

Part 1

The Global Financial System in Perspective

Try to imagine living in a world in which there are no financial institutions, no financial markets, and no financial assets. In such a world, there would be no opportunity to borrow against future income in order to purchase a home or an automobile, or to finance an education. Nor would you be able to save some of your current income (and, thereby, accumulate wealth over time) to handle the future expenses of a growing family or retirement. Businesses could not come up with the resources needed to produce the goods and services you like to consume. There would be no way to acquire insurance against sickness and death. Even the simple act of buying food would become extremely difficult, requiring you to barter simply to survive.

The financial system has emerged to fill these and many other critical needs that require some separation in time between the use of resources (such as capital and labor), the production of goods and services, and the actual consumption of those goods and services desired. Financial markets and institutions deal with these issues and provide for the smooth functioning of modern economies, enabling resources to find their way to their most highly valued use. In so doing, the financial system dramatically enhances the efficiency of the economy and raises our standard of living.

In order to set the stage for our study of the global financial system, Part One of *Money and Capital Markets* takes up essential topics—the linkage between financial and nonfinancial markets, the mechanism by which financial assets are created, valued, and traded, and the critical importance of public and private information in determining the value of a financial asset. Finally, any study of the financial system would be hopelessly ill-informed if it were not conducted against the backdrop of the fast-paced, ever-changing world of finance. Spurred on by technology and the creativity of those working in the financial marketplace, the financial system has rapidly evolved to better perform its traditional roles and meet new challenges. This rapid pace of change is unlikely to slow in the future, requiring all of us to learn how to adapt to a dynamic financial marketplace.

Chapter 1

Functions and Roles of the Financial System in the Global Economy

Learning Objectives in This Chapter

- You will understand the functions performed and the roles played by the system of financial markets and financial institutions in the global economy and in our daily lives.
- You will discover how important the money and capital markets and the whole financial system are to increasing our standard of living, generating new jobs, and building our savings to meet tomorrow's financial needs.

What's in This Chapter? Key Topics Outline

How the Financial System Interfaces with the Economy
The Importance of Savings and Investment
The Nature of Financial Claims and Money and Capital Markets
Functions of the Money and Capital Markets: Savings, Wealth, Liquidity, Credit, Payments, Risk Protection, and Setting Public Policy
Perfect and Efficient Markets
The Dynamic Financial System: Key Trends Under Way

financial system

1.1 Introduction to the Financial System

This book is devoted to the study of the **financial system**—the collection of markets, institutions, laws, regulations, and techniques through which bonds, stocks, and other securities are traded, interest rates are determined, and financial services are produced and delivered around the world. The financial system is one of the most important creations of modern society. *Its primary task is to move scarce loanable funds from those who save to those who borrow to buy goods and services and to make investments in new equipment and facilities so that the global economy can grow and increase the standard of living enjoyed by its citizens.* Without the global financial system and the loanable funds it supplies, each of us would lead a much less enjoyable existence.

The financial system determines both the cost and the quantity of funds available in the economy to pay for the thousands of goods and services we purchase daily. Equally important, what happens in this system has a powerful impact upon the health of the global economy. When funds become more costly and less available, spending for goods and services falls. As a result, unemployment rises and the economy's growth slows as businesses cut back production and lay off workers. In contrast, when the cost of funds declines and loanable funds become more readily available, spending in the economy often increases, more jobs are created, and the economy's growth accelerates. In truth, the global financial system is an integral part of the global economic system. We cannot understand one of these systems without understanding the other.

1.2 The Global Economy and the Financial System

Flows within the Global Economic System

To better understand the role played by the financial system in our daily lives, we begin by examining its position within the global economy.

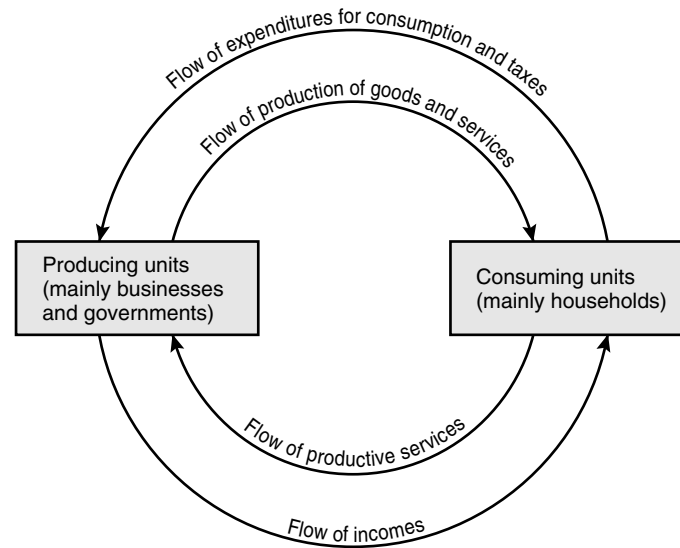
The basic function of the global economic system is to allocate scarce resources—land, labor, management skill, and capital—to their most highly valued use, producing the goods and services needed by society. The high standard of living most of us enjoy today depends on the ability of the global economy to turn out each day an enormous volume of food, shelter, and other essentials of modern living. This is an exceedingly complex task because scarce resources must be procured in just the right amounts to provide the raw materials of production and combined at just the right time with labor, management, and capital to generate the products and services demanded by consumers. In short, any economic system must combine inputs—land and other natural resources, labor and management skill, and capital equipment—to produce output—goods and services. The global economy generates a flow of production in return for a flow of payments.

We can depict the flows of payments and production within the global economic system as a *circular flow* between producing units (mainly businesses and governments) and consuming units (principally households). (See Exhibit 1.1.) In the modern economy, households provide labor, management skill, and natural resources to business firms and governments in return for income in the form of wages and other payments. Most of the income received by households is spent to purchase goods and services from businesses and governments. In 2003, for example, nearly 97 percent of the more than \$9 trillion in total personal income received by individuals and families in the United States was spent on the consumption of goods and services or paid out in taxes to purchase government services. The remainder of personal income—a little more than 3 percent—was set aside as *savings*. The result of this spending is a flow of funds back to producing units as income, which stimulates them to produce more

If you are interested in following the financial system on a daily basis, consider following such sites as money.cnn.com/markets/data/index.html and ftbusiness.com

EXHIBIT 1.1

Circular Flow of Income, Payments, and Production in the Global Economic System



goods and services in the future. The circular flow of production and income is interdependent and never ending.

The Role of Markets in the Global Economic System

Most economies around the world rely principally upon *markets* to carry out this complex task of allocating scarce resources, making possible the production and sale of goods and services that are in demand by businesses and households. What is a **market**? It is an institution through which buyers and sellers meet to exchange goods, services, and productive resources. This exchange determines what goods and services will be produced and in what quantity.

The marketplace is *dynamic*. It must respond continuously not only to changes in consumers' tastes, but also to the introduction of new goods and services, often associated with new technology. Today, cell phones and DVDs are part of our everyday lives, yet they barely existed a short 10 years ago. How did the resources of the economy get redeployed to produce those new goods?

This shift in production was accomplished in the marketplace through changes in the *prices* of goods and services being offered. If the price of an item rises, for example, this stimulates business firms to produce and supply more of it to consumers. In the long run, new firms may enter the market to produce those goods and services experiencing increased demand and rising prices. A decline in price, on the other hand, usually leads to reduced production of a good or service, and in the long run some less-efficient suppliers may leave the marketplace.

Markets also distribute *income*. In a pure market system, the income of an individual or a business firm is determined solely by the contribution each makes to producing goods and services demanded by the marketplace. Markets reward superior productivity and sensitivity to consumer demands with increased profits, higher wages, and other economic benefits. Of course, in all economies, government policies also affect the distribution of income and the allocation of other economic benefits.

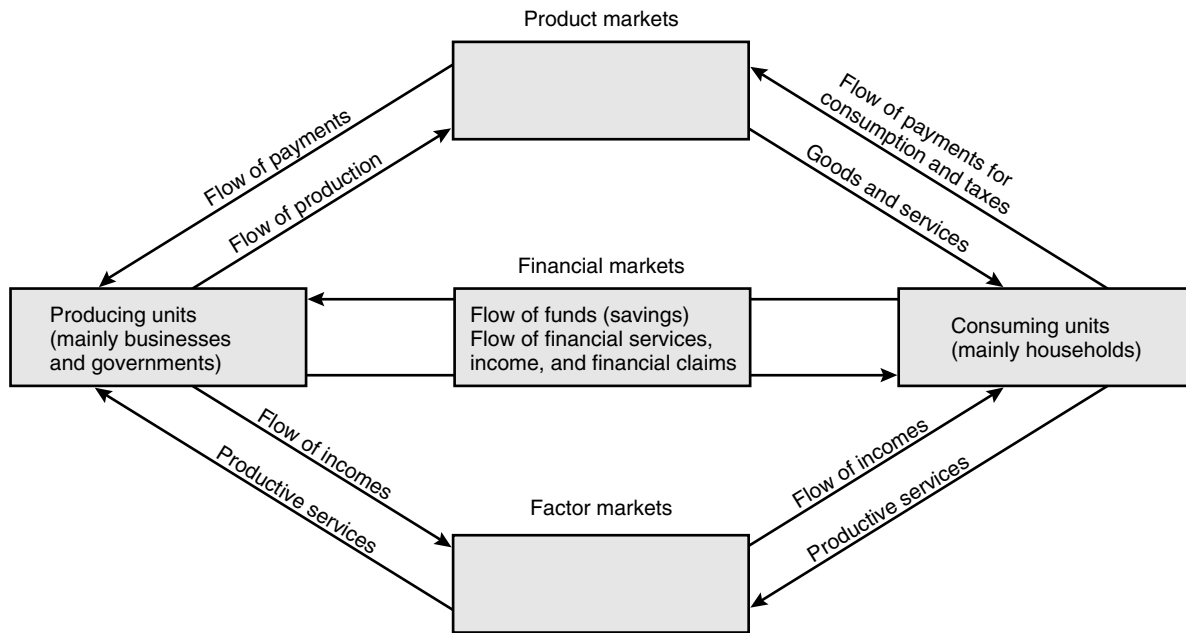
Types of Markets

There are essentially three *types of markets* at work within the global economic system: (1) factor markets, (2) product markets, and (3) financial markets (see Exhibit 1.2). In

market

EXHIBIT 1.2

Three Types of Markets in the Global Economic System



factor markets, consuming units sell their labor and other resources to those producing units offering the highest prices. The *factor markets* allocate factors of production—land, labor, managerial skills, and capital—and distribute income—wages, rental payments, and so on—to the owners of productive resources.

Consuming units use most of their income from factor markets to purchase goods and services in *product markets*. Food, shelter, automobiles, theater tickets, and clothing are among the many goods and services sold in product markets.

The Financial Markets and the Financial System: Channel for Savings and Investment

Of course, not all factor income is consumed. A proportion of after-tax income received by households each year—close to \$280 billion in 2003—is earmarked for *personal savings*. In addition, business firms save billions of dollars each year to build up their reserves for future contingencies and for long-term investment. For example, in 2003, U.S. corporations earned nearly \$470 billion in after-tax profits, of which almost \$200 billion was set aside (undistributed) for possible future needs as *business savings*. It is here that the third kind of market, the **financial market**, performs a vital function within the global economic system. The financial markets channel savings to those individuals and institutions needing more funds for spending than are provided by their current incomes. The financial markets are the heart of the global financial system, attracting and allocating savings and setting interest rates and the prices of financial assets (stocks, bonds, etc.).

financial market

savings

Nature of Savings The definition of **savings** differs depending on what type of unit in the economy is doing the saving. For households, savings are what is left from current income after current consumption expenditures and tax payments are made.

Part 1 The Global Financial System in Perspective

In the business sector, savings include current earnings retained inside business firms after payment of taxes, stockholder dividends, and other cash expenses. Government savings arise when there is a surplus of current revenues over current expenditures in a government's budget.

Nature of Investment Most of the funds set aside as savings flow through the global financial markets to support **investment** by business firms, governments, and households. Investment generally refers to the acquisition of capital goods, such as buildings and equipment, and the purchase of inventories of raw materials and goods to sell. The makeup of investment varies with the particular unit doing the investing. For a business firm, expenditures on *capital goods* (fixed assets, such as buildings and equipment) and *inventories* (consisting of raw materials and goods offered for sale) are investment expenditures. In contrast to businesses, for *households*, current accounting procedures in the United States stipulate that only the purchase of a home may be counted as an *investment*. All other household expenditures on durable goods (such as autos and furniture), as well as expenditures on nondurable goods (for example, food and fuel) and services (such as having your hair styled) are lumped together as *consumption spending* (i.e., expenditures on current account), rather than investment spending. Government spending to build and maintain public facilities (such as buildings, monuments, and highways) is another form of investment.

Modern economies require enormous amounts of investment to produce the goods and services demanded by consumers. Investment increases the productivity of labor and leads to a higher standard of living. However, investment often requires huge amounts of funds, far beyond the resources available to a single individual or institution. By selling financial claims (such as stocks and bonds) in the financial markets, large amounts of funds can be raised quickly from the pool of savings accumulated by households, businesses, and governments. The unit carrying out the investment then hopes to repay its loans from the financial marketplace by drawing on future income. Indeed, the money and capital markets make possible the *exchange of current income for future income* and the *transformation of savings into investment* so that production, employment, and income can grow, and living standards can improve.

Those who supply funds to the financial markets receive only *promises* in return for the loan of their money. These promises are packaged in the form of attractive financial claims and financial services, such as stocks, bonds, deposits, and insurance policies (see Exhibit 1.3). *Financial claims* promise the supplier of funds a future flow of income in the form of dividends, interest, or other returns. But there is no guarantee that the expected income will ever materialize. However, suppliers of funds to the financial system expect not only to recover their original funds but also to earn additional income as a reward for waiting and assuming risk.

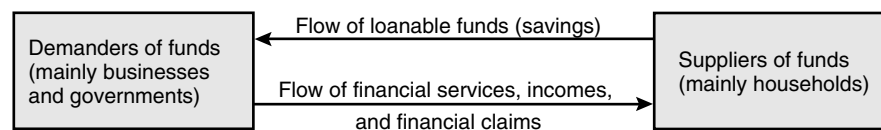
The role of the financial markets in channeling savings into investment is absolutely essential to the health of the economy. For example, if households set aside savings and those funds are not returned to the spending stream through investment by businesses and governments, the economy will begin to contract. The amount of income paid out by business firms and governments will *not* be matched by funds paid back to

investment

To learn more about savings and investment see Bankrate.com at bankrate.com/brm

Information about savings and investment options in the money and capital markets may be found in such popular Web sites as businessweek.com; forbes.com; fortune.com; moneyline.com; kiplinger.com; and smartmoney.com

EXHIBIT 1.3
The Global Financial System



those same sectors by households. As a result, income payments will decline, leading, in turn, to reduced consumption spending. The public's standard of living will fall. Moreover, with less spending, the need for labor will be curtailed, resulting in fewer jobs and rising unemployment.

QUESTIONS TO HELP YOU STUDY

1. Why is it important for us to understand how the global financial system works?
2. What are the principal links between the financial system and the economy? Why is each important to the other?
3. What are the principal functions or roles of the global financial system? How do the money and capital markets fulfill those roles or functions?
4. What exactly is *savings*? *Investment*? Are these terms often misused by people on the street? Why do you think this happens?
5. How and why are savings and investment important determinants of economic growth? Do they impact our standard of living? How?

1.3 Economic Functions Performed by the Global Financial System and the Financial Markets

The great importance of the financial system in our daily lives can be illustrated by reviewing the different functions that it performs. The global financial system has *seven* basic economic functions that create a need for money and capital markets.

Savings Function

The global system of financial markets and institutions provides a *conduit for the public's savings*. Bonds, stocks, and other financial claims sold in the money and capital markets provide a profitable, relatively low-risk outlet for the public's savings, which flow through the financial markets into investment so that more goods and services can be produced (i.e., productivity will rise), increasing the world's standard of living. When savings decline, investment and living standards begin to fall in those nations where savings are in short supply.

Wealth Function

While current savings represent a *flow* of funds, accumulated savings built up over time represent a *stock* of assets that we often refer to as *wealth*. For those businesses and individuals choosing to save, the financial instruments sold in the money and capital markets provide an excellent way to *store wealth* (i.e., preserve the value of assets we hold) until funds are needed for spending. Although we might choose to store our wealth in "things" (e.g., automobiles), such items are subject to depreciation and often carry great risk of loss. However, bonds, stocks, and other financial instruments do *not* wear out over time and usually generate income; moreover, their risk of loss often is much less than for many other forms of stored wealth.

wealth

Incidentally, what is **wealth**? For any individual, business firm, or government, wealth (W_t) is the sum (Σ) of the values of all individual assets (A_i) held at any moment in time (t). That is,

$$W_t = \sum_i A_{it} \quad (1.1)$$

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Wealth is built up over time by a combination of current savings plus income earned on previously accumulated wealth. In symbols,

$$\Delta W_t = S_t + r_t \cdot W_{t-1} \quad (1.2)$$

where ΔW_t represents the change in wealth in the current period, S_t is the volume of current savings, r_t is the current average rate of return on accumulated assets, and W_{t-1} is the value of all accumulated wealth (assets) held at the end of the preceding period ($t - 1$).

financial wealth

The portion of wealth held by society in the form of stocks, bonds, and other financial assets—that is, **financial wealth**—is created by the financial system and the money and capital markets within that system. The volume of financial wealth is huge and growing nearly every year. For example, in 2003 nearly \$80 trillion in securities, deposits, and other financial assets were held by domestic businesses, households, and governments in the United States, while foreign investors held almost \$8 trillion in financial instruments that were issued inside the United States during the same year. Individuals and families (households) alone held close to \$30 trillion in stocks, bonds, and other financial assets.

net financial wealth

If we subtract total debts owed by U.S. businesses, households, and governments, which amounted to about \$21 trillion in 2003, we obtain what is called **net financial wealth**. The total *net* financial wealth (financial assets – debts) held by U.S. individuals and institutions was nearly \$65 trillion. Wealth holdings represent *stored purchasing power* that will be used in future periods as income to finance purchases of goods and services and increase society's standard of living. Therefore, income emerges from the wealth function of the global financial system. Income (Y_t) is created by the rate of return (r_t) that current wealth holdings (W_t) generate for their owners. Or,

$$Y_t = W_t \cdot r_t \quad (1.3)$$

In turn, that wealth-created income leads to *both* increased consumption spending and to new saving, resulting in a higher standard of living for those who hold wealth in income-generating forms.

Liquidity Function

liquidity

For wealth stored in financial instruments, the global financial marketplace provides a means of converting those instruments into cash with little risk of loss. The world's financial markets provide **liquidity** (immediately spendable cash) for savers who hold financial instruments but are in need of money. In modern societies, *money* consists mainly of currency and deposits held in banks, credit unions, and other depository institutions and is the only financial instrument possessing *perfect liquidity*. Money can be spent as it is without the necessity of converting it into some other form. However, money generally earns the lowest rate of return of all assets traded in the financial system, and its purchasing power is seriously eroded by inflation. That is why savers generally minimize their holdings of money and hold other, higher-yielding financial instruments until they really need spendable funds. Of course, money is not the only means of making purchases of goods and services. In many lesser-developed economies, simple bartering—exchanging one good or service for another—performs many of the same services that money provides in a developed economy.

Credit Function

credit

In addition to providing liquidity and facilitating the flow of savings into investment to build wealth, the global financial markets furnish **credit** to finance consumption and investment spending. Credit consists of a loan of funds in return for a promise of future

E-COMMERCE AND THE FINANCIAL MARKETPLACE

Electronic Money Is Taking Over

More and more transactions in the money and capital markets today are being carried out with *E-money*—swiping a plastic card through an electronic reader or punching information into a computer networked to other computers. The rise of *E-money* within the economy and the financial system suggests that we are moving toward a faster, more efficient, and safer payments system in the future.

The *Internet* has enabled millions of customers to keep track of their checking, savings, and loan balances at the bank every day and place electronic orders for everything from stocks and bonds to sweaters and books. At the same time, *plastic cards* and *card readers* have literally taken over purchases made in gas stations, retail shops, and fast-food restaurants and are increasingly used for paying rent and other regular monthly bills. *Portable card-swiping devices*, operating much like cellular phones, are emerging to facilitate payments from anywhere on the planet.

Equally impressive are *debit cards* and *smart cards*, encoded with a customer's personal information and used to electronically subtract what is owed from a customer's checking or savings funds immediately. While *credit cards* are increasingly being used to pay for the largest purchases (such as clothing and appliances) or to take advantage of special offers (such as bonuses for airline travel), debit and smart cards have moved in to capture a growing share of small-size purchases in millions of stores and shops.

Europe appears to be leading the way toward an *E-money* system. However, the United States's payments system also is on the move with the writing of paper checks decreasing over the past decade (though Americans still write about 40 billion checks annually). The money and capital markets, like the rest of the economy, are being revolutionized by the rapid rise of *E-money* based payments technology.

payment. Consumers need credit to purchase a home, buy groceries, repair the family automobile, and retire outstanding debts. Businesses draw on their lines of credit to stock their shelves with inventory, construct new buildings, meet payrolls, and grant dividends to their stockholders. State, local, and federal governments borrow to construct buildings and other public facilities and to cover daily cash expenses until tax revenues flow in.

The volume of credit extended by the money and capital markets today is huge and growing. In the United States alone total credit funds raised in U.S. financial markets in 2003 amounted to more than \$2.3 trillion—about double the amount raised in the money and capital markets only a decade before. Growth of the economy, inflation, and the tax deductibility of some interest payments all appear to have fueled this rapid growth in credit usage by businesses, households, and governments.

Payments Function

The global financial system also provides *a mechanism for making payments for purchases of goods and services*. Certain financial assets—including *currency*, *non-interest-bearing checking accounts* (referred to as *demand deposits*), and *interest-bearing checking accounts* (referred to as *negotiable order of withdrawal* or *NOW accounts*)—still serve as a popular medium of exchange in making payments all over the globe (especially in the United States). Also high on the payments list are plastic debit and credit cards issued by banks, credit unions, and retail stores. In the case of *debit cards*, a customer pays immediately for purchases by electronically debiting his or her account in a depository institution; in the case of *credit cards*, the customer receives instant access to short-term credit when contracting for purchases of goods and services. If present trends continue, electronic means of payment, including *computer terminals in homes, offices, and stores* and *digital cash* (accessed by an encoded plastic card) will eventually replace checks and other pieces of paper as the principal means of paying in the future. Indeed,

FINANCIAL DEVELOPMENTS

Assault on the Financial System— Terror and Its Aftermath

On September 11, 2001, the United States experienced one of the most devastating tragedies in its history when hijackers took control of four commercial airliners and crashed two of the four into the World Trade Center in New York City and one into the Pentagon in Washington, D.C. More than 3,000 people lost their lives.

The assault on the World Trade Center was an attack on a key trading center within the financial system—a place where major dealers in securities, large banks, and other financial-service institutions served clients around the globe. When the trade center collapsed, several financial firms faced severe disruption, losing their communications links and suffering death or serious injury to their employees.

Still the flexibility and resilience of the money and capital markets in adjusting to this terrible tragedy proved to be remarkable. Within a handful of days the New York Stock Exchange was reopened and major security, banking, and insurance firms found new space from which to serve their customers.

Of course, even with the remarkable “bounce back” of the financial system from terror, significant damages

to the economy and financial system were felt. Lenders and investors became more concerned about *risk*. Stock prices around the globe fell for a time as investors sold riskier securities and fled into government bonds and insured bank deposits. Insurance companies braced for an unprecedented volume of financial claims related to deaths and destruction. Layoffs of workers rose and business sales fell.

These tragic events remind us of several key points. First, the economy and the financial system are intimately connected to each other—an external shock that affects one affects the other. Second, though a great institution, the money and capital markets are fragile and need the support of governments and the confidence of the public to operate efficiently and perform their essential functions. Third, the financial marketplace is now unquestionably global rather than belonging to a single nation—significant events in any nation, either good or bad, quickly spread around the world and eventually affect all markets.

electronic means of payment are growing rapidly today (especially in Europe), while checks and other paper-based means of payment are declining in volume.

Risk Protection Function

The financial markets offer businesses, consumers, and governments *protection against life, health, property, and income risks*. This is accomplished, first of all, by the sale of insurance policies. Policies marketed by life insurance companies indemnify a family against possible loss of income following the death of a loved one. Property-casualty insurers protect their policyholders against an incredibly wide array of personal and property risks, ranging from ill health and storm damage to negligence on the highways. In addition to making possible the sale of insurance policies, the money and capital markets have been used by businesses and consumers to “self-insure” against risk; that is, holdings of wealth are built up as protection against future losses.

The financial system permits individuals and institutions to engage in both *risk sharing* and *risk reduction*. Risk sharing occurs when an individual or institution transfers risk exposure to someone willing to accept that risk (such as an insurance company), while risk reduction usually takes place when we diversify our wealth across a wide variety of different assets so that our overall losses are likely to be more limited.

Policy Function

Finally, in recent decades, the financial markets have been *the principal channel through which government has carried out its policy of attempting to stabilize the economy and avoid inflation*. By manipulating interest rates and the availability of

For further exploration of the many risks often present in the financial system and markets, see, for example, Standardandpoor.com; moodys.com; and cbot.com

credit, government can affect the borrowing and spending plans of the public, impacting the growth of jobs, production, and prices. As we will see later on, this task of economic stabilization has been given largely to central banks, such as the Federal Reserve System in the United States, the Bank of England, the Bank of Japan, and the new European Central Bank (the ECB).

QUESTIONS TO HELP YOU STUDY

6. What seven vital *functions* does the financial system of money and capital markets perform?
7. Why is each function of the financial system important to households, businesses, and governments? What kinds of lives would we be living today if there were no financial system or no financial markets?
8. What exactly do we mean by the term *wealth*? Why is it important?
9. What is *net financial wealth*? What does it reveal about each of us?
10. Can you explain what factors determine the current volume of financial wealth and net financial wealth each of us has?

1.4 Types of Financial Markets within the Global Financial System

The global financial system fulfills its various roles mainly through *markets* where financial claims and financial services are traded (though in some lesser-developed economies government dictation and even barter are used). These markets may be viewed as *channels* through which moves a vast flow of loanable funds that is continually being drawn upon by demanders of funds and continually being replenished by suppliers of funds.

The Money Market versus the Capital Market

The flow of funds around the world may be divided into different segments, depending on the characteristics of financial claims being traded and the needs of different investors. One of the most important divisions in the financial system is between the *money market* and the *capital market*.

money market

The **money market** is designed for the making of short-term loans. It is the institution through which individuals and institutions with *temporary* surpluses of funds meet the needs of borrowers who have *temporary* funds shortages (deficits). Thus, the money market enables economic units to manage their liquidity positions. By convention, a security or loan maturing within one year or less is considered to be a money market instrument. One of the principal functions of the money market is to finance the working capital needs of corporations and to provide governments with short-term funds in lieu of tax collections. The money market also supplies funds for speculative buying of securities and commodities.

capital market

In contrast, the **capital market** is designed to finance long-term investments by businesses, governments, and households. Trading of funds in the capital market makes possible the construction of factories, highways, schools, and homes. Financial instruments in the capital market have original maturities of *more than one year* and range in size from small loans to multimillion dollar credits.

Who are the principal suppliers and demanders of funds in the money market and the capital market? In the money market, commercial banks are the most important

FINANCIAL DEVELOPMENTS

The Financial System of Money and Capital Markets Viewed as a Supplier of Financial Services to the Public

The financial system performs the economic functions described in this section by providing financial services to the public. Therefore, it can be viewed as a collection of financial-service firms (FSFs) that produce and sell those financial services most in demand by the public. Among the financial services most widely sought by the public and distributed by the money and capital markets are:

- *Payments services*, providing payments accounts against which the customer can write checks, wire funds, or use encoded cards to pay for purchases of goods and services.
- *Thrift services*, providing attractive financial instruments with adequate safety and yield to encourage people, businesses, and governments to save for their future financial needs.
- *Insurance services*, providing protection from loss of income or property in the event of death, disability, or other adverse developments.
- *Credit services*, providing loanable funds to supplement current income through borrowing in order to sustain current living standards.
- *Hedging services*, providing protection against loss due to unfavorable movements in market prices or interest rates through such devices as futures, options, and other hedging instruments.
- *Agency services*, acting on behalf of a customer in managing retirement funds or other property (as a bank trust department or security dealer might do).

institutional supplier of funds (lender) to both business firms and governments. Nonfinancial business corporations with temporary cash surpluses also provide substantial short-term funds to the money market. On the demand-for-funds side, the largest borrower in the U.S. money market is the Treasury Department, which borrows billions of dollars weekly. Other governments around the world are often among the leading borrowers in their own domestic money markets. The largest and best-known corporations and securities dealers are also active borrowers in money markets around the world. Due to the large size and strong financial standing of these well-known money market borrowers and lenders, money market instruments are considered to be high-quality, “near money” IOUs.

In contrast, the principal suppliers and demanders of funds in the capital market are more varied than in the money market. Families and individuals, for example, tap the capital market when they borrow to finance a new home. Governments rely on the capital market for funds to build schools and highways and provide essential services to the public. The most important borrowers in the capital market are businesses of all sizes that issue long-term debt instruments representing claims against their future revenues in order to cover the purchase of equipment and the construction of new facilities. Ranged against these many borrowers in the capital market are financial institutions, such as insurance companies, mutual funds, security dealers, and pension funds, that supply the bulk of capital market funds.

Divisions of the Money and Capital Markets

The money market and the capital market may be further subdivided into smaller markets, each important to selected groups of demanders and suppliers of funds. Within the money market, for example, is the huge *Treasury bill* market. Treasury bills—short-term IOUs issued by many governments around the world—are a safe and popular investment medium for financial institutions, corporations of all sizes, and wealthy individuals.

An interesting source of information on ongoing trends in financial services and the financial market-place is *The Economist* from London at economist.com

Somewhat larger in volume is the market for *certificates of deposit* (CDs) issued by banks and other depository institutions to raise funds in order to carry on their lending activities. Two other important money market instruments that arise from large corporations borrowing money are *bankers' acceptances* and *commercial paper*. In another corner of the money market, *federal funds*—the reserve balances of banks plus other immediately transferable monies—are traded daily in huge volume. Another segment of the money market reaches around the globe to encompass suppliers and demanders of short-term funds in Europe, Asia, and the Middle East. This is the vast, largely unregulated *Eurocurrency market*, in which deposits denominated in the world's major trading currencies—for example, the dollar and the Euro—are loaned to corporations and governments around the globe.

The capital market, too, is divided into several sectors, each having special characteristics. For example, one of the largest segments of the capital market is devoted to residential and commercial *mortgage loans* to support the building of homes and business structures, such as factories and shopping centers. In the United States, state and local governments sell their *tax-exempt (municipal) bonds* in another sector of the capital market. Households borrow in yet another segment, using *consumer loans* to make purchases ranging from automobiles to home appliances. There is also an international capital market for borrowing by large corporations represented by *Eurobonds* and *Euronotes*.

Probably the best-known segment of the capital market is the market for *corporate stock* represented by the major exchanges, such as the New York Stock Exchange (NYSE) and the Tokyo Exchange, and a vast over-the-counter (OTC) market, including electronic stock trading over the Internet. No matter where it is sold, however, each share of stock (equity) represents a certificate of ownership in a corporation, entitling the holder to receive any dividends paid out of current company earnings. Businesses also sell a huge quantity of *corporate notes* and *bonds* in the capital market each year to raise long-term funds. These securities, unlike shares of stock, are pure IOUs, evidencing a debt owed by the issuing company. Each of these financial instruments will be examined in detail in the chapters that lie ahead.

Open versus Negotiated Markets

open markets

negotiated markets

For interesting and often useful information about corporate stocks and bonds, see such sites as

finance.yahoo.com;
wsj.com;
financenter.com; and
bloomberg.com

Another distinction between markets in the global financial system focuses on **open markets** versus **negotiated markets**. For example, some corporate bonds are sold in the open market to the highest bidder and are bought and sold any number of times before they mature and are paid off. In contrast, in the negotiated market for corporate bonds, securities generally are sold to one or a few buyers under private contract.

An individual who goes to his or her local banker to secure a loan for a new car enters the negotiated market for auto loans. In the market for corporate stocks there are the major stock exchanges, which represent the open market. Operating at the same time, however, is the negotiated market for stock, in which a corporation may sell its entire stock issue to one or a handful of buyers.

Primary versus Secondary Markets

primary markets

secondary markets

The global financial markets also may be divided into **primary markets** and **secondary markets**. The primary market is for the trading of *new* securities. Its principal function is raising financial capital to support new investment in buildings, equipment, and inventories. You engage in a primary-market transaction when you purchase shares of stock just issued by a company or borrow money through a new mortgage to purchase a home.

FINANCIAL DEVELOPMENTS

The Low Savings Rate in the U.S. Economy

Saving is vital to support the growth of *investment* in new capital equipment and new technologies so that economies can grow and increase the standard of living of their citizens. Although the national savings rate of the United States has remained fairly stable for much of the nation's history, the United States today posts one of the lowest savings rates in the world, with a savings-to-gross domestic product ratio well below that of Japan and Germany, for example.

One reason for low savings rates may simply be changing public attitudes toward saving itself. Older generations remember the Great Depression of the 1930s, with millions of people out of work. Younger savers, however, are more likely to have experienced periods of prosperity and low unemployment and see less need for savings protection.

Then, too, the U.S. government's Social Security and Medicare systems promise workers at least a minimal

level of retirement income, reducing the apparent need for maximizing personal savings, at least in the minds of many savers. Moreover, when inflation rises, many consumers prefer to buy now rather than add to their savings.

The currently low U.S. savings rate may come back to haunt Americans in the future. For example, a relatively low savings rate coupled with a low investment rate make the economy more prone to inflation because, with less investment in new equipment, fewer goods and services can be produced as demands for goods and services increase. Living standards of individuals and families are likely to grow more slowly in the future. However, some economists believe that the U.S. savings rate will begin to rise in the future as the population ages because there will be more Americans concerned about building their savings for retirement. Let's hope they are right!

For further discussion
of the importance of
savings see
bankrate.com/brm

In contrast, the secondary market deals in securities previously issued. Its chief function is to provide *liquidity* to security investors—that is, provide an avenue for converting financial instruments into cash. If you sell shares of stock or bonds you have been holding for some time to a friend or call a broker to place an order for shares currently being traded on the American, London, or Tokyo stock exchanges, you are participating in a secondary-market transaction.

The volume of trading in the secondary market is far larger than in the primary market. However, the secondary market does *not* support new investment. Nevertheless, the primary and secondary markets are closely intertwined. For example, a rise in security prices in the secondary market usually leads to a similar rise in prices on primary-market securities, and vice versa. This happens because many investors readily switch from one market to another in response to differences in price or yield.

Spot versus Futures, Forward, and Option Markets

We may also distinguish between *spot markets*, *futures* or *forward markets*, and *option markets*. A spot market is one in which assets are traded for immediate delivery (usually within one or two business days). If you pick up the telephone and instruct your broker to purchase Telecon Corporation stock at today's price, this is a spot market transaction. You expect to acquire ownership of Telecon shares today.

A *futures* or *forward market*, on the other hand, is designed to trade contracts calling for the *future delivery* of financial instruments. For example, you may call your broker and ask to purchase a contract calling for delivery to you of \$1 million in government bonds six months from today. The purpose of such a contract would be to shift risk to some individual or institution willing to bear that risk by agreeing upon a delivery price today rather than waiting six months when government bonds might be priced much higher.

Finally, *options markets* also offer investors in the money and capital markets an opportunity to reduce risk. These markets make possible the trading of options on selected stocks and bonds, which are contracts that give an investor the right to either buy designated securities from or sell designated securities to the writer of the option at a guaranteed price at any time during the life of the contract. We will see more clearly how and why such transactions take place when we explore the financial futures and options markets in Chapter 9 and the forward markets for foreign currencies in Chapter 23.

1.5 Factors Tying All Financial Markets Together

Each corner of the financial system represents a market segment with its own special characteristics. Each segment is insulated from the others to some degree by investor preferences and by rules and regulations. Yet when interest rates and security prices change in one corner of the financial system, *all* of the financial markets likely will be affected eventually. This implies that, even though the financial system is split up into many different markets, there must be forces at work to tie all the financial markets together.

Credit, the Common Commodity

One unifying factor is the fact that the basic commodity being traded in most financial markets is *credit*. Borrowers can switch from one market to another, seeking the most favorable credit terms wherever they can be found. It is not uncommon, for example, for an oil company to finance the construction of a drilling rig through short-term loans from the money market when interest rates in the capital market are unusually high, but to seek long-term financing of the project later on when capital market conditions are more favorable. The shifting of borrowers between markets helps to weld the parts of the financial system together and to bring credit costs in different markets into balance with one another.

Speculation and Arbitrage

Another unifying element is profit seeking by demanders and suppliers of funds. *Speculators* in securities are continually on the lookout for opportunities to profit from their forecasts of future market developments. The speculator in the financial marketplace gambles that security prices or interest rates will move in a direction that will result in quick gains due to his or her ability to outguess the market's collective judgment. Many speculators are *risk seekers*, willing to gamble their funds even when the probability of success is low. Speculators perform an important function in the markets by leveling out the prices of assets, buying those they believe are underpriced and selling those thought to be overpriced.

Still another unifying force in the financial markets comes from investors who watch for profitable opportunities to **arbitrage** funds—transferring funds from one market to another whenever the prices of assets in different markets appear to be out of line with each other. *Arbitrageurs* help to maintain *consistent prices between markets*, aiding other buyers in finding the best prices with minimal effort.

arbitrage

For an overview of the concept of arbitrage, see especially finpipe.com/derivglossary.htm

Perfect and Efficient Markets

There is some research evidence today suggesting that financial markets are closely tied to one another due to their near perfection and efficiency. What is a **perfect market**? It is one in which the cost of carrying out transactions is zero or nearly so and all market participants are *price takers* (rather than being able to dictate prices to the market). In such a market, there are no significant government restrictions on trading

perfect market

ETHICS IN THE MONEY AND CAPITAL MARKETS

The Mutual Fund Scandal

The huge mutual fund scandal of 2003–2004 reminds us that unethical behavior—the violation of a written or unwritten moral code—is nearly everywhere in our world, even inside the money and capital markets. A prime example emerged recently among some prominent *mutual funds* that attract money from millions of investors and invest in stocks, bonds, and other assets having income or growth potential. They are among the simplest of businesses, consisting of shareholders and a board of directors and with most of their daily operations—portfolio management, record keeping, and the like—handled by outsiders. Sadly, this loose organizational structure can lead to unethical behavior.

Mutual funds have a reputation for being “customer friendly,” especially to small investors with limited knowledge of the financial marketplace. Recently, many customers have been in shock, not really believing that

their fund manager might take part in such questionable games as “front running” (placing an order for stock just ahead of an order for the same shares from a larger customer, hoping to benefit from a price change) or “after hours trading” (allowing favorite clients to trade *after* the closing bell but at the previously established closing price—a privilege not available to most customers).

In the wake of the scandal, millions of customers suddenly realized that mutual funds are not heavily scrutinized from stem to stern like banks. Instead, the funds’ principal regulators (e.g., the states and the U.S. Securities and Exchange Commission) have limited control and few investigatory resources. Ethics are a powerful moral force, however, and it seems likely that tougher rules will be on the way as a result of this latest scandal.

and the movement of funds; rather, competition among buyers and sellers sets the terms of trade. No financial market today is perfect, but several seem to come close to being so.

Some financial markets may also have another desirable characteristic: *The prices of financial instruments may accurately reflect their inherent value and fully reflect all available information.* Moreover, any new information supplied to the market may quickly be incorporated into a new set of prices. A market in which prices fully reflect the latest available information is an **efficient market**. No information that might affect prices or interest rates is wasted. Thus, no buyer or seller can expect to reap excess profits from collecting information that is readily available in the marketplace and trading on the basis of that information. As we will see in Chapters 3 and 20, numerous studies of the financial markets suggest that they approach fairly closely the ideal of a perfect and an efficient marketplace.

efficient market

For a discussion of the efficient markets concept see investorhome.com

Financial Markets in the Real World: Imperfection and Asymmetry

Unfortunately, as we will see in subsequent chapters, as nearly perfect and efficient as some financial markets may seem to be, there is still a great deal that is *imperfect* in our financial system. Not all financial-service markets are fully competitive, and collusion to fix prices or to bilk unsuspecting members of the public does occur quite frequently. For example, the *mutual fund scandal*—alleged illegal trading among the managers of some investment companies that resulted in losses to their customers amounting to billions of dollars—literally rocked the financial marketplace in 2003 and 2004. The scandal placed millions of small household investors in a real quandary. Were their savings and retirement plans really safe? Events of this magnitude remind us that the functioning and regulation of our financial marketplace still leave much room for improvement.

**asymmetric
information**

Moreover, we now realize that not all the information needed by purchasers of financial assets or services is readily or cheaply available. Increasingly, we are coming to an awareness of the importance of **asymmetric information** in our global financial system—that is, different participants in the markets often operate with different sets of information, some possessing special or inside information others do not possess. The result is that some market players may be able to earn excess profits by taking advantage of the special information they possess. Moreover, as we will see in Chapter 3, high-quality assets may be driven from the market when the asymmetrical distribution of information in the marketplace is severe.

1.6 The Dynamic Financial System

To learn more about possible inefficiencies, asymmetric information problems, and scandals in the financial marketplace, see especially the U.S. Securities and Exchange Commission at sec.gov/consumer

There is an old saying: “You cannot step into the same river twice, for rivers are ever flowing onward.” That statement can be applied to the global financial system—it is rapidly changing into a *new* financial system. Powerful trends are under way to convert even smaller national financial systems into an integrated global system, at work 24 hours a day to attract savings, extend credit, and fulfill other vital roles. Satellites, computers, and other automated systems now tie together financial-service trading centers as widely dispersed as London, New York, Tokyo, Singapore, and Sydney. This process of integrating financial systems globally has been aided by gradual deregulation of financial institutions and services on the part of leading industrialized nations (such as the United States, Japan, and members of the European Economic Union). Many of these countries have begun to “harmonize” their regulations so that financial-service firms operate under similar rules no matter where they are located. The results have been increasingly intense competition for customers, the development of many new financial services, increased risk to financial firms and their customers, and a wave of mergers among financial institutions. One of the purposes of this book is to help you understand why these global trends are occurring and what they are likely to mean for all of us in the future.

QUESTIONS TO HELP YOU STUDY

11. Can you distinguish between the following institutions?
Money market versus capital market
Open market versus negotiated market
Primary market versus secondary market
Spot market versus forward or futures market
12. If we follow the money and capital markets around the world each day it soon becomes apparent that interest rates and security prices in different markets tend to move together, albeit with leads and lags. Why do you think this is so?
13. Can you explain what is meant by the term *perfect market*? *An efficient market*? What real-world elements might limit the perfection and efficiency of money and capital markets?
14. What is meant by the term *asymmetric information*? Why do you think this concept might be important to you and to other participants in the financial system?

1.7 The Plan of This Book

This text is divided into seven parts, each devoted to a particular segment of the financial system. Part One provides an overview of the global financial system—its role in the world’s economy and basic characteristics. The vital processes of saving and

Part 1 The Global Financial System in Perspective

investing, lending and borrowing, and creating and destroying financial assets are described. Part One surveys the principal sources of information available today on the workings of the worldwide financial marketplace and presents an overview of the financial system of the future.

Part Two examines forces that shape interest rates and the prices of financial instruments. Because the rate of interest is the key price in the financial system, this section begins in Chapter 5, which presents a variety of views about how interest rates are determined. Subsequent chapters address such important topics as the measurement of interest rates and financial asset prices, yield curves, duration, inflation, the risk of default, and taxes. Part Two concludes with a review of methods for hedging against interest rate and asset price changes, including swaps, futures, and options.

Part Three draws our attention to the money market and its principal institutions and instruments and to a government institution that often dominates the tone of the money market—the central bank. Chapters in this section examine the characteristics of Treasury bills, federal funds, repurchase agreements, bank certificates of deposit, commercial paper, federal agency securities, bankers' acceptances, and Eurocurrency deposits. Part Three also presents a thorough examination of the many roles and functions of the central bank within the financial system, including an in-depth look at the history, organizational structure, and policy tools of the Federal Reserve System as well as the policy tools used by other central banks around the world. Part Three concludes with a review of the goals and targets for implementing central bank monetary policy decisions.

In Part Four, the spotlight turns to private financial institutions—commercial banks, credit unions, savings and loan associations, money market funds, insurance companies, pension funds, mutual funds, investment banks, and other financial-service firms. The reader is presented with an overview of their characteristics, regulation, current problems, and management tools designed to deal with those problems.

Part Five turns to the role of governments (federal, state, and local) and business firms within the global financial system. The opening chapter of this section explores the fiscal and debt management policies of the U.S. government, followed by an overview of state and local government borrowing, spending, and taxation. Then Chapter 19 takes up the topic of business borrowing, including the pricing and marketing of corporate bonds and asset-backed securities. Part Five concludes with an exploration of the many facets of the corporate stock market.

The financial characteristics of consumers—individuals and families—are considered in Part Six. Chapter 21 looks at the types of consumer debt and savings instruments available today and reviews current laws that protect the financial services consumer. This section closes with an overview of the residential mortgage market—one of the largest of all financial markets. Chapter 22 explores the array of different types of home loans that have appeared in recent years and how this huge market has expanded lately under the umbrella of strong government support and aggressive private innovation.

Finally, Part Seven focuses upon the international financial system and future trends in global finance. Topics covered include international trade and the balance of payments, the markets for foreign currencies, hedging against currency risk, and international banking.

Throughout this text, there is a strong emphasis on the innovative character of modern financial systems and institutions. A veritable explosion of new services and trading techniques has occurred in recent years. Moreover, the pace of innovation in financial services appears to be accelerating under the combined pressure of increased competition, rising costs, and growing risks. As we will see in the pages that follow, these forces of innovation, competition, cost, and risk are profoundly reshaping the structure and the operations of our whole financial system today.

MARKETS ON THE NET: The Most Important Web Sites for This Chapter

Bankrate.com (bankrate.com/brm)
 Chicago Board of Trade (cbot.com)
 Derivatives Concepts A–Z (finpipe.com/
 derivglossary.htm)
 Moody's Investors Service (moody.com)
 Securities and Exchange Commission
 (sec.gov)
 Standard & Poor's Corporation
 (standardandpoors.com)

The Financial Times (ftbusiness.com)
 The Wall Street Journal (wsj.com)
 U.S. Bureau of Economic Analysis
 (bea.gov)
 U.S. Bureau of the Census (census.gov)
 U.S. Treasury Department
 (publicdebt.treas.gov)

Summary of the Chapter's Main Points

The opening chapter of *Money and Capital Markets* presents us with an introduction to the global financial system in which the money and capital markets play central roles. It also highlights the principal institutions that shape the character and functioning of the world's financial marketplace.

- The *financial system* produces and distributes financial services to the public. Among its most important services is a supply of *credit* which allows businesses, households, and governments to invest and acquire assets they need for daily economic activity. The financial system of money and capital markets determines both the amount and cost of credit available. In turn, the supply and cost of credit affect the health and growth of the global economy and our own economic welfare.
- Credit and other financial services are offered for sale in the institution we call a *market*. Markets allocate financial and physical resources that are scarce relative to demand.
- Another key role played by markets operating within the financial system is to stimulate an adequate volume of *savings* (i.e., funds left over after current consumption spending by households and earnings retained by businesses) and to transform those savings into an adequate volume of *investment* (i.e., the purchase of capital goods and the buildup of inventories of goods to sell). In turn, investment generates new products and services and creates new jobs and new businesses, resulting in faster economic growth and a higher standard of living. By determining interest rates within the financial system, the money and capital markets bring the volume of savings generated by the public into balance with the volume of investment in new plant and equipment and in inventories of goods and resources available for sale.
- One important way to view the financial system of money and capital markets is by examining its seven key functions or roles in meeting the financial needs of individuals and institutions, including generating and allocating savings, stimulating the accumulation of wealth, providing liquidity for spending, providing a mechanism for making payments, supplying credit to aid in the purchase of goods and services, providing risk protection services, and supplying a channel for government policy in helping achieve the nation's

Part 1 The Global Financial System in Perspective

economic goals (including maximum employment, low inflation, and sustainable economic growth).

- The markets that serve the financial system may be classified in several different ways, including *money markets*, supplying short-term loans (credit) of less than a year, and *capital markets*, supplying long-term loans (credit) lasting longer than a year. There are also *open markets* where anyone may participate as buyer or seller versus *negotiated markets* where only a few bidders seek to acquire assets. There are *primary* versus *secondary* markets; in the former, *new* financial instruments are traded in contrast to the latter where existing instruments are exchanged. Additional types of financial markets that make up the global financial system include markets that deal in the immediate purchase or sale of goods or services, called *spot markets*, and those that promise future delivery, known as *futures*, *forward*, or *option markets*.
- While many different segments make up the money and capital markets around the globe, all these markets share the common purpose of supplying credit to answer global demands for borrowed funds and all encourage saving to make investment (and, therefore, economic growth) possible. Funds flow easily and, for the most part, smoothly from one segment of the marketplace to another, spurred by such forces as *arbitrage* and *speculation*. For example, *arbitrage* causes credit, savings, and investment to flow toward those market segments that offer the most favorable returns, helping different markets to price resources more consistently and eliminate price disparities for the same goods and services. Prices are also brought into balance from market to market by the force of *speculation*, which seeks out underpriced and overpriced services and goods.
- Finally, the money and capital markets have revealed themselves to be *efficient* institutions, gathering and quickly using all relevant information to price credit and other financial services. Some are nearly *perfect* markets where competition sets prices and allocates resources. However, important imperfections do exist within the financial system where competition is sometimes restricted and excess profits are sometimes earned by those who stifle competition or gain access to inside information not freely available to all due to *asymmetries* within the marketplace.

Key Terms Appearing in This Chapter

financial system, 3
 market, 4
 financial market, 5
 savings, 5
 investment, 6
 wealth, 7
 financial wealth, 8
 net financial wealth, 8
 liquidity, 8
 credit, 8

money market, 11
 capital market, 11
 open markets, 13
 negotiated markets, 13
 primary markets, 13
 secondary markets, 13
 arbitrage, 15
 perfect market, 15
 efficient market, 16
 asymmetric information, 17

Problems and Issues

1. *None* of the following statements are correct. In each case, identify the error and correct the statement.
 - a. A household's current savings includes its current purchases of corporate stock as well as prior holdings of corporate stock and its current investment includes the equity it currently has in its house.
 - b. The change in a household's wealth over a quarter is given by its wealth at the beginning of the quarter plus its savings during the quarter.
 - c. The ability of a household to borrow money from a bank to purchase a new PC is an example of the payments function of the financial markets, while the ability of the bank to make the loan is an example of the liquidity function.
 - d. The ability of Treasury bills to retain their value over time is an example of the savings function of the economy, while the ability of a household to sell the Treasury bill on short notice with little risk of loss is an example of the liquidity function.
 - e. The ability of the Federal Reserve to manipulate interest rates is an example of the policy function of the financial markets, while the ability of households to earn interest on those investments affected by the Fed's decision is an example of the risk-protection function of the financial markets.
2. George Wilkins checked the spreadsheet where he keeps track of his assets and liabilities and discovered that: (a) he owes \$80,000 on his house, which he believes to be worth \$150,000; (b) his car is worth \$20,000 and he has two more payments of \$1,000 each to make before he owns the car outright; (c) his stock portfolio has risen in value to \$50,000; (d) he has a \$10,000 balance in his bank account that is earning 2 percent annual interest; and (e) the value of his other belongings is about \$45,000. He just received his monthly paycheck for \$6,000 and needs to decide whether he should pay off his car or take a vacation. His monthly expenses are \$3,000. He has two possible vacation choices: the Bahamas for \$2,000 or the local beach for \$1,000. Any money left over at the end of the month will be added to his bank account. Evaluate the following options for George:
 - a. If he pays off his car, can he still take a vacation? If so, compute how much he saves and what his net wealth will be if his bank account is the only interest-bearing asset he owns (assuming no change in the value of his stocks during the month). Recompute his savings and net wealth if he decides *not* to take a vacation.
 - b. If he only makes one monthly payment on the car, can he afford to go to the Bahamas? If so, what will his savings and net wealth be at the end of the month? If he does *not* take a vacation, what are his savings and net wealth for the month?
3. Classify the *market* in which each of the following financial transactions takes place as: (a) money versus capital; (b) primary versus secondary; (c) open versus negotiated; and (d) spot versus futures/forward.
 - a. A three-year auto loan from a bank.
 - b. A share of Google stock bought at its initial public offering (IPO).
 - c. A six-month CD purchased from your local credit union.
 - d. A contract for the delivery of hog bellies six months from today.
 - e. A municipal bond purchased from a broker.

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4. The household sector (individuals and families) recorded current income of approximately \$3.35 trillion in a recent year and total consumption expenditures (including taxes) of \$2.89 trillion in that same year. The household sector held about \$24.36 trillion in the total value of its wealth (including stocks, bonds, bank deposits, accumulated retirement savings, houses, etc.) at the beginning of the year and earned an average rate of return of 4.5 percent on its wealth holdings during the year. Calculate the change (growth) in wealth for the household sector that occurred during the year.
5. Suppose that banks held total financial assets (loans, securities, and other financial instruments) of \$3,786 billion, while the banking sector's total liabilities amounted to \$3,631 billion. What is the banking system's *net* financial wealth? If the banking system began the year with total financial assets of \$3,639 billion and saved \$53 billion during the year, how much income was earned on previously accumulated assets? What was the banking system's *net* financial wealth at year-end?

Standard & Poor's Market Insight and Web-Based Problems

STANDARD & POOR'S

1. Your text defines the wealth of a business firm as the sum of all its assets. To determine its *net* wealth (or total equity) you have to subtract the firm's liabilities from its assets. Net wealth is the value of the firm and should be reflected in its market capitalization (or stock price times the number of shares outstanding). Firms in different industries will require different amounts of wealth to create the same market value (or market capitalization). In this problem you are asked to compare the wealth (total assets), net wealth (assets less liabilities), and market capitalization of a large firm in each of the following industries: Financial Services (Citigroup, ticker symbol C); Manufacturing (General Motors, GM); and High Tech (Microsoft, MSFT). Using the S&P Market Insight Web site, which is mhhe.com/edumarketinsight, key in each firm's ticker symbol and find its most recent balance sheet (under Excel Analytics) and market capitalization (under Financial Hlts). Are you surprised by how different these firms are in terms of the dollar value of assets required to create \$1 of market value?
2. A large share of household wealth is held in the form of corporate stock. How much wealth does the entire stock market represent? To find an approximate answer, go to the Web site for Wilshire Associates at www.wilshire.com and click Indexes from the menu. Locate the information that explains how the Wilshire 5000 index is constructed. This index is weighted by the market capitalization of the firms included in it, such that if you add the right amount of zeros to the index, you obtain the total value of all the firms represented in the index. Why is this number a good approximation to the entire U.S. stock market? Now obtain a chart for the index. How much stock market wealth has been created or destroyed over the past 12 months? Determine how much stock market wealth was created or lost *per person* in the United States over this period. (Hint: You can find the U.S. population at census.gov/main/www/popclick.html). Compare this with the average after-tax annual income *per person* in the U.S. Use the disposable personal income figure that can be found under "Selected NIPA

Tables: Table 2.1” at bea.gov/doc/bea/dn/nipaweb/index.asp to make the comparison.

3. One of the world’s most important financial markets that we will study throughout this book is the market for U.S. Treasury securities. It is important because it is one of the few default-free, highly liquid debt instruments available anywhere in the financial marketplace. To determine the size of this market go to the Treasury Department’s Web site at publicdebt.treas.gov and find the *Monthly Statement of the Public Debt*. How much debt does the U.S. government owe *per person* in the United States? (See the previous problem on how to find the U.S. population figure.) How much of this debt is held by the public and how much by government agencies? Only a portion of this debt—termed “marketable”—is traded daily in the money and capital markets. The remainder is held by the buyer until it matures. How much of this public debt is “marketable”?

Semester Project: A Study of the Federal Funds Market

The following project on the money and capital markets may prove to be a very interesting one for you to work on and follow throughout the semester. This semester project focuses on what has become one of the most important marketplaces in today's financial scene—the **federal funds market**. This is not a market that your average man or woman on the street can participate in—yet it affects the lives of every one of us in *many* important ways.

The federal funds market is a market for *interbank loans*. It is centered in the United States but there is a parallel market worldwide—the Eurocurrency market—and several nations have their own versions of a domestic interbank loan market. The Fed funds market is crucial to the functioning of the payments system, the determination of short-term interest rates, the efficiency of the money and capital markets, and the conduct of monetary policy. We will have occasion to describe the many important aspects of this market throughout this text.

The information and questions below are designed to get you started on this semester project. Subsequent questions and issues to explore as you pursue this project appear at the end of Chapters 2 through 14. Moreover, Chapter 11, Section 11.3 discusses the basic characteristics of the federal funds market. You may want to read that section first as you begin this interesting journey.

First Project Assignment: Let's begin our journey by examining *how large* the Fed funds market is. In 2000 the total volume of transactions in Fed funds was \$379.8 trillion! (You can find this information at federalreserve.gov/pubs/bulletin/2002/0202lead.pdf.) Note that the dollar figure just mentioned corresponds to more than \$1 trillion traded per day. Transactions average approximately \$3.5 billion each. Truly, this *is* a huge market!

Let's get an even better feel for just how big it is by comparing this market with the size of the U.S. government debt. To derive a comparative size measure visit the Web site of the U.S. Treasury Department at publicdebt.treas.gov/opd/opdpenny.htm. For a second size comparison find the total value of goods and services produced in the U.S. economy last year (Gross Domestic Product or GDP) by exploring the Web site of the Bureau of Economic Analysis, U.S. Department of Commerce at bea.doc.gov. Are you surprised by any of the numbers you are coming up with?

The next installment of this semester project appears at the conclusion of Chapter 2. The authors hope you enjoy this journey of discovery through a vitally important marketplace within today's financial system.

Selected References to Explore

- Duca, John V. "The Democratization of America's Capital Markets." *Economic and Financial Review*, Federal Reserve Bank of Dallas, Second Quarter 2001, pp. 10–19.
- Hilgert, Mariann A.; Jeanne M. Hogarth; and Sondra G. Beverly. "Household Financial Management: The Connection between Knowledge and Behavior." *Federal Reserve Bulletin*, July 2003, pp. 309–22.
- Peach, Richard, and Charles Steindel. "A Nation of Spendthrifts? An Analysis of Trends in Personal and Gross Savings." *Current Issues in Economics and Finance*, Federal Reserve Bank of New York, September 2000.
- Valderrame, Diego. "Financial Development, Productivity and Economic Growth." *FRBSF Economic Letter*, Federal Reserve Bank of San Francisco, June 27, 2003.