

Chapter 1

An Overview of Financial Management and the Financial Environment

ANSWERS TO END-OF-CHAPTER QUESTIONS

- 1-1
- a. A proprietorship, or sole proprietorship, is a business owned by one individual. A partnership exists when two or more persons associate to conduct a business. In contrast, a corporation is a legal entity created by provincial and federal laws. The corporation is separate and distinct from its owners and managers.
 - b. In a limited partnership, limited partners' liabilities, investment returns, and control are limited, while general partners have unlimited liability and control. A limited liability partnership's (LLP) primary benefit is the protection it offers partners to liability exposure from their partner's professional negligence. Individual partners still maintain unlimited liability for their own negligence or those they directly supervise. A professional corporation (PC) has most of the benefits of incorporation but the participants are not relieved of professional (malpractice) liability.
 - c. Shareholder wealth maximization is the appropriate goal for management decisions. The risk and timing associated with expected earnings per share and cash flows are considered in order to maximize the price of the firm's common stock.
 - d. A money market is a financial market for debt securities with maturities of less than one year (short-term). The New York money market is the world's largest. Capital markets are the financial markets for long-term debt and corporate stock. The New York Stock Exchange and Toronto Stock Exchange are examples of capital markets. Primary markets are the markets in which newly issued securities are sold for the first time. Secondary markets are where securities are resold after initial issue in the primary market. The New York Stock Exchange and Toronto Stock Exchange are secondary markets.

- e. In private markets, transactions are worked out directly between two parties and structured in any manner that appeals to them. Bank loans and private placements of debt with insurance companies are examples of private market transactions. In public markets, standardized contracts are traded on organized exchanges. Securities that are issued in public markets, such as common stock and corporate bonds, are ultimately held by a large number of individuals. Private market securities are more tailor-made but less liquid, whereas public market securities are more liquid but subject to greater standardization. Derivatives are claims whose value depends on what happens to the value of some other asset. Futures and options are two important types of derivatives, and their values depend on what happens to the prices of other assets, say Tim Hortons shares, Japanese yen, or pork bellies. Therefore, the value of a derivative security is derived from the value of an underlying real asset.
- f. An investment banker is a middleman between businesses and savers. Investment banks assist in the design of corporate securities and then sell them to savers (investors) in the primary markets. A financial intermediary buys securities with funds that it obtains by issuing its own securities. An example is a common stock mutual fund that buys common shares with funds obtained by issuing shares in the mutual fund.
- g. A mutual fund is a corporation that sells shares in a fund and uses the proceeds to buy stocks, long-term bonds, or short-term debt instruments. The resulting dividends, interest, and capital gains are distributed to the fund's shareholders after the deduction of operating expenses. Different funds are designed to meet different objectives. Money market funds are mutual funds that invest in short-term debt instruments, typically with maturity dates of less than one year.
- h. Production opportunities are the returns available within an economy from investment in productive assets. The higher the production opportunities, the more producers would be willing to pay for required capital. Consumption time preferences refer to the preferred pattern of consumption. Consumers' time preferences for consumption establish how much consumption they are willing to defer, and hence save, at different levels of interest.
- i. A foreign trade deficit occurs when businesses and individuals in a country import more goods from foreign countries than are exported. Trade deficits must be financed, and the main source of financing is debt. Therefore, as the trade deficit increases, the debt financing increases, driving up interest rates. Interest rates, however, must be competitive with foreign interest rates; if the central bank attempts to set interest rates lower than foreign rates, foreigners will sell bonds, decreasing bond prices, resulting in higher rates. Thus, if the trade deficit is large relative to the size of the overall economy, it may hinder the central bank's ability to combat a recession by lowering interest rates.

- 1-2 Sole proprietorship, partnership, and corporation are the three principal forms of business organization. The advantages of the first two include the ease and low cost of formation. The advantages of the corporation include limited liability, indefinite life, ease of ownership transfer, and access to capital markets.
- The disadvantages of a sole proprietorship are (1) difficulty in obtaining large sums of capital; (2) unlimited personal liability for business debts; and (3) limited life. The disadvantages of a partnership are (1) unlimited liability, (2) limited life, (3) difficulty of transferring ownership, and (4) difficulty of raising large amounts of capital. The disadvantages of a corporation are (1) double taxation of earnings and (2) requirements to file federal reports for registration, which are expensive, complex, and time consuming.
- 1-3 A firm's fundamental, or intrinsic, value is the present value of its free cash flows when discounted at the weighted average cost of capital. If the market price reflects all *relevant* information, then the observed price is also the intrinsic price. If material information is withheld from investors, the firm's intrinsic value may differ from its actual market value.
- 1-4 a. Corporate philanthropy is always a sticky issue, but it can be justified in terms of helping to create a more attractive community that will make it easier to hire a productive workforce. This corporate philanthropy could be received by shareholders negatively, especially those shareholders not living in its headquarters city. Shareholders are interested in actions that maximize share price, and if competing firms are not making similar contributions, the "cost" of this philanthropy has to be borne by someone—the shareholders. Thus, the stock price could decrease.
- b. Companies must make investments in the current period in order to generate future cash flows. Shareholders should be aware of this and, assuming a correct analysis has been performed, they should react positively to the decision. The Chinese plant is in this category. Assuming that the correct capital budgeting analysis has been made, the stock price should increase in the future.
- 1-5 Earnings per share in the current year will decline due to the cost of the investment made in the current year and no significant performance impact in the short run. However, the company's intrinsic value and its share price should increase due to the significant cost savings expected in the future.

- 1-6 In a well-functioning economy, capital will flow efficiently from those who supply capital to those who demand it. This transfer of capital can take place in three different ways:
1. Direct transfers of money and securities occur when a business sells its shares or bonds directly to savers, without going through any type of financial institution. The business delivers its securities to savers, who in turn give the firm the money it needs.
 2. Transfers may also go through an investment banking house that underwrites the issue. An underwriter serves as a middleman and facilitates the issuance of securities. The company sells its stocks or bonds to the investment bank, which in turn sells these same securities to savers. The businesses' securities and the savers' money merely "pass through" the investment banking house.
 3. Transfers can also be made through a financial intermediary. Here, the intermediary obtains funds from savers in exchange for its own securities. The intermediary uses this money to buy and hold businesses' securities. Intermediaries literally create new forms of capital. The existence of intermediaries greatly increases the efficiency of money and capital markets.
- 1-7 Financial intermediaries are business organizations that receive funds in one form and repackage them for the use of those who need funds. Through financial intermediation, resources are allocated more effectively, and the real output of the economy is thereby increased.
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- a. If transfers between the two markets were costly, interest rates would be different in the two areas. Area Y, with the relatively young population, would have less in savings accumulation and stronger loan demand. Area O, with the relatively old population, would have more savings accumulation and weaker loan demand as the members of the older population have already purchased their houses, and are less consumption oriented. Thus, supply/demand equilibrium would be at a higher rate of interest in Area Y.
 - b. Yes. Nationwide branching would reduce the cost of financial transfers between the areas. Thus, funds would flow from Area O with excess relative supply to Area Y with excess relative demand. This flow would increase the interest rate in Area O and decrease the interest rate in Y until the rates were roughly equal, the difference being the transfer cost.
- 1-9 The immediate effect would be to lower interest rates.
- 1-10 A primary market is the market in which corporations raise capital by issuing new securities. An initial public offering (IPO) is a share issue in which privately held firms go public. Therefore, an IPO would be an example of a primary market transaction.

1-11 The two stock markets today are the Toronto Stock Exchange (TSX) and the TSX Venture Exchange. The TSX trades shares of primarily senior Canadian issuers, while the TSX Venture Exchange trades shares of junior or speculative corporations.

MINI CASE

The detailed solution for the Mini Case is also available in spreadsheet format, in the file *Brigham3Ce_MiniCase_Ch01.xlsx* and is available on the textbook's website.

Assume that you have recently graduated and have just reported to work as an investment advisor at the brokerage firm of Balik and Kiefer Inc. One of the firm's clients is Sergie Turganev, a professional hockey player who has just come to Canada from Russia. Turganev is a highly ranked hockey player who would like to start a company to produce and market apparel with his signature. He also expects to invest substantial amounts of money through Balik and Kiefer. Turganev is very bright, and, therefore he would like to understand in general terms what will happen to his money. Your boss has developed the following set of questions that you must answer to explain the Canadian financial system to Turganev.

a. Why is corporate finance important to all managers?

Answer: Corporate finance provides the skills managers need to (1) identify and select the corporate strategies and individual projects that add value to their firm; and (2) forecast the funding requirements of their company, and devise strategies for acquiring those funds.

b. What are the organizational forms a business might have as it evolves from a start-up to a major corporation? List the advantages and disadvantages of each form.

Answer: The three main forms of business organization are (1) sole proprietorships, (2) partnerships, and (3) corporations. In addition, several hybrid forms are gaining popularity. These hybrid forms are the limited partnership, the limited liability partnership, and the professional corporation.

The proprietorship has three important advantages: (1) it is easily and inexpensively formed, (2) it is subject to few government regulations, and (3) the business pays no corporate income taxes. The proprietorship also has three important limitations: (1) it is difficult for a proprietorship to obtain large sums of capital; (2) the proprietor has unlimited personal liability for the business's debts, and (3) the life of a business organized as a proprietorship is limited to the life of the individual who created it.

The major advantages of a partnership are its low cost and ease of formation. The disadvantages are similar to those associated with proprietorships: (1) unlimited liability, (2) limited life of the organization, (3) difficulty of transferring ownership, and (4) difficulty of raising large amounts of capital. The tax treatment of a partnership is similar to that for proprietorships, which is often an advantage.

The corporate form of business has three major advantages: (1) unlimited life, (2) easy transferability of ownership interest, and (3) limited liability. While the corporate form offers significant advantages over proprietorships and partnerships, it does have two primary disadvantages: (1) corporate earnings may be subject to double taxation and (2) setting up a corporation and filing many required reports is more complex and time consuming than for a proprietorship or a partnership.

In a limited partnership, the limited partners are liable only for the amount of their investment in the partnership; however, the limited partners typically have no control. The limited liability partnership form of organization combines the limited liability advantage of a corporation with the tax advantages of a partnership. Professional corporations provide most of the benefits of incorporation but do not relieve the participants of professional liability.

c. How do corporations go public and continue to grow? What are agency problems? What is corporate governance?
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Answer: A company goes public when it sells shares to the public in an initial public offering. As the firm grows, it might issue additional shares or debt. An agency problem occurs when the managers of the firm act in their own self-interests and not in the interests of the shareholders. Corporate governance is the set of rules that control a company's behaviour towards its directors, managers, employees, shareholders, creditors, customers, competitors, and community.

d. What should be the primary objective of managers?
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Answer: The corporation's primary goal is shareholder wealth maximization, which translates to maximizing the price of the firm's common stock.

d. 1. Do firms have any responsibilities to society at large?

Answer: Firms have an ethical responsibility to provide a safe working environment, to avoid polluting the air or water, and to produce safe products. However, the most significant cost-increasing actions will have to be put on a mandatory rather than a voluntary basis to ensure that the burden falls uniformly on all businesses.

d. 2. Is stock price maximization good or bad for society?

Answer: The same actions that maximize stock prices also benefit society. Stock price maximization requires efficient, low-cost operations that produce high-quality goods and services at the lowest possible cost. Stock price maximization requires the development of products and services that consumers want and need, so the profit motive leads to new technology, to new products, and to new jobs. Also, stock price maximization necessitates efficient and courteous service, adequate stocks of merchandise, and well-located business establishments—factors that are all necessary to make sales, which are necessary for profits.

d. 3. Should firms behave ethically?

Answer: Yes. Results of a recent study indicate that the executives of most major firms in the United States and Canada believe that firms do try to maintain high ethical standards in all of their business dealings. Furthermore, most executives believe that there is a positive correlation between ethics and long-run profitability. Conflicts often arise between profits and ethics. Companies must deal with these conflicts on a regular basis, and a failure to handle the situation properly can lead to huge product liability suits and even to bankruptcy. There is no room for unethical behaviour in the business world.

e. What three aspects of cash flows affect the value of any investment?

Answer: (1) amount of expected cash flows; (2) timing of the cash flow stream; and (3) riskiness of the cash flows.

f. What are free cash flows?

Answer: Free cash flows are the cash flows available for distribution to all investors (shareholders and creditors) after paying expenses (including taxes) and making the necessary investments to support growth.

$$\text{FCF} = \text{sales revenues} - \text{operating costs} - \text{operating taxes} \\ - \text{required investments in operating capital.}$$

g. What is the weighted average cost of capital?

Answer: The weighted average cost of capital (WACC) is the average rate of return required by all of the company's investors (shareholders and creditors). It is affected by the firm's capital structure, interest rates, the firm's risk, and the market's overall attitude toward risk.

h. How do free cash flows and the weighted average cost of capital interact to determine a firm's value?

Answer: A firm's value is the sum of all future expected free cash flows, converted into today's dollars.

$$\text{Value} = \frac{\text{FCF}_1}{(1 + \text{WACC})^1} + \frac{\text{FCF}_2}{(1 + \text{WACC})^2} + \dots + \frac{\text{FCF}_\infty}{(1 + \text{WACC})^\infty}$$

i. Who are the providers (savers) and users (borrowers) of capital? How is capital transferred between savers and borrowers?

Answer: Households are net savers. Nonfinancial corporations are net borrowers. Governments are also net borrowers, although the government is a net saver when it runs a surplus. Capital is transferred through (1) direct transfer (e.g., corporation issues commercial paper to insurance company); (2) an investment banking house (e.g., IPO, seasoned equity offering, or debt placement); or (3) a financial intermediary (e.g., individual deposits money in bank, bank makes commercial loan to a company).

j. What do we call the price that a borrower must pay for debt capital? What is the price of equity capital? What are the four most fundamental factors that affect the cost of money, or the general level of interest rates, in the economy?

Answer: The *interest rate* is the price paid for borrowed capital, while the *return on equity capital* comes in the form of *dividends plus capital gains*. The return that investors require on capital depends on (1) production opportunities, (2) time preferences for consumption, (3) risk, and (4) inflation.

Production opportunities refer to the returns that are available from investment in productive assets: the more productive a producer firm believes its assets will be, the more it will be willing to pay for the capital necessary to acquire those assets.

Time preference for consumption refers to consumers' preferences for current consumption versus savings for future consumption: consumers with low preferences for current consumption will be willing to lend at a lower rate than consumers with a high preference for current consumption.

Inflation refers to the tendency of prices to rise, and the higher the expected rate of inflation, the larger the required rate of return.

Risk, in a money and capital market context, refers to the chance that the future cash flows will not be as high as expected—the higher the perceived default risk, the higher the required rate of return.

Risk is also linked to the maturity and liquidity of a security. The longer the maturity and the less liquid (marketable) the security, the higher the required rate of return, other things constant.

k. What are some economic conditions (including international aspects) that affect the cost of money?

Answer: The cost of money will be influenced by things such as Bank of Canada (BoC) policy, fiscal deficits, business activity, and foreign trade deficits.

If the BoC increases growth in the money supply, the cost of money will initially decline. If the federal government shows a deficit, interest rates are likely to increase. The cost of money will typically rise before a recession and decline thereafter. The cost of money for an international investment is also affected by country risk, which refers to the risk that arises from investing or doing business in a particular country. This risk depends on the country's economic, political, and social environment. Country risk also includes the risk that property will be expropriated without adequate compensation, as well as new host country stipulations about local production, sourcing or hiring practices, and damage or destruction of facilities due to internal strife.

The cost of money for an international investment is also affected by exchange rate risk. When investing overseas, the security usually will be denominated in a currency other than the dollar, which means that the value of the investment will depend on what happens to exchange rates. Changes in relative inflation or interest rates will lead to changes in exchange rates. International trade deficits/surpluses affect exchange rates. Also, an increase in country risk will also cause the country's currency to fall.

l. What are financial securities? Describe some financial instruments.

Answer: Financial securities are pieces of paper with contractual obligations. Short-term securities (i.e., they mature in less than a year) are instruments with low default risk such as treasury bills, banker's acceptances, commercial paper, and Eurodollar deposits. Commercial loans (which have maturities up to 7 years) have rates that are usually tied to the prime rate (i.e., the rate that banks charge their best customers) or LIBOR (the London Interbank Offered Rate, which is the rate that banks in the U.K. charge one another). Government of Canada bonds have maturities from 2 to 30 years; they are free of default risk. Mortgages have maturities up to 30 years. Corporate bonds have maturities up to 40 years. Corporate bonds are subject to default risk. Some preferred shares have no maturity date; some do have a specific maturity date. Common shares have no maturity date, and are riskier than preferred shares.

m. List some financial institutions.

Answer: Commercial banks, trust companies, and credit unions, life insurance companies, mutual funds, and pension funds are examples of financial institutions.

n. What are some different types of markets?

Answer: A market is a method of exchanging one asset (usually cash) for another asset. Some types of markets are physical assets vs. financial assets; spot versus future markets; money versus capital markets; primary versus secondary markets.