Financial Management Theory & Practice 16th edition Brigham Solutions Manual

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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 a state. The corporation is separate and distinct from its owners and managers. A charter includes the following information: (1) name of the proposed corporation, (2) types of activities it will pursue, (3) amount of capital stock, (4) number of directors, and (5) names and addresses of directors. The bylaws are a set of rules drawn up by the founders of the corporation. Included are such points as: (1) how directors are to be elected (all elected each year or perhaps one-third each year for 3-year terms), (2) whether the existing stockholders will have the first right to buy any new shares the firm issues, and (3) procedures for changing the bylaws themselves, should conditions require it.

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 (LLP), sometimes called a limited liability company (LLC), combines the limited liability advantage of a corporation with the tax advantages of a partnership. A professional corporation (PC), known in some states as a professional association (PA), has most of the benefits of incorporation but the participants are not relieved of professional (malpractice) liability.

c. Stockholder 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 stocks. The New York Stock Exchange is an example of a capital market. 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 is a secondary market.

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e. In private markets, transactions are worked out directly between two parties and structured in any manners that appeal 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 IBM stock, 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 banking houses assist in the design of corporate securities and then sell them to savers (investors) in the primary markets. Financial service corporations offer a wide range of financial services such as brokerage operations, insurance, and commercial banking. 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 stocks with funds obtained by issuing shares in the mutual fund.

g. A mutual fund is a corporation that sells shares in the 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 which invest in short-term debt instruments and offer their shareholders check writing privileges; thus, they are essentially interest-bearing checking accounts.

h. Physical location exchanges have face-to-face communication between buyers and sellers of securities. In contrast, a computer/telephone network links buyers and sellers electronically, not face-to-face.

i. An open outcry auction is a method of matching buyers and sellers. In an auction, the buyers and sellers are face-to-face, with each stating the prices and which they will buy or sell. In a dealer market, a dealer holds an inventory of the security and makes a market by offering to buy or sell. Others who wish to buy or sell can see the offers made by the dealers, and can contact the dealer of their choice to arrange a transaction. An automated trading platform is a computer system in which buyers and sellers post orders and in which trades are automatically executed for matching orders.

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j. 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. Consumer's time preferences for consumption establish how much consumption they are willing to defer, and hence save, at different levels of interest.

k. A foreign trade deficit occurs when businesses and individuals in the U. S. 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. U. S. interest rates must be competitive with foreign interest rates; if the Federal Reserve attempts to set interest rates lower than foreign rates, foreigners will sell U.S. bonds, decreasing bond prices, resulting in higher U. S. rates. Thus, if the trade deficit is large relative to the size of the overall economy, it may hinder the Fed'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 state and 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**.**

1-4 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 stock price should increase due to the significant cost savings expected in the future.

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1-5 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 stocks 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 which 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.

1-6 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.

1-7 A primary market is the market in which corporations raise capital by issuing new securities. An initial public offering is a stock issue in which privately held firms go public. Therefore, an IPO would be an example of a primary market transaction.

1-8 Traders meet face-to-face in an open outcry auction. In a dealer market, there are "market makers" who keep an inventory of the stock. These dealers list the prices at which they are willing to buy or sell. In a traditional dealer market, computerized quotation systems keep track of all bid and ask quotes, but they don't actually match buyers and sellers. Instead, traders must contact a specific dealer to complete the transaction. An automated trading platform is a computer system in which buyers and sellers post their orders and then let the computer automatically determine whether a match exists. If a match exists, the computer automatically executes and reports the trade.

1-9 Broker-dealer networks are registered with the SEC but are much less regulated than alternative trading systems (ATS) and registered stock exchanges. In a typical broker-dealer network, the broker-dealer purchases the stock being offered for sale by a client and then immediately sells it to another client who wished to buy the stock. Notice that the broker-dealer is the counterparty to each of the clients. The broker-dealer must report the transactions, but not any information prior to the trade. An alternative trading system is a broker-dealer than registers with the SEC as an ATS. An ATS usually has an automated trading platform to match orders from clients, so the owner of the ATS is not

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always the counterparty, in contrast to a broker-dealer network. The ATS must report trades, but not any pre-trade information. Therefore, an ATS is often called a dark pool. Stocks can only be listed at a registered stock exchange, although they may be traded elsewhere. A stock exchange must comply with more regulations than an ATS. In addition to reporting trades, a stock exchange must also report pre-trade information regarding bids and quotes.

1-10 The NYSE is the oldest U.S. registered stock exchange. The NASDAQ Stock Market has the most listings because it is willing to list smaller corporations than the NYSE. However, the NYSE's listings have a much bigger market value than NASDAQ's listed stocks.

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MINI CASE

Assume that you 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 Michelle Dellatorre, a professional tennis player who has just come to the United States from Chile. Dellatorre is a highly ranked tennis player who would like to start a company to produce and market apparel that she designs. She also expects to invest substantial amounts of money through Balik and Kiefer. Dellatorre is also very bright, and, therefore, she would like to understand, in general terms, what will happen to her money. Your boss has developed the following set of questions which you must ask and answer to explain the U.S. financial system to Dellatorre.

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. Describe the organizational forms a company 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, the professional corporation, and the s 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 advantage of a partnership is 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.

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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 the many required state and federal 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. S corporations are similar in many ways to limited liability partnerships, but LLPS frequently offer more flexibility and benefits to their owners.

c. How do corporations "go public" and continue to grow? What are agency problems? What is corporate governance?

Answer: A company goes public when it sells stock to the public in an initial public as the firm grows, it might issue additional stock 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 behavior towards its directors, managers, employees, shareholders, creditors, customers, competitors, and community.

d. What should be the primary objective of managers?

Answer: The corporation's primary goal is stockholder 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.

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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 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 behavior 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 (stockholders and creditors) after paying expenses (including taxes) and making the necessary investments to support growth.

FCF = sales revenues - operating costs - operating taxes
- required investments in operating capital.

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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 (stockholders 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.

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

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

Answer: Households are net savers. Non-financial corporations are net borrowers. Governments are net borrowers, although the U.S. government is a net saver when it runs a surplus. Non-financial corporations (i.e., financial intermediaries) are slightly net borrowers, but they are almost breakeven. 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); (3) a financial intermediary (e.g., individual deposits money in bank, bank makes commercial loan to a company).

j.	**What do we call the cost that a borrower must pay to use debt capital? What two components make up the cost of using 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 cost paid to use 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.

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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 that affect the cost of money?

Answer: The cost of money will be influenced by such things as fed policy, fiscal deficits, business activity, and foreign trade deficits.

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

Answer: Financial assets are pieces of paper with contractual obligations. Some short-term (i.e., they mature in less than a year) are instruments with low default risk are u.s. treasury bills, banker's acceptances, commercial paper, negotiable CDs, and Eurodollar deposits. Commercial loans (which have maturities up to seven years) have rates that are usually tied to the prime rate (i.e., the rate that U.S. banks charge to their best customers) or LIBOR (the London Interbank Offered Rate, which is the rate that banks in the U.K. charge one another. U.S. treasury notes and bonds have maturities from two to thirty years; they are free of default risk. Mortgages have maturities up to thirty years. Municipal bonds have maturities of up to thirty years; their interest is exempt from most taxes. Corporate bonds have maturities up to forty years. Municipal and corporate bonds are subject to default risk. Some preferred stocks have no maturity date, some do have a specific maturity date. Common stock has no maturity date, and is riskier than preferred stock.

m. List some financial institutions.

Answer: Commercial banks, savings & loans, mutual savings banks, and credit unions, life insurance companies, mutual funds, pension funds, hedge funds, and private equity funds are financial institutions or institutional investors.

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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.

o.	Along what two dimensions can we classify trading procedures??

Answer: They are categorized by "location" (physical location exchanges or computer/telephone networks) and by the way that orders from buyers and sellers are matched (open outcry auctions, dealers (i.e., market makers), and automated trading platforms.

Open outcry auctions have face-to-face trading. Dealers (i.e., market makers) buy from and sell to clients from an inventory of stocks. Orders are not always automatically matched by computers. Automated trading platforms match orders and execute trades automatically

p.	What are the differences between market orders and limit orders?

Answer: Market orders are to transact as quickly as possible at the current price. Limit orders are to transact only if a specific situation occurs. For example, buy 100 shares if the price drops to $50 or below during the next two hours.

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q. Explain the differences among dealer-broker networks, alternative trading systems, and registered stock exchanges.

Answer: Broker-dealer networks are registered with the SEC but are much less regulated than alternative trading systems (ATS) and registered stock exchanges. In a typical broker-dealer network, the broker-dealer purchases the stock being offered for sale by a client and then immediately sells it to another client who wished to buy the stock. Notice that the broker-dealer is the counterparty to each of the clients. The broker-dealer must report the transactions, but not any information prior to the trade. Trades in broker-dealer networks are called "off exchange" or over-the-counter (OTC). Trades can be with individuals (called retail trades) or with institutions. Large trades (10,000 shares or more) are called block trades and are sometimes called "upstairs" trades.

An alternative trading system is a broker-dealer than registers with the SEC as an ATS. An ATS usually has an automated trading platform to match orders from clients, so the owner of the ATS is not always the counterparty, in contrast to a broker-dealer network. The ATS must report trades, but not any pre-trade information. Therefore, an ATS is often called a dark pool.

Stocks can only be listed at a registered stock exchange, although they may be traded elsewhere. A stock exchange must comply with more regulations than an ATS. In addition to reporting trades, a stock exchange must also report pre-trade information regarding bids and quotes.

The NYSE is the oldest U.S. registered stock exchange. The NASDAQ Stock Market has the most listings because it is willing to list smaller corporations than the NYSE. However, the NYSE's listings have a much bigger market value than NASDAQ's listed stocks.

r. Briefly explain mortgage securitization and how it contributed to the global economic crisis.

Answer: Homeowners wanted better homes than they could afford. Mortgage brokers encouraged homeowners to take mortgages that would reset to payments that the borrowers might not be able to pay because the brokers got a commission for closing the deal. Appraisers thought the real estate boom would continue and over-appraised house values, getting paid at the time of the appraisal. Originating institutions (like Countrywide) quickly sold the mortgages to investment banks and other institutions. Investment banks created CDOs and got rating agencies to help design and then rate the new CDOs, with rating agencies making big profits despite conflicts of interest. Financial engineers used unrealistic inputs to generate high values for the CDOs. Investment banks sold the CDOs to investors and made big profits. Investors bought the CDOs but either didn't understand or care about the risk. Some investors bought

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"insurance" via credit default swaps.

When mortgages reset and borrowers defaulted, the values of CDOs plummeted. Many of the credit default swaps failed to provide insurance because the counterparty failed. Many originators and securitizers still owned sub-prime securities, which led to many bankruptcies, government takeovers, and fire sales, including New Century, Countrywide, IndyMac, Northern Rock, Fannie Mae, Freddie Mac, Bear Stearns, Lehman Brothers, and Merrill Lynch.

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