Chapter 1 Solutions

1-1 Finance deals with decisions about money. Finance decisions deal with how money is raised and used by businesses, governments, and individuals. In business, decisions about cash inflows include for what price products should be sold, how funds should be raised when firms have good investment opportunities, and so forth; decisions about cash outflows include what expenses must be incurred, which investments should be purchased, and so forth.

1-2 Simply stated, everyone should have a basic understanding of finance because everyone faces financial decisions daily, whether those decisions are as simple as determining how much money to carry in one’s pocket or they require more sophisticated thought processes, such as the purchase of a house or planning for retirement. Persons who make business decisions must understand finance because their decisions generally include an element of finance in the sense that the results of their decisions generally require some type of funding to be operationalized.

1-3 The value of a firm can be measured by the market value of its stock. Thus, the firm maximizes value/wealth by maximizing the value of its stock.

1-4 Value is measured as the present value of the cash flows that an investment is expected to generate during its life. The three factors that determine value are (1) the amount of the future cash flows, (2) the timing of the future cash flows, and (3) investors’ required rate of return. If the amount of the cash flows increases, the cash flows are received sooner, investors’ required rate of return decreases, or any combination of these events occur, the value of an investment will increase.

1-5 Profit maximization abstracts from (1) the timing of profits and (2) the riskiness of different operating plans. However, both factors are reflected in stock price maximization. Profit maximization is a short-sighted goal because it doesn’t consider the impact on future earnings or the firm’s future risk position. On the other hand, a firm’s value is determined by the cash flows it is expected to generate in the future, as well as the risk associated with those expected cash flows. Thus, profit maximization would not

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necessarily lead to stock price maximization. A firm could maximize its current profit but go bankrupt in the near future by implementing "corner-cutting" measures that increase profits. Such measures might include not replacing equipment when it is worn out, decreasing the quality of the product that is manufactured and sold, reducing the number of employees, and so forth.

1-6 Such factors as a compensation system that is based on management performance (bonuses tied to profits, stock option plans) as well as the possibility of being removed from office (voted out of office, an unfriendly tender offer by another firm) serve to keep management's focus on stockholders' interests. If a firm is taken over, or acquired, by another firm, generally top management is let go. To help ensure that they are not in this position, management should take steps to ensure the firm is operated as efficiently as possible. Efficient firms generally are priced correctly in the financial markets, thus are not takeover targets.

1-7 The answer to this question depends on which action satisfies you more as the sole owner of the business. But chances are you would be inclined to maximize your personal satisfaction, which does not preclude you from maximizing the value of the business. No agency problem exists in a proprietorship because there is only one owner, and he or she is the person who makes the day-to-day business decisions.

1-8 Provided that the rate of return on assets exceeds the interest rate on debt, greater use of debt will raise the expected rate of return on stockholders' equity. Also, the interest on debt is tax deductible, which provides a further advantage. However, (1) greater use of debt will have a negative impact on the stockholders if the company's return on assets falls below the cost of debt, and (2) increased use of debt increases the chances of going bankrupt. The effects of the use of debt, called "financial leverage," are spelled out in detail in Chapter 16.

1-9 Corporate governance refers to the "set of rules" that a firm follows when conducting business. In general, corporate governance relates to how a firm is operated. Corporate governance affects the manner in which a firm approaches its decision-making tasks,

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treats its employees and customers, constructs its financial statements, and so forth. Because its governance policy affects how a company does business, corporate governance is a major factor that determines whether a firm "acts" ethically. If a firm does not have a good corporate governance policy—that is, a good set of rules to follow—then there is a chance that management might behave unethically—either intentionally or unintentionally—at some point. Firms that have good corporate governance policies generally have higher values than firms that don't.

1-10 Firms "go international" for many reasons, including to seek new markets, to get access to raw materials, to avoid political hurdles, to name a few. Considering differential labor costs abroad, transportation, tax advantages, and so forth, U.S. corporations can maximize long-run profits. There are also nonprofit behavioral and strategic considerations, such as maximizing market share and enhancing the prestige of corporate officers.

1-11 Factors that make financial decision making more complicated for firms that operate in foreign countries include differences in currency, language, culture, governmental relations, political risk, legal structure, and economy. The general techniques and concepts applied by purely domestic firms are valid for multinational firms. These factors, however, increase the risks that multinational firms face when making financial decisions.

1-12 The general areas of study in finance include (1) financial markets and institutions, which includes the study of the roles of banks, credit unions, and other financial organizations in the financial markets; (2) investments, which focuses on how investments are valued and selected to be included in portfolios; (3) financial services, which refers to the area of study that deals with the management of money, primarily for individuals; and (4) managerial finance, which deals with how firms make decisions about their cash flows, both inflows and outflows.

Simply stated, finance deals with how firms generate and use funds. To do a good job, people must understand how all four of the areas of finance are related. For example, publicly traded firms raise money in the financial markets, which means financial

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managers must understand the financial markets. Likewise, persons who work in the financial markets must understand the needs of publicly traded firms and of investors to ensure they are offering the right financial products.

1-13 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 proprietorships and partnerships are (1) difficulty in obtaining large sums of capital; (2) unlimited personal liability for business debts; (3) limited life; and (4) difficulty of transferring ownership. The disadvantages of a corporation are (1) double taxation of earnings and (2) setting up a corporation and filing required state and federal reports that are complex and time-consuming.

1-14 Hybrid forms of business have been created over the years as the result of the needs of businesspeople and investors. The hybrid forms of business generally include the advantages of partnerships and corporations in one business. As business operations change in the future, so too will the structure of business organizations.

1-15 Ethics refers to the attitude and behavior that a firm applies when dealing with stakeholders. A firm must consider all its stakeholders—that is, investors, customers, employees, local community, environment, and so forth—when conducting business; otherwise, it will not stay in business for very long. For example, if a firm makes huge profits at the expense of its customers, then the customers will quit purchasing from the firm when they discover how they have been treated—the customers will either begin purchasing from competitors or find substitute products to purchase. As a result, although their satisfaction does not have to be maximized, the firm must find a way to keep all stakeholders happy. Likewise, if a firm focuses only on its common stockholders, other stakeholders will take appropriate actions, which could mean the death of the company. A firm that increases the value of its stock in the short run, risks going out of business because such a short-run decision is short-sighted and can be extremely harmful to the long-run success of the firm.

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1-17 The corporate structure of foreign firms generally is characterized by greater concentration in ownership, which often means more involvement in ownership and operations by large lenders, such as banks and other financial institutions, and by large groups or families. In many instances, this means that banks, other financial institutions, and ownership groups can meet most or all of the financing needs of a firm. In the United States, on the other hand, banks and financial institutions are restricted in the amounts of corporate debt and stock they can own. Thus, most large U.S. firms have very dispersed ownership structures because they must raise needed funds from a large number of sources—it generally is not possible to get the large amount of funds needed from a single source or even from very few sources. "One-stop" financing outlets do not currently exist in the United States. It is argued that greater concentration in ownership breeds fewer agency-related problems, so that managers can better focus on maximizing the wealth of the firm, which are also their self-fulfilling goals. In addition, because creditors generally have a significant ownership position in the firm, it is in their best interests to make sure the firm is successful. Therefore, when financial difficulties arise, such creditors are perhaps more likely to "bail out" the company than creditors in the United States. On the other hand, many argue that the foreign ownership structures create a corporate environment in which managers can easily become entrenched; thus, it is very difficult to get rid of inefficient management. In addition, creditors might be too eager to try and save failing firms, and hence turn "good money" into "bad money" instead of walking away and not compounding their existing losses.

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It is difficult to say which form of business organization is better—the “open” company with disperse ownership that we have in the United States and Canada, or the more “closed” company with more concentrated ownership that we find in Japan, Germany, and many other countries. Government regulations, the sophistication of both the financial markets and the product markets, and the culture of the country impact greatly on which type of business organization works better.

1-18 Stockholder wealth maximization is a long-run goal. Companies, and consequently the stockholders, prosper when management makes decisions that will produce long-term increases in earnings. Actions that are continually short-sighted often “catch up” with a firm and, as a result, it may find itself unable to compete effectively against its competitors. There has been much criticism in recent years that U.S. firms are too short-run profit oriented. A prime example was the U.S. auto industry in the 1970s and early 1980s, which was accused of continuing to build large “gas guzzler” automobiles because they had higher profit margins rather than retooling for smaller, more fuel-efficient models.

1-19 (a) Agency problems should not exist in a proprietorship, because there is only one owner, who generally is the sole decision maker. The owner operates the business in a fashion that will improve his or her own welfare. Thus, the owner can do whatever makes him or her happy, even if such actions are harmful to the business.

(b) As more owners are included in a business, the likelihood of agency problems increases because the potential for conflicts as to what actions promote the best interests of all owners increases. As a result, the possibility of agency problems in a partnership is greater than in a proprietorship. And, businesses with greater numbers of partners have greater chances of experiencing agency problems.

(c) As mentioned in part (b), the greater the number of owners in a business, the greater the possibility of agency problems. Consequently, we would expect the potential for agency problems to be much greater in a corporation with 100,000 stockholders than in a partnership with 100 partners. Similarly, we would expect the possibility

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of agency problems to be even greater in a corporation that is publicly traded with millions of stockholders.

1-20 The statement is not valid in every instance. Clearly, there are cases in which a firm's stock price has declined as the result of managerial decisions that were not in the best interests of shareholders. However, the stock prices of firms are also based on external factors, including economic conditions. In a poor economy, the stock prices of most companies decline even when management is making decisions that are considered in the best interests of their shareholders.

1-21 Generally small businesses start as proprietorships and partnerships because these forms of business are easy to set up. But, as a company becomes more successful and grows larger, it probably should change from a proprietorship to a corporation. A major reason for changing to a corporation is to protect personal wealth—the owners of a corporation are not personally liable for the debts of the business, whereas the owners of proprietorships and partnerships are personally fully liable for all business debts. When a company becomes very large, most owners believe that the limited liability offered by the corporate form of business is extremely important. In addition, a corporation has additional sources available to raise funds; that is, corporations can issue debt and stock.

1-22 In an oligopolistic industry, a small number of companies dominate the competition. On the other hand, there generally are no dominant firms in a highly competitive industry with many participants; there is only fierce competition. As a result, the management of an oligopolistic firm would be more likely to engage voluntarily in "socially conscious" practices. Competitive firms would be less able to engage in such practices unless they were cost-justified, because such actions generally come with a substantial negative effect on the "bottom line."

1-23 U.S. companies build manufacturing plants overseas to take advantage of differential labor costs, transportation, tax advantages, and so forth, which can help them to maximize long-run profits and wealth. There are also nonprofit behavioral and strategic considerations, such as maximizing market share and enhancing the prestige of corporate officers.

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1-24 An agency problem exists when mangers make decisions concerning the operations of a company that are in their best interests and those interests conflict with the best interests of the owners (stockholders). Methods used to motivate managers to act in the shareholders' best interests include: (1) linking managers' compensation to the company's stock performance; (2) requiring managers to purchase stock in the company, which makes them owners of the firm like other stockholders; (3) ensuring managers understand that below-average performance could lead to dismissal or a takeover from another firm, in which case managers normally are dismissed.

1-25 As we will show in later chapters, the financial decisions corporations make relate to how to raise funds (sources) when they are needed and how to invest surplus funds when they exist. As an individual, we make the same decisions—when we buy a car or a house, we search for the appropriate funding sources (in most cases the cheapest), and when we have excess funds, we decide what investments should be made (considering risk and return). Although discussions in the book focus on corporations, the techniques/concepts we describe can also be applied by individuals to make personal financial decisions.

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INTEGRATIVE PROBLEM SOLUTIONS

a. Finance deals with decisions about money—that is, how money is raised and used by companies and individuals. Because value is based on cash flows, finance is integral to the successful operations of a firm. To be successful, a firm must understand how to raise funds, how much it costs to use investors' money, and how to appropriately invest funds. The principal reason many small businesses fail is because the decision makers do not have a basic understanding of finance.

b. Everyone deals with financial decisions, both in business and in their personal lives. For this reason, and because *there are financial implications in nearly every business-related decision*, it is important that everyone has at least a general knowledge of financial concepts so they can make informed decisions about money. Marty should be especially knowledgeable in finance because he is a one-person operation—he is the person who makes the financial decisions for his firm.

c. The three main forms of business organization are the *proprietorship*, the *partnership*, and the *corporation*. Although proprietorships and partnerships are easy to start, the major disadvantage to these forms of business is that the owners have unlimited personal liability for the debts of the businesses. On the other hand, a corporation is more difficult to start than the other forms of business, but owners have limited liability. Most business is conducted by corporations because this organizational form maximizes firms' values.

d. Mr. Kimble probably should organize as a proprietorship because it is easy to start the business as a proprietorship. In addition, it generally is more advantageous from a tax standpoint for a small business to be organized as a proprietorship rather than as a corporation.

e. If the company is so successful that it grows to be a large organization, then Mr. Kimble probably should change from a proprietorship to a corporation. A major reason for changing to a corporation is to protect personal wealth—the owners of a corporation are not personally liable for the debts of the business, whereas the owners of proprietorships and partnerships are personally fully liable for all business debts. When a company becomes very large, most

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owners believe that the limited liability offered by the corporate form of business is extremely important. In addition, changing to a corporation will provide Mr. Kimble more sources to raise funds to support growth, because corporations can issue stocks and bonds to raise funds in the financial markets whereas proprietorships cannot.

f. Mr. Kimble should operate the business so that his best interests are met. Perhaps he would like to maximize the value of his company, or perhaps he would prefer to maximize his leisure time while making a good living with his business. Whatever goal(s) he chooses, as long as he is sole owner of the company, Mr. Kimble can operate the business as he pleases. However, if he sells a portion of the company to investors, then Mr. Kimble will have to pay more attention to the best interests of the investors—that is, he will have to pursue the goal of maximizing the value of the firm.

g. After converting to a corporation and selling stock to outsiders, PAR will have multiple owners, which means that Mr. Kimble and his management team will have to consider the best interests of the other owners when making decisions about the corporation. Mr. Kimble and his management team are "agents" of the stockholders, and they should operate the business to maximize the value of the firm. To ensure management makes decisions that are in the best interests of the owners, the company can pay incentives that are based on the success of the firm, make management owners of the firm, or use other methods to encourage management to make the "correct" decisions. Such methods will help to lessen the chances of management making decisions in their own best interests rather than the stockholders' best interests—that is, such actions help to mitigate the possibility of agency problems.

h. U.S. and foreign companies "go international" for the following major reasons:

1. To seek new markets. After a company has saturated its home market, growth opportunities often are better in foreign markets.
2. To seek raw materials. Few countries have all the raw materials they need within their own borders, which means generally they must seek some raw materials from other countries.
3. To seek new technology. No single nation holds a commanding advantage in all technologies, so companies scour the globe for leading scientific and design ideas.

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4. To seek production efficiency. Companies in countries where production costs are high tend to shift production to low-cost countries.
5. To avoid political and regulatory hurdles. For example, companies move production to foreign countries in which they sell products to get around the countries' import quotas.

i. The following is a list of problems of which Mr. Kimble should be aware when conducting busines in foreign markets:

1. Different currency denominations. Cash flows in various parts of a multinational corporate system often are denominated in different currencies. Hence, an analysis of exchange rates and the effects of fluctuating currency values must be included in all financial analyses.

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2. Economic and legal ramifications. Each country in which the firm operates has its own unique political and economic institutions, and institutional differences among countries can cause significant problems when a firm tries to coordinate and control the worldwide operations of its subsidiaries. Such differences can restrict multinational corporations' flexibility to deploy resources as they wish and can even make procedures illegal in one part of the company that are required in another part. These differences also make it difficult for executives trained in one country to operate effectively in another.
3. Language differences. The ability to communicate is critical in all business transactions.
4. Cultural differences. Even within geographic regions long considered fairly homogeneous, different countries have unique cultural heritages that shape values and influence the role of business in the society. Multinational corporations find that such matters as defining the appropriate goals of the firm, attitudes toward risk taking, dealing with employees, and the ability to curtail unprofitable operations can vary dramatically from one country to the next.
5. Role of governments. Most traditional models in finance assume the existence of a competitive marketplace in which the terms of trade are determined by the participants. However, in foreign countries, in some instances, the terms under which companies compete, the actions that must be taken or avoided, and the terms of trade on various transactions are determined not in the marketplace but by direct negotiation between the host government and the multinational corporation.
6. Political risk. The distinguishing characteristic that differentiates a nation from a multinational corporation is that the nation exercises sovereignty over the people and property in its territory. Hence, a nation is free to place constraints on the transfer of corporate resources and even to *expropriate*—that is, take for public use—the assets of a firm without compensation.

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ETHICAL DILEMMA

Chances Are What They Don't Know Won't Hurt Them!

Ethical dilemma:

It appears that the ethical dilemma is whether Futuristic Electronic Technologies (FET) should continue to distribute its new micro system even though laboratory tests have shown the system *might* be flawed. To make matters worse, as an executive with FET, your salary is based on the performance of the company's common stock, and it is expected the stock will not do well unless the new micro system is successful. You need the salary compensation you expect to be associated with the success of the new micro system to make the mortgage payments on the expensive house you just purchased. What should you do?

Discussion questions:

- *Is there an ethical problem (dilemma)? If so, what is it?*

  You will get some interesting answers to these questions. In reality, the new micro system might not be flawed. The information provided in the text indicates that the lab tests on the new micro system are not conclusive—it is implied that additional tests are needed to reach more concrete conclusions. If an ethical dilemma exists, it might be that FET is willing to introduce a new product without full knowledge of its flaws; but this is not unusual in very competitive markets.

- *Should FET discontinue the distribution of its new micro system until further laboratory tests can be completed?*

  Certainly, additional testing will give the company a better idea of whether a flaw actually does exist, and, if there is a flaw, to what degree it is harmful to customers. But, if distribution of the new micro system is temporarily discontinued, FET's competitors might be able to introduce their new systems and significantly cut into FET's share of the market. At the same time, if FET is not fully aware of any flaws in its system, continuing to distribute a product of inferior quality might be extremely harmful to the company's reputation. There is no clear answer to this question because the extent of the problem is unknown—the flaw could be nonexistent, it could exist and be very insignificant, or it

could exist and cause very significant difficulties for those customers purchasing the new micro system.

- *What action do you think FET should take?*

  There are a variety of responses to this question. Some students will suggest that FET ignore the flaw, because it doesn't seem to occur very often. Remind these students that the new micro system will be used by such financial institutions as banks and savings and loan associations, by large corporations, and by governments to store large amounts of financial data. If such data are lost, even once in 10 million retrievals, the consequences could be devastating. Some students will suggest that FET should do "the right thing," and discontinue distribution until further testing is complete so it can be determined to what extent a flaw does exist, and the necessary corrections can be made. A few students will suggest a third alternative—continue to distribute the new micro system but inform those who buy it there is a possibility that a flaw exists. In addition, inform the customers that the new micro system currently is undergoing further tests, and the results will be publicly announced as soon as they are available; if it is determined a flaw actually exists, corrections will be made at no cost to the customer, and with as little interruption as possible.

References:

It is well documented in the business press that Intel Corporation was embroiled in controversy over a flaw in the Pentium computer chip it introduced in 1994. The cost of replacing the flawed chips that were installed in computers resulted in a fourth-quarter profit in 1994 that was 37 percent lower than the previous year. In addition, a number of lawsuits were filed accusing Intel of fraud, false advertising, and various violations of state laws protecting consumers.

On the other hand, in part because of the controversy created by the Intel situation, in 1995, Advanced Micro Devices, Inc. delayed the distribution of its new computer chip, which was intended to compete directly with Intel's Pentium chip, because it was felt technical corrections and additional testing were needed.

You can find additional information concerning these two situations in articles that appear in *The Wall Street Journal* at the end of 1994 and throughout 1995. The following

articles might be assigned for background material:

“Chip Shot: Computer Giants’ War over Flaw in Pentium Jolts the PC Industry,” *The Wall Street Journal*, December 3, 1994, p. A1+.

“AMD Will Delay Delivery of New Chips Aimed at Competing with Intel Pentium,” *The Wall Street Journal*, April 11, 1995, p. B5.

AnnickJesdanun, “Experts Spot Security Flaw in Windows Vista Software,” *The Tampa Tribune*, December 27, 2006, Business 1+.

Other more recent examples can be found in the following articles:
Cade Metz and Nicole Perloth, “Researchers Discover Two Major Flaws in the World’s Computers,” *The New York Times*, January 3, 2018. (http://www.nytimes.com) Available online at https://www.nytimes.com/2018/01/03/business/computer-flaws.html.

Selena Larson, “Major Chip Flaws Affect Billions of Devices,” January 4, 2018, *CNN Business*. (http://cnn.com/business) Available online at https://money.cnn.com/2018/01/03/technology/computer-chip-flaw-security/index.html.

Roger Atiken, “Solving Blockchain’s Current Flaws & Enabling Future Mainstream Adoption.” *Forbes*, February 28, 2019. (http://www.forbes.com) Available online at https://www.forbes.com/sites/rogeraitken/2019/02/28/solving-blockchains-current-flaws-enabling-future-mainstream-adoption/#59bbeafa274b.