###### CHAPTER 1

 **AN OVERVIEW OF FINANCIAL MARKETS AND INSTITUTIONS**

**CHAPTER OBJECTIVES**

1. Chapter 1 introduces the basic elements of the financial system: financial claims, financial markets, and financial institutions. These elements integrate in a conceptual model of the financial system, shown in Exhibit 1-1. This chapter also develops basic vocabulary, which should be emphasized.
2. Chapter 1 compares and contrasts the two basic kinds of financing relationships—direct finance and financial intermediation—in the context of why financial needs exist, how financial claims arise, and what choices for financial activity emerge in different types of institutions and markets.
3. Chapter 1 compares and contrasts major types of financial institutions and markets. These mechanisms promote liquidity and diversification. More funds flow to the most productive uses, competition among institutions lowers costs, and widespread market participation links prices more closely to information. A vigorous, efficient financial system promotes economic growth and prosperity by maximizing rational investment opportunities and lowering the cost of capital. To achieve these outcomes fully, the financial system needs public trust. Consequently, its ethical issues must be addressed.

**CHANGES FROM THE 11th EDITION**

1. Chapter opener has been revised.
2. Tables, exhibits, data, and anecdotal material have been updated.
3. A 7th learning objective has been added: “Understand the importance of ethical behavior in financial services.”
4. Section 1.2 now ends with a summary of the 2007-08 global financial crisis.
5. Section 1.9 now ends with the new topic “Systemically Risky Banks.”
6. Chapter 1 now ends with newly added Section 1.10: “Ethics and the Financial System.”

**CHAPTER KEY POINTS**

1. The financial system brings savers and borrowers together. Stress these key concepts: SSUs and DSUs, financial claims, direct finance versus financial intermediation, financial institutions, transformation of claims, and types of financial markets. Remind students of financial intermediation in their own lives—checking accounts, insurance, student loans, etc.
2. Direct finance works if preferences of SSUs and DSUs match as to amount, maturity, and risk. Financial intermediaries transform claims to reduce the recurring problem of unmatched preferences:

 Denomination Divisibility. DSUs prefer to borrow the full funding need all at once. SSUs tend

to save small amounts periodically. Intermediaries pool small savings into large investments.

 Currency Transformation. Intermediaries can buy claims denominated in one currency while issuing claims denominated in another. This would be difficult for most ordinary SSUs.

 Maturity Flexibility. DSUs generally prefer longer-term financing. SSUs generally prefer shorter-term investments. Intermediaries can offer different ranges of maturities to both.

 Credit Risk Diversification. Intermediaries manage risk by evaluating and holding many different securities. SSUs on their own would have to leave “more eggs in one basket.”

 Liquidity. Many claims issued by intermediaries are highly liquid because intermediaries substitute their own liquidity for that of DSUs.

1. Financial institutions are classifiable by their origins, purposes, and major characteristics:

Depository Institutions

Commercial banks

Thrifts (savings and loan associations; mutual savings banks)

Credit unions

Contractual Institutions

Insurance companies (life and casualty)

Private pension funds

State and local government pension funds

Investment Funds

Mutual Funds

Money Market Mutual Funds

Other Institutions

Finance companies

Federal agencies

1. Financial markets are classifiable in a number of concurrent ways—

 Primary or Secondary

 Public or Private

 Exchanges or OTC

 Spot, Futures, or Option

 Foreign Exchange

 International or Domestic

 Money or Capital

The respective contributions of money markets and capital markets to the economy are important themes. Representative lists of money and capital market instruments foreshadow later chapters.

1. Financial intermediaries are major “information producers” in financial markets. The need for information arises because of asymmetric information – sellers or borrowers in financial transactions usually have more information than buyers or lenders. The two kinds of information asymmetry are adverse selection, which arises before a transaction, and moral hazard, which occurs after the transaction.
2. Risks faced by financial institutions are:

 Credit risk

 Interest rate risk

 Liquidity risk

 Foreign exchange risk

 Political risk

1. Financial systems need to be regulated for two reasons: consumer protection and stability. Any career path in the financial system will, by definition, present opportunities (and thus temptations) to act unethically.

**ANSWERS TO END-OF-CHAPTER QUESTIONS**

1. *Does it make sense that the typical household is a surplus spending unit (SSU) while the typical business firm is a deficit spending unit (DSU)? Explain.*

Households are ultimately SSUs, but have deficit periods when a home or other “big ticket” item is purchased. Businesses usually invest more in real assets than they receive in current operating cash flow.

1. *Explain the economic role of brokers, dealers, and investment bankers. How does each make a profit?*

Brokers, dealers, and investment bankers make markets at both primary and secondary stages. Funds are raised and claims issued in primary markets with the help of investment bankers, who buy securities from issuers at one price and sell them to the investing public at a higher price, earning the underwriter’s spread. In secondary markets, brokers bring buyers and sellers together, charging commissions. Dealers trade claims in volume, providing liquidity and price discovery and earning the difference between ask and bid price (the bid-ask spread).

1. *Why are direct financing transactions more costly or inconvenient than intermediated transactions?*

Parties to direct finance have to find each other and negotiate a match of preferences as to amount, maturity, and risk. Intermediaries provide all parties choices about financial activity, and drive costs down through competition, diversification, and economies of scale.

1. *Explain how you believe economic activity would be affected if we did not have financial markets and institutions*.

Financing relationships would arise only when preferences of SSUs and DSUs match. DSUs would not always obtain timely financing for attractive projects and SSUs would under-utilize their savings. The “production possibilities frontier” of the society would be smaller.

1. *Explain the concept of financial intermediation. How does the possibility of financial intermediation increase the efficiency of the financial system?*

Financial intermediation is the process by which financial institutions mediate unmatched preferences of ultimate borrowers (DSUs) and ultimate lenders (SSUs). Financial intermediaries buy financial claims with one set of characteristics from DSUs, then issue their own liabilities with different characteristics to SSUs. Thus, financial intermediaries “transform” claims to make them more attractive to both DSUs and SSUs. This increases the amount and regularity of participation in the financial system, thus making financial markets more efficient.

1. *How* *do financial intermediaries generate profits?*

Intermediaries pay SSUs less than they earn from DSUs. Operating costs absorb part of this margin. Risks taken by the intermediary are rewarded by any remaining profit. Intermediaries enjoy 3 sources of comparative advantage: Economies of scale —large volumes of similar transactions; transaction cost control—finding and negotiating direct investments less expensively; and risk management expertise—bridging the “information gap” about DSUs’ creditworthiness.

1. *Explain the differences between the money markets and the capital markets. Which market would General Motors use to finance a new vehicle assembly plant? Why?*

Money markets are markets for liquidity, whether borrowed to finance current operations or lent to avoid holding idle cash in the short term. Money markets tend to be wholesale OTC markets made by dealers. Capital markets are where real assets or “capital goods” are permanently financed, and involve a variety of wholesale and retail arrangements, both on organized exchanges and in OTC markets. GM would finance its new plant by issuing bonds or stock in the capital market. Investors would purchase those securities to build wealth over the long term, not to store liquidity.

1. *What steps should bank management take to manage credit risk in the bank’s loan portfolio?*

Banks manage credit risk of their loan portfolios by (1) diversifying the portfolios across regions, industries, and types of loans, (2) conducting a careful credit analysis of potential borrowers, and (3) continually monitoring the borrowers over the life of the loan or investment. Banks develop and follow lending policies which set guidelines for lending officers.

1. *Metropolitan Nashville and Davidson County issues $25 million of municipal bonds to finance a new domed stadium for the Tennessee Titans. The bonds have a face value of $10,000 each, are somewhat risky, and mature in 20 years. Enterprise Bank of Nashville buys one of the bonds using funds deposited by Sarah Levien and Ted Hawkins, who each purchased a 6-month, $5,000 certificate of deposit. Explain the intermediation services provided by Enterprise Bank in this transaction. Illustrate with T-accounts.*

Metropolitan Nashville and Davidson County Levien \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cash $10,000 from EBN || Bond $10,000 to EBN CD $5,000 at EBN || Cash $5,000 to EBN

 *Hawkins*

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 CD $5,000 at EBN || Cash $5,000 to EBN

 *Enterprise Bank of Nashville*

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 Bond $10,000 from MNDC || CD Levien $5,000

 Cash $5,000 from Levien || CD Hawkins $5,000

 Cash $5,000 from Hawkins || Cash $10,000 to MNDC

If Sarah or Ted had $10,000 and wanted to take the risks presented by the bonds, either of them could buy a bond in the direct market from a broker or dealer. Each likely prefers the government guarantee of the CD, the more easily affordable denomination of $5,000, and the ready liquidity (net of some known "penalty for early withdrawal"). Enterprise Bank now has a tax-free source of income from the municipal bond, has made its expert evaluation of credit risk, is diversified with other securities, and can buy the bonds with low transaction costs. Many banks are underwriters of municipal securities and carry inventories as dealers. The City of Nashville has financed a capital project (the stadium) by issuing financial claims (the bonds). The bank bought a bond with deposit funds it raised by issuing Sarah and Ted CDs, which are assets to them and liabilities to the Bank. The bond and the CDs are separate claims varying in denomination, maturity, risk, and liquidity. The bank takes a position of risk, keeps part of the interest income from the bonds as a reward for that risk, and distributes part of it to Sarah and Ted to reward them for postponing current consumption. The city, the ultimate borrower or DSU, has no direct relationship with Sarah and Ted, the ultimate lenders or SSUs.

1. *Explain the statement, "A financial claim is someone's asset and someone else's liability."*

There are always two sides to debt. To the issuer of the debt, it is a liability. To the holder of the debt, it is an asset. A financial asset always appears on two balance sheets; a real asset on just one.

1. *Why are banks singled out for special attention in the financial system?*

Banks are the dominant type of depository institutions. As such, they deal with consumers (depositors), whose trust in the banking system is vital to the flow of funds and ultimate well-being of the economy. Banks are also highly leveraged (liabilities are often around 90% of total assets, with capital being the other 10%), making them much more vulnerable to credit and liquidity risks than other businesses.

1. *Explain* *why households are the principal SSUs in the economy.*

Households in the U.S. are more likely to have their income exceed their expenditures than businesses or governments. A successful business usually has more capital spending opportunities than it can finance internally. The public goods supplied by governments (security, education, infrastructure) require large, extensive systems of assets. These assets are financed with long-term debt in order to allocate their costs to future taxpayers who will benefit from them.

1. *Explain why direct financial markets are wholesale markets. How do consumers gain access to these important markets?*

Direct financial markets are dominated by institutions that want to avoid the costs of registering securities with the SEC and transact large amounts of securities between each other. Only wealthy individuals, so called “accredited investors” (one must have high income and/or net worth to be considered an accredited investor) may participate in direct financial transactions such as private placements. Small individual investors access financial markets indirectly through intermediaries such as commercial banks or mutual funds.

1. *What are money center banks and why were they not allowed to engage in investment banking activities following the Great Depression?*

Money center banks are large commercial banks located in major financial centers. The Glass-Steagall Act of 1933 separated commercial banking and investment banking because it was believed that excessive risk taking by commercial banks resulted in large number of bank failures after the 1929 stock crash, followed by a depression. Commercial banks were again allowed in investment banking activities (and vice versa) in 1999.

1. *What is the difference between marketability and liquidity?*

Marketability is the ease with which a security can be sold and converted into cash. Liquidity is the ability to convert an asset into cash quickly without a loss of value. While the two concepts are similar, marketability does not necessarily imply preservation of value.

1. *Municipal bonds are attractive to what type of investors?*

Municipal bonds are long-term debt of state and local governments. Because their coupon income is exempt from federal income tax, they attract investors in high income tax brackets.

1. *Why do corporations issue commercial paper?*

Commercial paper is short-term corporate debt; it is issued to meet corporate short-term cash obligations.

1. *Explain what is meant by moral hazard. What problems does it present when a bank makes a loan?*

Moral hazard occurs if borrowers engage in activities that increase risk of default. A firm with a bank loan may take on very risky projects which, if successful, would yield large profits, but which have high risks of failure. The reason for such behavior is that lenders do not share the upside with shareholders of the firm. To reduce moral hazard, the bank will impose some restrictions on the borrower in the loan agreement (e.g., to maintain certain financial ratios at a certain level or better, to not acquire certain assets, or to reduce expenses), will continually monitor the borrower, and will usually have the borrower pledge crucial assets as collateral.

1. *Explain the adverse selection problem. How can lenders reduce its effect?*

Adverse selection arises from asymmetric information and, in the context of debt markets, refers to borrowers of poor credit quality applying for loans (perhaps because such borrowers need the loans the most in order to survive financially). The lender may reduce adverse selection by requiring loan applicants to supply detailed financial statements and other additional information, by using differential loan pricing for borrowers of different credit quality, or by rejecting loan applications if the risk is too high. To process the information they collect, lenders often develop or acquire from third parties credit scoring models that help measure borrowers’ creditworthiness.

1. *Why is the financial system so highly regulated?*

The regulation is needed to protect consumers from abuses by unscrupulous financial firms and to ensure economic stability. People should have confidence in the financial system for it to function well. A well-functioning financial system is critical for ensuring the flow of funds and, in turn, economic growth.

1. *Describe two recent high profile ethical failures in finance. How do ethical failures impact the financial services industry and the economy as a whole?*

During the financial crisis many large banks illegally manipulated a well-known interest rate called the London Interbank Offer Rate (LIBOR) for their own profit. Many mortgage originators created loans they knew (or should have known) the borrowers could not repay. These “front end” lenders knew they would quickly resell the mortgage and not bear the risk. This activity helped create the mortgage crisis and attendant “Great Recession”. Large scale ethical failures in the financial system cause huge economic losses and invite expensive additional regulation.