend to be more sophisticated because they handle much larger amounts of money, and they tend to have a broader knowledge of the investment process and available investment techniques and vehicles.

8. *Short-term investments* are those that usually have lives of less than one year. These vehicles may be used to “warehouse” temporarily idle funds while suitable long-term vehicles are evaluated.

   Due to their safety and convenience, they are popular with those who wish to earn a return on temporarily idle funds or with the very conservative investor who may use these short-term vehicles as a primary investment outlet. In addition to their “warehousing” function, short-term vehicles provide liquidity—they can be converted into cash quickly and with little or no loss in value. This characteristic is very useful when investors need to meet unexpected expenses or take advantage of attractive opportunities.

9. The *ordinary share* is an equity investment that represents a fractional ownership interest in a corporation. The return on an ordinary share investment derives from two sources: *dividends,* which are periodic payments made by the firm to its shareholders from current and past earnings, and *capital gains,* which result from selling the share at a price above the original purchase price. Because ordinary shares offer a broad range of return-risk combinations, they are one of the most popular investment vehicles.

10. (a) *Bonds* are debt obligations of corporations or governments. A bondholder receives a known interest return, typically semi-annually, plus the face value at maturity. Bonds are usually issued in $1,000 denominations, pay semi-annual interest, and have 10- to 40-year maturities. Bonds offer fixed/certain returns, if held until maturity.

    (b) A *convertible security* is a fixed-income security, either a bond or preference share, which has a conversion feature. Typically, it can be converted into a specified number of shares. Convertible securities are quasi-derivative securities, as their market value would depend on the price of the ordinary shares and the conversion ratio.

(c) *Preference shares* are very much like ordinary shares in that they represent an ownership interest in a corporation. But preference shares pay only a fixed stated dividend, which has precedence over ordinary share dividends, and does not share in other earnings of the firm.

(d) A *managed fund* is a company that invests in a large portfolio of securities, whereas a *money market managed fund* is a managed fund that solely invests in short-term investment vehicles. Investors might find managed funds appealing because a large portfolio may be more consistent with their investment goals in terms of risk and return. As we will see later, a managed fund offers the investor the benefits of diversification and professional management. Managed funds do not offer fixed/certain returns. Managed funds are quasi-derivative securities, as their market value would depend on the price of the assets that make up the fund's portfolio.

(e) Similar to managed funds, hedge funds pool the investors' funds to invest in securities, but are open to a narrower group of investor than managed funds and may employ high risk strategies. They do not offer a fixed return and are most often not based on derivatives. Hedge funds usually employ a professional manager.

(f) *Options* are derivative securities that provide holders the right to buy or sell another security (typically shares) or property at a specified price over a given time period. Factors like the time until expiration, the underlying share price behaviour, and supply and demand conditions affect the returns.

(g) *Futures* represent contractual arrangements in which a seller will deliver or a buyer will take delivery of a specified quantity of a commodity at a given price by a certain date. Unlike an option, which gives the investor the *right* to purchase or sell another security, futures contracts *obligate* the investor to deliver or take delivery. Factors affecting returns on commodity contracts include changes in government policy, unpredictable weather, trade embargoes, and other events.

11. Before developing and executing an investment program, an investor should establish a set of overall financial goals for the investment program. The seven steps involved in investing are as follows:

(1) *Meeting investment prerequisites.* Providing for necessities of life, and adequate protection against losses, as discussed above.

(2) *Establishing investment goals.* Investment goals are the financial objectives that one wishes to achieve by investing. Common investment goals are:

- Accumulating retirement funds
- Enhancing current income through interest income and dividends
- Savings for major expenditures like home, education etc.
- Sheltering income from taxes

(3) *Adopting an investment plan.* An investment plan is a written document describing how funds will be invested. The more specific your investment goal, the easier it will be to establish an investment plan consistent with your goals.

(4) *Evaluating investment vehicles.* In this step, the measures of risk and return are used to estimate the perceived worth of an investment vehicle. This process is called valuation.

(5) *Selecting suitable investments.* This step involves careful selection of investment vehicles that are consistent with established goals and offer acceptable levels of return, risk, and value.

(6) *Constructing a diversified portfolio.* Diversification is the concept of forming a portfolio using different investment vehicles to reduce risk and increase return. This concept is central to constructing an effective portfolio.

(7) *Managing the portfolio.* Portfolio management involves monitoring the portfolio and restructuring it as dictated by the actual behaviour of the investments.

12. Investment goals are the financial objectives you wish to achieve by investing in any of a wide range of investment vehicles. Common investment goals are as follows.

    (a) *Enhancing current income* means choosing investment vehicles that regularly pay dividends and interest that can provide all or some of the money needed to meet living expenses. This is a common goal of retired persons and sometimes an important part of a normal family budget.

    (b) *Saving for major expenditures* includes money set aside for such things as the down payment on a home, travel, and capital to start a business. The amount of money needed and the time period over which one can save will determine the amount set aside and, frequently, the investment vehicle employed.

    (c) The single most important reason for investing is to *accumulate retirement funds.* The amount that must be set aside is determined by the level of expected expenditures, expected income from social security and other sources, and the amount of interest expected to be earned on savings.

    (d) *Sheltering income from taxes* involves taking advantage of certain tax provisions that permit reduction of the income reported to the government or direct reductions in taxes. Investments in certain assets, such as real estate, may be attractive due to their tax advantages.

13. Investors tend to follow different investment strategies as they move through different stages of their life cycle.

    (a) Young investors, *ages 20 to 45,* tend to prefer growth-oriented investments that stress *capital gains* rather than income. These investors have little investable funds, and capital gains are seen as the quickest way to build up investment capital.

(b) By middle age, *ages 45 to 60,* there is a consolidation taking place as family demands and responsibilities change. While growth-oriented securities are still used, investing becomes less speculative. *Quality-growth* vehicles are employed, and more attention is given to *current income.* The foundation is being set for retirement.

(c) As the investor moves into the retirement years, *age 60 on,* preservation of capital and current income become the principal concerns. High-quality stocks and bonds and money market instruments are used, as the investor's objective is to live as comfortably as possible from the investment income. During retirement, one tries to reap the rewards of a lifetime of saving and investing.

14. Shares and equity-related securities (such as managed funds and convertibles) are highly responsive to the economic cycle. During recovery and expansion, share prices are up. As the decline approaches, share prices begin to decline as well. Growth-oriented and speculative shares tend to do especially well in an expanding economy. Bonds and other fixed-income securities are sensitive to movements in interest rates. Bond prices also move in the opposite direction of interest rate changes. This means that if interest rates are expected to rise, bond prices would fall, and bonds would not be a good place to hold investment funds. Interest rates generally shift with the economic cycle. Rates rise during normal recovery and fall during economic declines.

15. An asset is *liquid* if it can be converted to cash (sold) easily and quickly, with little or no loss in value. You would want to hold liquid assets as emergency funds or to accumulate funds for some specific purpose. CBA shares are not considered a liquid investment even though they can be easily sold. As with shares in general, you can never be sure that, when funds are needed, you can quickly sell the shares without taking a loss.

16. *Purchasing power,* or *inflation, risk* for short-term investments occurs when the rate of return on these investments falls short of the inflation rate. This generally happens to fixed-rate investments such as bank savings accounts. Most other short-term investments have managed to provide rates of return about equal to the inflation rate when one looks at these short-term rates over long periods of time. *Default (nonpayment) risk* is very small with most short-term investments. For individuals, the Commonwealth Government guarantee covers deposit balances up to $1 million per institution or bank. Australian Treasury notes are perfectly safe and sometimes called a risk-free investment. Commercial paper and repurchase agreements are extremely safe, based upon past experience, even though there have been rare instances of problems. These latter two instruments are also not insured. Money market managed funds have also had an exceptionally safe history. Of course, the safest money market funds are those that invest solely in government securities and are virtually default-risk-free.

17. The senior managers in a corporation such as the Chief Financial Officer (CFO) have the primary responsibility of managing the firm's capital resources and investments. Because so much of the CFO's primary responsibilities require an understanding of investment principles, a CFO must understand market forces but more importantly communicate with investors in a way that they understand the value of the firm and the securities the firm has issued.

18. Because insurance companies have large sums of investment capital under management, they require the skills of a highly trained finance person in investment principles. Since this person is asked to manage risk for individuals as well as businesses, the decisions they make and the strategies they devise will assist the insurance companies' customers in the creation of their individual successful asset and risk management strategies.

■ Suggested Answers to Discussion Questions

1. (a) Since you fall into the category of a young investor (20-45 years old), your key investment goals should stress capital gains. Investments should provide savings for major expenditures such as the down payment on a house, education, travel, and capital to start a business.

   (b) You should also include allowances for tax consequences associated with the type of investment you are choosing. Since your plan will focus on increasing your capital, it is important that you take steps to minimise the impact of the capital gains tax on your investments.

   (c) Since you have a relatively long investment horizon, it is appropriate to focus your portfolio on higher-risk investments such as ordinary shares.

2. Short-term vehicles play an important part in your investment program. Most importantly, they will provide a pool of reserves that can be used for emergencies such as replacing cars, appliances, and clothing that wear out over time.

■ Solutions to Problems

1. (a) Goal $250,000

Goal	$250,000
$31,500 at 8% for 15 yrs.	100,000
Additional requirement	$150,000

(b) Annual deposit: $=\dfrac{\$150{,}000}{\$1{,}000}\times\$36.83=150\times\$36.83$

$=\$5{,}524.50$

■ Solutions to Case Problems

Case 1.1 Investments or Golf?

This case illustrates the many facets of the investment process; it involves much more than ordinary shares. The authors recognise the value of physical education and emphasise the importance of sports, but a course in investments offers the student a lifetime of financial benefits. Thus, our arguments for selecting the investments course should not be interpreted as a negative statement on physical education, but rather as a positive discussion of the merits of investments.

(1) The term *investments* refers to the process of identifying, evaluating, selecting, and monitoring the placement of funds with a view toward preserving or increasing value and/or earning a positive return. Justin has simply identified one investment vehicle (shares). He will not know how to evaluate other vehicles, select investments, or monitor them without a course in investments. In addition to looking at his own investments, a course in investing will give Justin a new perspective on the role of investments in the economy. He will learn that as an investor, he is actually supplying funds to government and business, which will enable the continued strength and growth of the general economy.

(2) Clearly, Justin has ignored short-term securities, bonds, options, commodities and financial futures, managed funds, real estate, tangibles, tax shelters, and limited partnerships. Each one of these vehicles offers another risk-reward relationship that may meet certain unique investment requirements that cannot be met by ordinary shares alone.

(3) Justin does not have the knowledge needed to carry out the investment process described in Question 2. Knowing about ordinary shares is not the same as understanding investments. There is no reason whatsoever to assume that ordinary shares are the best investment available to Justin. Besides, the investment decision has to be compatible with his goals. Since Justin is just starting his career, in all probability he will not want to choose risky investments. Shares are far riskier than, say, an investment in bonds.

    There are other considerations, too. Does Justin have plans for the future when he will need the money? If so, is it a short-term or a long-term need? Answers to these questions will help determine whether he should make short-term or long-term investments. In summary, to gain an understanding of the investment decision and management process, Justin should pass up the golf course in favour of the investments course.

Case 1.2 Preparing Carolyn Bowen's Investment Plan

This case allows students to evaluate a proposed investment plan aimed at achieving certain retirement goals.

(1) The amount currently available to Carolyn includes \$60,000 from the proceeds of the life insurance and \$37,500 from her savings account, or a total of \$97,500. At 6% compounded annually, her money will be worth:

If she retires at age 62 (seven-year investment):

$$\$97{,}500 \times (1.06)^7 = \$146{,}604$$

(You can find this in Excel by typing the formula

=fv(0.06,7,0,−97500).)

Add \$112,500 from the sale of her home, and Carolyn will have \$259,104.

If she retires at age 65 (10-year investment):

$$\$97{,}500 \times (1.06)^{10} = \$174{,}608$$

(You can find this in Excel by typing the formula

=fv(0.06,10,0,−97500).)

Add \$127,500 from the sale of her home, and Carolyn will have \$302,108.

(2) Value of Carolyn's assets at 62 = Value of savings account + Value of house:

$$\$146{,}604 + \$112{,}500 = \$259{,}104$$

Similarly, value of assets at 65 = \$174,608 + \$127,500 = \$302,108.

Because Carolyn receives \$79 for each \$1,000 that she invests in the annuity, we can calculate her annual income starting at age 62 as follows:

$$(\$259{,}104/\$1{,}000) \times \$79 = \$20{,}469$$

Similarly, if Carolyn's assets at age 65 are \$302,108, and if for each \$1,000 that she invests in the annuity she will receive \$89.94 in income, her income starting at age 65 would be:

$$(\$302{,}108/\$1{,}000) \times \$89.94 = \$27{,}172$$

(3)

	Annual Retirement Income	
	Age 62 Retirement	Age 65 Retirement
Annual Superannuation		
Fund Benefits	$16,308	$20,256
Annuity Income	[illegible]0,469	[illegible]7,172
Total Annual Retirement Income	$36,777	$47,428

(4) Carolyn needs $45,000 per year (before taxes) of retirement income. Without considering the change in her tax status upon retirement, she will not satisfy this goal if she retires at age 62. At age 65, she meets her requirement. The nature of tax legislation and the reduction in Carolyn's tax liability upon retirement may make retirement at age 65 viable.

(5) Carolyn's plan is extremely conservative and low risk. The returns from the plan are very secure and probably assured. Carolyn can be confident that the accumulated worth of her investments will be available to her at retirement. Her plan to retire at age 65 meets her retirement-income goal. Carolyn's plan offers low risk and low return. Through only a slight increase in risk, she might improve her return on investment and have more "cushion" to allow for inflation and unexpected expenditures. Carolyn could purchase highly rated bonds, and other blue chip security investments. In this manner, her risk aversion would be satisfied, and she would earn a higher return on her investments. This should permit more likely achievement of her retirement-income objectives. Therefore, with very little increase in risk, Carolyn could invest her funds in vehicles that will increase the probability that she will meet or surpass her requirement of an annual retirement income of $45,000.