

15 Money and Banking

A Tale of Two Worlds in Banking

Once upon a time, in an economic climate far, far away, banking was a steady, quiet, money-making industry regarded by some as, well, rather mundane or even boring. Nothing is further removed from the turbulent and controversial world of banking today.

Banking's external environments—especially economic, global, and political-legal—are significantly demanding and challenging, starting with the largest national banking systems, and continuing on down to the smallest community banks. Following the global economic meltdown of 2008, the U.S. Federal Reserve Bank and European Central Bank, for example, have taken ambitious steps to staunch the damage at thousands of banks in their jurisdictions. Individual banks, both large and small, are redefining the products they offer, changing sources of revenue to compete and survive, and otherwise addressing obligations to the communities they serve.

Governments are relying on banks as instruments of national policy for economic stability, using diverse responses for different conditions. We see, for example, while central banks in China and India are raising key interest rates, those in the euro zone and the U.S. are holding rates at near-historic lows, because remedies for stagnant economies differ from cures for those that are booming. Countries with severe downturns, high unemployment, and increasing national debt—the U.S., Portugal, Greece, Ireland, and Spain among

After reading this chapter, you should be able to:

- 1** Define *money* and identify the different forms that it takes in the nation's money supply.
- 2** Describe the different kinds of financial institutions that compose the U.S. financial system and explain the services they offer.
- 3** Explain how financial institutions create money and describe the means by which they are regulated.
- 4** Discuss the functions of the Federal Reserve System and describe the tools that it uses to control the money supply.
- 5** Identify three important ways in which the money and banking system is changing.
- 6** Discuss some of the institutions and activities in international banking and finance.

others—use low interest rates and financial bailouts to stimulate borrowing and create jobs. Meanwhile, banks in China and India are increasing lending rates to make borrowing more expensive for businesses and consumers. The goal is to slow down rapid economic expansion and reduce fears of runaway inflation. At the same time, Japan’s economy—broken by a terrible earthquake and tsunami—needs lower interest rates for easier borrowing to rebuild the devastated economy.¹

Countries with massive debt face double-trouble for recovery: The first is difficulty borrowing outside money for economic recovery, although some have received emergency financing from the International Monetary Fund. Second, when national debt increases, the value of its currency falls on foreign exchange markets, its money then buys less than before, so each of its citizens suffers lower real wealth.²

Our story continues on page 406.

Jeffrey Blackler/Alamy

WHAT’S IN IT FOR ME?

Dealing in matters of money is vastly more complicated than counting the cash and coins in your pocket, especially when technology and globalization come into play. At its core are questions about where money comes from, how national economies depend on it, and the public’s trust in its value. This chapter will give you a solid understanding of the different forms of money and how its supply is created and controlled by different kinds of financial institutions and government regulations.

MyBizLab Where you see MyBizLab in this chapter, go to www.mybizlab.com for additional activities on the topic being discussed.



1 Define *money* and identify the different forms that it takes in the nation's money supply.

What Is Money?

When someone asks you how much money you have, do you count the dollar bills and coins in your pockets? Do you include your checking and savings accounts? What about stocks and bonds? Do you count your car? Taken together, the value of all these combined is your personal wealth. Not all of it, however, is “money.” This section considers more precisely what *money* is and does.

The Characteristics of Money

Modern money generally takes the form of stamped metal or printed paper issued by governments. Theoretically, however, just about anything *portable*, *divisible*, *durable*, and *stable* can serve as **money**. To appreciate these qualities, imagine using something that lacks them—for example, a 1,000-pound cow used as a unit of exchange in ancient agrarian economies.

- **Portability.** Try lugging 1,000 pounds of cow from shop to shop. In contrast, modern currency is light and easy to handle.
- **Divisibility.** How would you divide your cow if you wanted to buy a hat, a book, and a radio from three different stores? Is a pound of head worth as much as a pound of leg? Modern currency is easily divisible into smaller parts with fixed values—for example, a dollar for ten dimes.
- **Durability.** Your cow will lose value every day (and eventually die). Modern currency, however, neither dies nor spoils, and if it wears out, it can be replaced. It is also hard to counterfeit—certainly harder than cattle breeding.
- **Stability.** If cows were in short supply, you might be able to make quite a deal for yourself. In the middle of an abundant cow year, however, the market would be flooded with cows, so their value would fall. The value of our paper money also fluctuates, but it is considerably more stable and predictable.

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Gain hands-on experience through an interactive, real-world scenario. This chapter's simulation entitled *Adapting to the Economic Environment* is located at www.mybizlab.com.

The Functions of Money

Imagine a successful cow rancher who needs a new fence. In a *barter economy*—one in which goods are exchanged directly for one another—he or she would have to find someone who is willing to exchange a fence for a cow (or parts of it). If no fence maker wants a cow, the rancher must find someone else—for example, a wagon maker—who does want a cow. Then, the rancher must hope that the fence maker will



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Cattle are not portable, divisible, durable, or stable, making them an unsuitable medium of exchange in the modern monetized economy.

trade for a new wagon. In a money economy, the rancher would sell his or her cow, receive money, and exchange the money for such goods as a new fence.

Money serves three functions:

- 1 **It is a medium of exchange.** Like the rancher “trading” money for a new fence, money is used to buy and sell things. Without money, we would be bogged down in a system of barter.
- 2 **It is a store of value.** Pity the rancher whose cow gets sick on Monday and who wants to buy some clothes on the following Saturday, by which time the cow may have died and lost its value. In the form of currency, however, money can be used for future purchases and “stores” value.
- 3 **It is a measure of worth.** Money lets us measure the relative values of goods and services. It acts as a measure of worth because all products can be valued and accounted for in terms of money. For example, the concepts of \$1,000 worth of clothes or \$500 in labor costs have universal meaning.



Ton Koene/Picture Contact BV/Alamy

Instead of using a modern monetary system, traders like Muhammed Essa in Quetta, Pakistan, transfer funds through handshakes and code words. The ancient system is called *hawala*, which means “trust” in Arabic. The worldwide *hawala* system, though illegal in most countries, moves billions of dollars past regulators annually and is alleged to be the system of choice for terrorists because it leaves no paper trail.³

M-1: The Spendable Money Supply

For money to serve its basic functions, both buyers and sellers must agree on its value, which depends in part on its *supply*—how much money is in circulation. When the money supply is high, the value of money drops. When it is low, that value increases.

Unfortunately, there is no single agreed-upon measure of the supply of money. The oldest and most basic measure, **M-1**, counts only the most liquid, or spendable, forms of money—cash, checks, and checking accounts.

- Paper money and metal coins are **currency (cash)** issued by the government and widely used for small exchanges. Law requires creditors to accept it in payment of debts.
- A **check** is essentially an order instructing a bank to pay a given sum to a payee. Checks are usually, but not always, accepted because they are valuable only to specified payees and can be exchanged for cash.
- **Checking accounts, or demand deposits,** are money because their funds may be withdrawn at any time on demand.

These are all noninterest-bearing or low-interest-bearing forms of money. As of January 2011, M-1 in the United States totaled \$1.85 trillion.⁴

Money object that is portable, divisible, durable, and stable, and that serves as a medium of exchange, a store of value, and a measure of worth

M-1 measure of the money supply that includes only the most liquid (spendable) forms of money

Currency (Cash) government-issued paper money and metal coins

Check demand deposit order instructing a bank to pay a given sum to a specified payee

Checking Account (Demand Deposit) bank account funds, owned by the depositor, that may be withdrawn at any time by check or cash

M-2: M-1 Plus the Convertible Money Supply

M-2, a second measure of the money supply, is often used for economic planning by businesses and government agencies. **M-2** includes everything in M-1 plus other forms of money that are not quite as liquid—short-term investments that are easily converted to spendable forms—including *time deposits*, *money market mutual funds*, and *savings accounts*. Totalling \$8.84 trillion in January 2011, M-2 accounts for most of the nation’s money supply.⁵ It measures the store of monetary value available for financial transactions by individuals and small businesses. As this overall level increases, more money is available for consumer purchases and business investments. When the supply is tightened, less money is available; financial transactions, spending, and business activity slow down.

Unlike demand deposits, **time deposits**, such as certificates of deposit (CDs), have a fixed term, are intended to be held to maturity, cannot be transferred by check, and pay higher interest rates than checking accounts. Time deposits in M-2 include only accounts of less than \$100,000 that can be redeemed on demand, with penalties for early withdrawal.

With **money market mutual funds**, investment companies buy a collection of short-term, low-risk financial securities. Ownership of and profits (or losses) from the sale of these securities are shared among the fund’s investors.

Figure 15.1 shows how M-1 and M-2 have grown since 1979. For many years, M-1 was the traditional measure of liquid money. Because it was closely related to gross domestic product, it served as a reliable predictor of the nation’s real money supply. This situation changed in the early 1980s, with the introduction of new types of investments and the easier transfer of money among investment funds to gain higher interest returns. As a result, M-2 today is regarded as a more reliable measure than M-1.

Credit Cards and Debit Cards: Plastic Money? The use of credit and debit cards has become so widespread that many people refer to them as “plastic money.” Credit cards, however, are not money and, accordingly, are not included in M-1 or M-2 when measuring the nation’s money supply. Why? Because spending with a credit card creates a debt, but does not move money until later when the debt is paid by cash or check. Debit card transactions, in contrast, transfer money immediately from the consumer’s bank account, so they affect the money supply the same way as spending with a check or cash, and are included in M-1.⁶

While consumers enjoy the convenience of credit cards, they also are finding that irresponsible use of the cards can be hazardous to your financial health. A discussion on managing the use of credit cards is presented in Appendix III: Managing Your Personal Finances.

2 Describe the different kinds of financial institutions that compose the U.S. financial system and explain the services they offer.

The U.S. Financial System

Many forms of money depend on the existence of financial institutions that provide money-related services to both individuals and businesses. Just how important are these financial institutions, how do they work, and what are some of the services that they offer? The sections that follow explain their role as creators of money and discuss the regulation of the U.S. banking system.

Financial Institutions

The main function of financial institutions is to ease the flow of money from users with surpluses to those with deficits by attracting funds into checking and savings accounts. Incoming funds will be loaned to individuals and businesses and perhaps invested in government securities. U.S. consumers have access to more than 90,000 U.S. branches and offices of *commercial banks*, *savings institutions*, *credit unions*, and various *nondeposit institutions*.

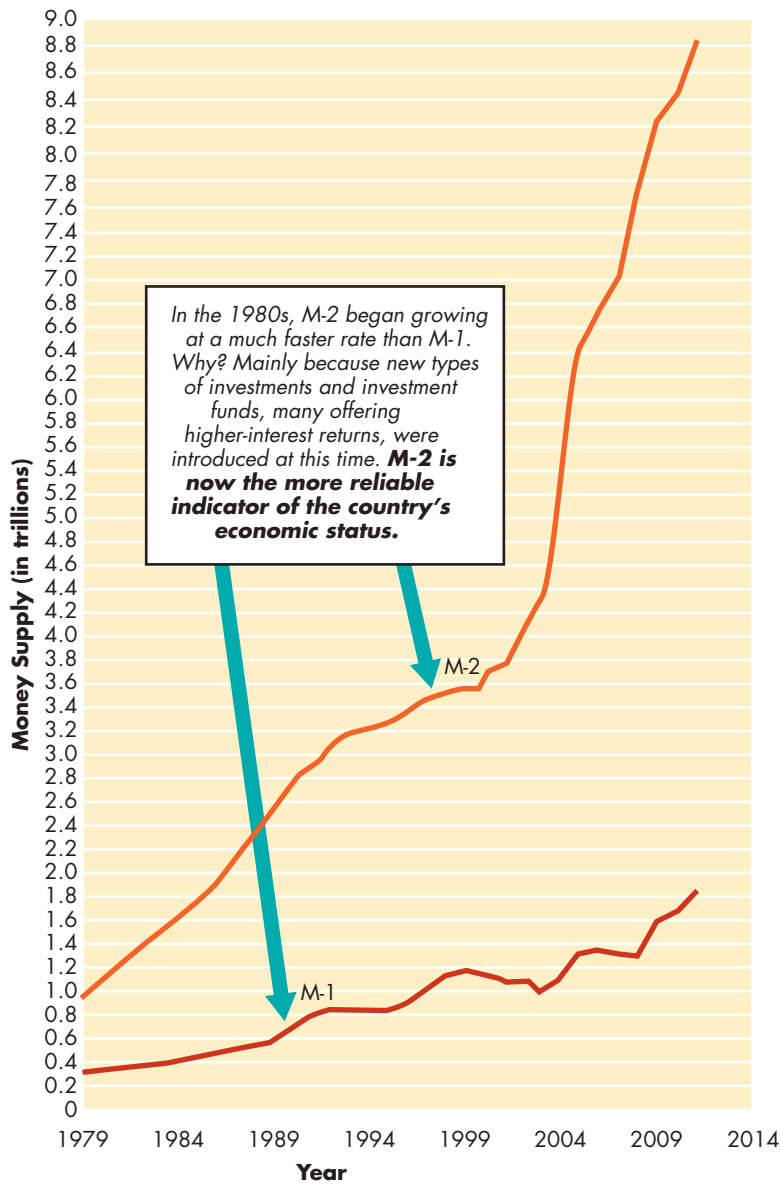


Figure 15.1 Money Supply Growth

Source: “Money stock measures,” Federal Reserve, at <http://www.federalreserve.gov/releases/h6/>, accessed 4/16/2011.

Commercial Banks Federally insured **commercial banks** accept deposits, make loans, earn profits, and pay interest and dividends. Some 6,400 commercial banks range from the very largest institutions in New York, such as Citigroup, Bank of America, and JPMorgan Chase, to tiny banks dotting the rural landscape. Bank liabilities—holdings owed to others—include checking accounts and savings accounts. U.S. banks hold assets totaling more than \$12 trillion, consisting of a wide variety of loans to individuals, businesses, and governments.⁷

Savings Institutions Savings institutions include mutual savings banks and savings and loan associations. They are also called *thrift institutions* because they were established decades ago to promote the idea of savings among the general population.

M-2 measure of the money supply that includes all the components of M-1 plus the forms of money that can be easily converted into spendable forms

Time Deposit bank funds that have a fixed term of time to maturity and cannot be withdrawn earlier or transferred by check

Money Market Mutual Fund fund of short-term, low-risk financial securities purchased with the pooled assets of investor-owners

Commercial Bank company that accepts deposits that it uses to make loans, earn profits, pay interest to depositors, and pay dividends to owners

Savings and Loan Associations Like commercial banks, **savings and loan associations (S&Ls)** accept deposits, make loans, and are owned by investors. Most S&Ls were created to encourage savings habits and provide financing for homes; they did not offer check services. Today they have ventured into a variety of other loans and services.

Mutual Savings Banks In a **mutual savings bank**, all depositors are considered owners of the bank. All profits are divided proportionately among depositors, who receive dividends. More than 700 U.S. mutual savings banks attract most of their funds in the form of savings deposits, and funds are loaned out in the form of mortgages.

Credit Unions A **credit union** is a nonprofit, cooperative financial institution owned and run by its members. Its purpose is to promote *thrift*—careful management of one’s money or resources—and to provide members with a safe place to save and borrow at reasonable rates. Members pool their funds to make loans to one another. Each credit union decides whom it will serve, such as a group of employees, people in a particular community, or members of an association. Many universities, for example, have credit unions, as does the U.S. Navy, among the nation’s nearly 8,000 credit unions.

Nondeposit Institutions A variety of other organizations take in money, provide interest or other services, and make loans. Unlike commercial banks, these *non-deposit institutions* use inflowing funds for purposes other than earning interest for depositors. Four of the most important are *pension funds*, *insurance companies*, *finance companies*, and *securities investment dealers*.

- 1 A **pension fund** is a pool of funds that is managed to provide retirement income for its members. *Public pension funds* in the U.S. include Social Security and the nearly \$3 trillion in retirement programs for state and local government employees. *Private pension funds*, operated by employers, unions, and other private groups, cover about 43 million people and have total assets of \$13 trillion, down from \$15 trillion before the recent recession.⁸
- 2 **Insurance companies** accumulate money from premiums charged for coverage. They invest these funds in stocks, real estate, and other assets. Earnings pay for insured losses, such as death benefits, automobile damage, and healthcare expenses.

The Prime Rate Every bank receives a major portion of its income from interest paid on loans by borrowers. As long as terms and conditions are clearly revealed to borrowers, banks may set their own interest rates, within limits set by each state. Traditionally, banks only offered the lowest rate, or **prime rate**, to their most creditworthy commercial customers. Most commercial loans are set at markups over prime, like prime + 1, which means 1 percent over the prime rate. To remain competitive with lower-interest foreign banks, U.S. banks offer some commercial loans at rates below prime. Figure 15.2 shows the changes in the prime rate since 2000. Lower rates in 2008–2011 encouraged banks to continue lending in the economic downturn.

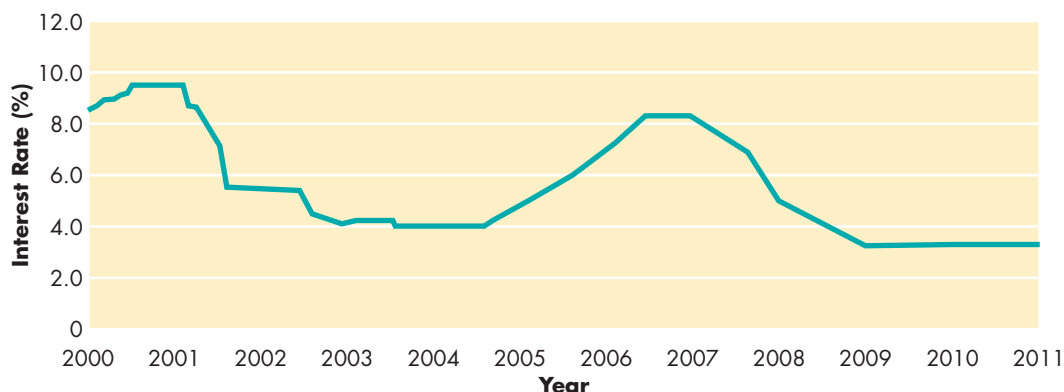


Figure 15.2 The Prime Rate

Source: http://www.federalreserve.gov/releases/h15/data/annual/h15_prime_na.txt.

- 3 **Finance companies** specialize in making loans to businesses and consumers. HFC Beneficial, for example, offers mortgage refinancing and personal loans. Commercial finance companies lend to businesses needing capital or long-term funds. Consumer finance companies devote most of their resources to providing small noncommercial loans to individuals.
- 4 **Securities investment dealers (brokers)**, such as Merrill Lynch and A. G. Edwards Inc., buy and sell stocks and bonds for client investors. They also invest in securities—they buy stocks and bonds for their own accounts in hopes of reselling them later at a profit. These companies hold large sums of money for transfer between buyers and sellers. (We discuss the activities of brokers and investment banking more fully in Chapter 16.)

The Growth of Financial Services

The finance business today is highly competitive. No longer is it enough for commercial banks to accept deposits and make loans. Most, for example, also offer bank-issued credit and debit cards, safe-deposit boxes, ATMs, electronic money transfer, and foreign currency exchange. In addition, many offer pension, trust, international, and brokerage services and financial advice.

Pension and Trust Services **Individual retirement accounts (IRAs)** are tax-deferred pension funds that wage earners and their spouses can set up to supplement other retirement funds. Advantages and drawbacks to various kinds of IRAs—*traditional, Roth, and education*—are discussed in Appendix III.

Many commercial banks offer **trust services**—the management of funds left in the bank’s trust. In return for a fee, the trust department will perform such tasks as making your monthly bill payments and managing your investment portfolio. Trust departments also manage the estates of deceased persons.

International Services Suppose a U.S. company wants to buy a product from a Chinese supplier. For a fee, it can use one or more of three services offered by its bank:

- 1 **Currency Exchange:** It can exchange U.S. dollars for Chinese yuan to pay the supplier.
- 2 **Letters of Credit:** It can pay its bank to issue a **letter of credit**—a promise by the bank to pay the Chinese firm a certain amount if specified conditions are met.
- 3 **Banker’s Acceptances:** It can pay its bank to draw up a **banker’s acceptance**, which promises that the bank will pay some specified amount at a future date.

A banker’s acceptance requires payment by a particular date. Letters of credit are payable only after certain conditions are met. The Chinese supplier, for example, may not be paid until shipping documents prove that the merchandise has been shipped from China.

<p>Savings and Loan Association (S&L) financial institution accepting deposits and making loans primarily for home mortgages</p> <p>Mutual Savings Bank financial institution whose depositors are owners sharing in its profits</p> <p>Credit Union nonprofit, cooperative financial institution owned and run by its members, usually employees of a particular organization</p> <p>Pension Fund nondeposit pool of funds managed to provide retirement income for its members</p>	<p>Insurance Company nondeposit institution that invests funds collected as premiums charged for insurance coverage</p> <p>Prime Rate interest rate available to a bank’s most creditworthy customers</p> <p>Finance Company nondeposit institution that specializes in making loans to businesses and consumers</p> <p>Securities Investment Dealer (Broker) financial institution that buys and sells stocks and bonds both for investors and for its own accounts</p>	<p>Individual Retirement Account (IRA) tax-deferred pension fund that wage earners set up to supplement retirement funds</p> <p>Trust Services management by a bank of an estate, investments, or other assets on behalf of an individual</p> <p>Letter of Credit bank promise, issued for a buyer, to pay a designated firm a certain amount of money if specified conditions are met</p> <p>Banker’s Acceptance bank promise, issued for a buyer, to pay a designated firm a specified amount at a future date</p>
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MANAGING IN TURBULENT TIMES

Getting Serious with Credit Standards

While banks try to avoid drowning in bad loans, borrowers and lenders alike are questioning how the banks got into the current financial mess. Many observers blame subprime mortgage lending. Unlike prime mortgages, subprime loans are made to high-risk borrowers—those with bad credit histories, excessive debt, inadequate income, or other indicators that they will not repay the lender. In return for riskier loans, borrowers pay higher interest rates. As the housing market tumbled, delinquencies skyrocketed on millions of subprime loans. Whereas about 6 percent of mortgage loans were uncollectable from 2000 to 2005, thereafter delinquencies increased, nearing 30 percent by 2008, and on into 2010. Lenders extended too much credit to weak borrowers.⁹

Reports indicate that the subprime crisis can be traced to overly relaxed credit standards. One study found that many loan applications listed fraudulent information. Some borrowers, taking advantage of lax lending practices to live beyond their means, lied about their income and assets in order to secure loans. Other misinformation can be attributed to mortgage brokers eager to get otherwise unqualified borrowers approved for loans. Some lenders went so far as to have a relative pose as a borrower's fake employer and falsify W-2 forms to gain approval. These problems were compounded further by those within the banking and finance system who knew that rampant fraud was occurring but looked the other way, as long as profits kept rolling in.¹⁰

Now stuck with uncollectable loans, unsellable foreclosed properties, and big financial losses, the industry is tightening



DNY59/iStockphoto.com

credit standards and lending practices. Federal bank examiners, for example, are insisting that loan officers use greater caution and judgment to identify credit-worthy borrowers and avoid weak loans. Lenders are switching to independent real estate appraisers who have no direct contact with loan officers, to get accurate rather than inflated property appraisals. Along with requiring bigger down payments, lenders are requiring higher minimum credit scores. Lenders are also reducing limits on credit card balances. With a dire lesson learned, it appears that tighter standards are here for the foreseeable future.¹¹

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Financial Advice and Brokerage Services Many banks, both large and small, help their customers manage their money. Depending on the customer's situation, the bank, in its role as financial advisor, may recommend different investment opportunities. The recommended mix might include CDs, mutual funds, stocks, and bonds. Many banks also serve as securities intermediaries, using their own stockbrokers to buy and sell securities and their own facilities to hold them.

Electronic Funds Transfer **Electronic funds transfer (EFT)** provides for payments and collections by transferring financial information electronically. Consumers using debit cards instead of writing personal checks enjoy EFT's convenience and speed at the checkout. In addition, EFT systems provide automatic payroll deposit, ATM transactions, bill payment, and automatic funds transfer. Such systems can help a businessperson close an important business deal by transferring money from San Francisco to Miami within a few seconds. The U.S. Treasury reports that it costs \$1.03 to issue a check payment, but only \$0.105 to issue an EFT payment. The U.S. Social Security system expects savings of over \$1 billion during the next decade by phasing out paper check payments by 2013, and instead using paperless payments for federal benefits.¹²

Automated Teller Machines **Automated teller machines (ATMs)** allow customers to withdraw money, make deposits, transfer funds between accounts, and access information on their accounts. About 420,000 machines are located in U.S. bank buildings and other locations.¹³ Increasingly, ATMs have become multilingual global fixtures. As Figure 15.3 shows, among the world's more than 2 million ATMs, most are located outside the United States, and many U.S. banks offer international ATM services. China is expected to become the world's largest ATM market by 2015.

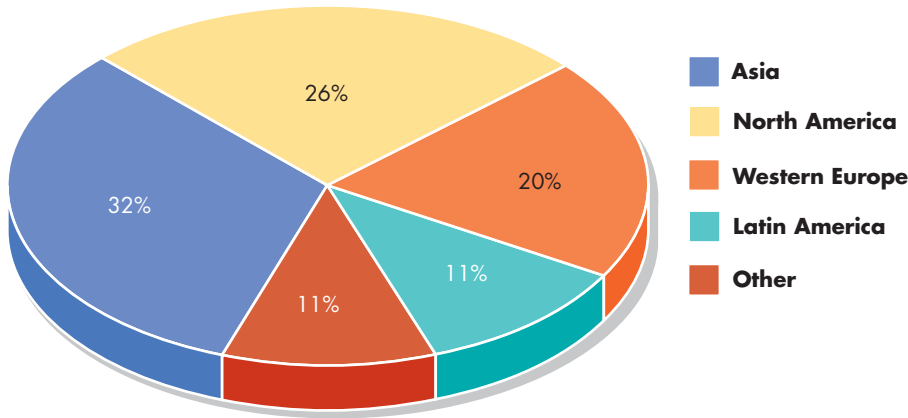


Figure 15.3 Global Dispersion of ATMs

Financial Institutions Create Money and Are Regulated

3 Explain how financial institutions create money and describe the means by which they are regulated.

Financial institutions provide a special service to the economy: They create money. They don't print bills and mint coins, but by taking in deposits and making loans, they expand the money supply.

As Figure 15.4 shows, the money supply expands because banks are allowed to loan out most (although not all) of the money they take in from deposits. If you deposit \$100 in your bank and banks are allowed to loan out 90 percent of all their deposits, then your bank will hold \$10 in reserve and loan \$90 of your money to borrowers. (You still have \$100 on deposit.) Meanwhile, a borrower—or the people paid by the borrower—will deposit the \$90 loan money in a bank (or banks). The bank will then have another \$81 (90 percent of \$90) available for new loans. The banks, therefore, have turned your original \$100 into \$271 (\$100 + \$90 + \$81). The chain continues, with borrowings from one bank becoming deposits in the next.

Deposit	Money Held in Reserve by Bank	Money to Lend	Total Supply
\$100.00	\$10.00	\$90.00	\$190.00
90.00	9.00	81.00	271.00
81.00	8.10	72.90	343.90
72.90	7.29	65.61	409.51
65.61	6.56	59.05	468.56

Figure 15.4 How Banks Create Money

Electronic Funds Transfer (EFT) communication of fund-transfer information over wire, cable, or microwave

Automated Teller Machine (ATM) electronic machine that allows bank customers to conduct account-related activities 24 hours a day, 7 days a week

Regulation of the Banking System

Because commercial banks are essential to the creation of money, the government regulates them to ensure a sound and competitive financial system. Federal and state agencies regulate banks to ensure that the failure of some will not cause the public to lose faith in the banking system itself.

Federal Deposit Insurance Corporation The **Federal Deposit Insurance Corporation (FDIC)** supervises banks and insures deposits in banks and thrift institutions. The FDIC is a government agency, created by President Franklin D. Roosevelt to restore public confidence in banks during the Depression era. More than 99 percent of the nation’s commercial banks and savings institutions pay fees for membership in the FDIC. In return, the FDIC guarantees the safety of all accounts—checking, savings, and certificates of deposit (CDs)—of every account owner up to the current maximum of \$250,000. If a bank collapses, the FDIC promises to pay each depositor for losses up to \$250,000 per account. A person with more money can establish accounts in more than one bank to protect sums in excess of \$250,000. (A handful of the nation’s 6,400 commercial banks are insured by states rather than by the FDIC.) To ensure against multiple bank failures, the FDIC maintains the right to examine the activities and accounts of all member banks.

The Role of the FDIC in Bank Failures What happens with banks that fail, such as the nearly 300 U.S. banks that failed in slow-down years 2009–2010? The FDIC becomes responsible for disposing of failed banks. One option is to sell them to other banks that are then responsible for the liabilities of the failed banks. Alternatively, the FDIC can seize the assets of the failed banks and undertake two activities: (1) Pay insurance to depositors and (2) dispose of the banks’ assets and settle their debts, all at the lowest cost to the FDIC’s insurance deposit fund. The resulting net gain (or loss) is put into (or paid from) the insurance deposit fund. As the recession of 2007–2009 deepened, this fund had dwindled to \$13 billion in 2009, down from \$45 billion in 2008, before recovering to \$18 billion in 2010. With more bank closures expected, the FDIC was raising assessments against member banks to restore the fund’s reserves.¹⁴



Nikolai Ignatiev/PhotoLibrary

Devout Muslims can’t pay or receive interest—a fact that tends to complicate banking operations. Because money has to work in order to earn a return, institutions like the Shamil Bank in Bahrain invest deposits directly in such ventures as real estate and pay back profit shares rather than interest.

4 Discuss the functions of the Federal Reserve System and describe the tools that it uses to control the money supply.

The Federal Reserve System

Perched atop the U.S. financial system and regulating many aspects of its operation is the **Federal Reserve System (the Fed)**, the nation’s central bank, established by Congress in 1913. This section describes the structure of the Fed, its functions, and the tools it uses to control the nation’s money supply.

The Structure of the Fed

The Fed consists of a board of governors, a group of reserve banks, and member banks. As originally established by the Federal Reserve Act of 1913, the system consisted of 12 relatively autonomous banks and a seven-member committee whose powers were limited to coordinating the activities of those banks. By the 1930s, however, both the structure and function of the Fed had changed dramatically.

The Board of Governors The Fed’s board of governors consists of seven members appointed by the U.S. President for overlapping terms of 14 years. The chair of the board serves on major economic advisory committees and works actively with the administration to formulate economic policy. The board plays a large role in controlling the money supply. It alone determines the reserve requirements, within statutory limits, for depository institutions. It also works with other members of the Fed to set discount rates and handle the Fed’s sale and purchase of government securities.

Reserve Banks The Fed consists of 12 districts, as shown in Figure 15.5. Each Federal Reserve Bank holds reserve deposits from and sets the discount rate for commercial banks in its geographic region. Reserve Banks also play a major role in the nation’s check-clearing process.

Open Market Committee The Federal Open Market Committee is responsible for formulating the Fed’s monetary policies to promote economic stability and growth by managing the nation’s money supply. Its members include the Board of Governors, the president of the Federal Reserve Bank of New York, and the presidents of four other Reserve Banks, who serve on a rotating basis.

Member Banks All nationally chartered commercial banks and some state-chartered banks are members of the Fed. The accounts of all member bank depositors are automatically covered by the FDIC.

Other Depository Institutions Although many state-chartered banks, credit unions, and S&Ls do not belong to the Fed, they are subject to its regulations, pay deposit insurance premiums, and are covered by the FDIC or the National Credit Union Administration (NCUA).

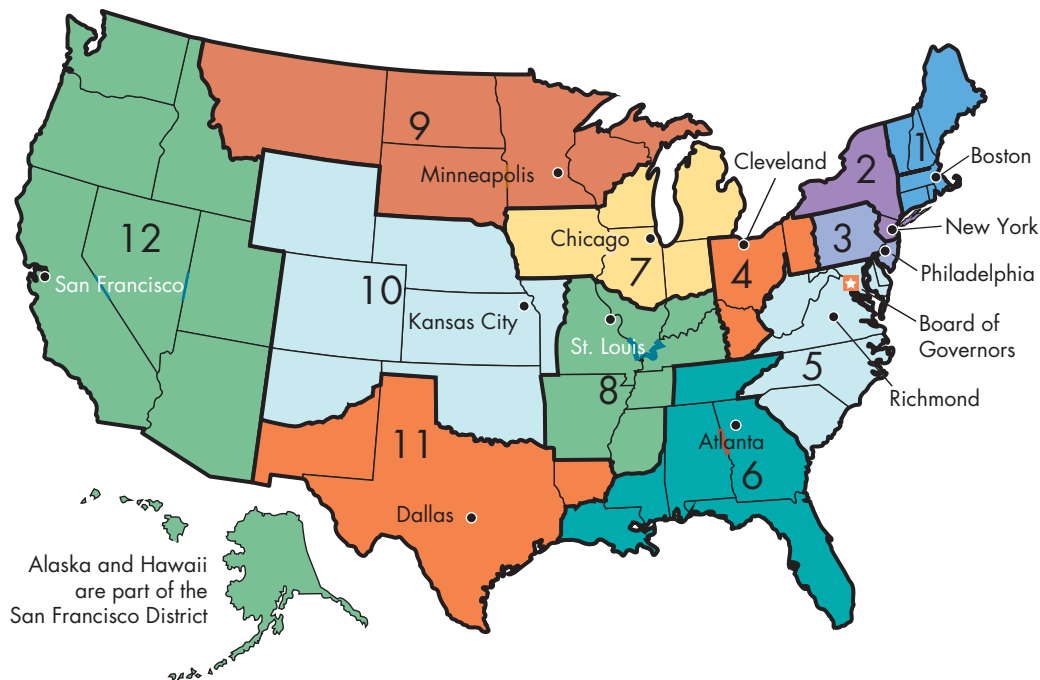


Figure 15.5 The Twelve Federal Reserve Districts
 Source: <http://www.federalreserve.gov/otherfrb.htm>

Federal Deposit Insurance Corporation (FDIC) federal agency that guarantees the safety of deposits up to \$250,000 in the financial institutions that it insures

Federal Reserve System (The Fed) central bank of the United States, which acts as the government’s bank, serves member commercial banks, and controls the nation’s money supply

The Functions of the Fed

In addition to chartering national banks, the Fed serves as the federal government's bank and the "bankers' bank," regulating a number of banking activities. Most importantly, it controls the money supply.

The Government's Bank The Fed produces the nation's paper currency and decides how many bills to produce and destroy. It also lends money to the government by buying bonds issued by the Treasury Department to help finance the national deficit.

The Bankers' Bank Individual banks that need money can borrow from the Fed and pay interest on the loans. In addition, the Fed provides storage for commercial banks, which are required to keep funds on reserve at a Federal Reserve Bank.



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Check Clearing The Fed also clears checks for commercial banks to ensure that cash is deducted from the check writer's bank account and deposited into the check receiver's account. With electronic payments, however, the number of paper checks processed is falling, with 9.5 billion cleared by the Fed in 2008, down from a peak of 60 billion in 2000. Consumers prefer the convenience of debit and credit cards and electronic transactions such as direct deposits and online payments. Even with paper checks, however, the clearing is faster because banks now send the Fed some 60 million electronic images daily to be processed (instead of shipping the checks). As a result, the Fed now has just one full-service check-processing site, instead of the 45 locations needed as recently as 2003.¹⁵

Controlling the Money Supply The Fed is responsible for the conduct of U.S. **monetary policy**—the management of the nation's economic growth by managing the money supply and interest rates. By controlling these two factors, the Fed influences the ability and willingness of banks throughout the country to loan money.

Inflation Management As defined in Chapter 1, *inflation* is a period of widespread price increases throughout an economic system. It occurs if the money supply grows too large. Demand for goods and services increases, and the prices of everything rise. To reduce China's inflationary conditions in 2010–2011, for example, banking officials decreased the money supply, hoping to slow that nation's economic growth. In contrast, *deflation* occurs when the supply of goods outpaces the supply of money, so demand for goods and services falls. Decreasing prices lead businesses to cut output, and unemployment rises. The Fed, with its goal of economic stability, uses the money supply to avoid extreme inflation or deflation. Because commercial banks are the main creators of money, much of the Fed's management of the money supply takes the form of regulating the supply of money through commercial banks.

The Tools of the Fed

According to the Fed's original charter, its primary duties were to supervise banking and to manage the nation's currency. The duties of the Fed have evolved to include an emphasis on the broad economic goals as discussed in Chapter 1, especially growth and stability. The Fed's role in controlling the nation's money supply stems from its role in setting policies to help reach these goals. To control the money supply, the Fed uses *reserve requirements*, *interest rate controls*, and *open-market operations*.

Reserve Requirements The **reserve requirement** is the percentage of its deposits that a bank must hold, in cash or on deposit, with a Federal Reserve Bank. High requirements mean that banks have less money to lend and the money supply is reduced. Conversely, low requirements permit the supply to expand. Because the Fed sets requirements for all depository institutions, it can adjust them to make changes to the overall supply of money in the economy.

Interest Rate Controls As the bankers' bank, the Fed loans money to banks. The interest rate on these loans is known as the **discount rate**. If the Fed wants to reduce the money supply, it increases the discount rate, making it more expensive for banks to borrow money and less attractive for them to loan it. Conversely, low rates encourage borrowing and lending and expand the money supply.

More familiar to consumers, the **federal funds rate** (or **key rate**) reflects the rate at which commercial banks lend reserves to each other, usually overnight. While the Fed can't actually control this rate, which is determined by the supply and demand of bank reserves, it can control the supply of those reserves to create the desired rate. By instructing its bond traders to buy fewer government bonds, the supply of reserves was decreased, resulting in a series of key rate increases—from a then-historic low of 1 percent in 2004 up to 5.25 percent in 2006—to slow a booming U.S. economy. The Fed then reversed its policy as the economy lost momentum, cutting the target rate gradually down to a then-record low, 0.25 percent in 2008 to boost the economy during the recession, and then to 0.00–0.25 percent to encourage the 2011 recovery.¹⁶

Open-Market Operations **Open-market operations** refer to the Fed's sale and purchase of securities (usually U.S. Treasury notes and short-term bonds) in the open market, as directed by the Fed's Open-Market Committee. Open-market operations are particularly effective because they act quickly and predictably on the money supply. The Fed buys securities from a commercial dealer, whose bank account is credited for the transaction, thus giving that bank more money to lend, so this transaction expands the money supply.

The opposite happens when the Fed sells securities. Selling treasury securities to investors allows the U.S. government to raise money and contract the money supply. These securities may include Treasury bills (T-bills), T-notes, and T-bonds with maturity dates ranging from short-term (a few weeks) to long-term (up to 30 years). Treasury securities are highly liquid because they are actively traded on national securities markets, and traditionally have been considered a risk-free investment because they are backed by the U.S. government.

Fed Uses Massive Bond Purchases to Stem Recession In 2009, the Fed launched its most aggressive buying of long-term Treasury bonds in history—\$300 billion—to fight the recession. The purchases were intended to push up market prices for Treasuries and thereby drive down interest rates. As long-term Treasury rates fell, other interest rates soon followed, including rates for home mortgages, business loans, and consumer loans. Overall lower interest rates were expected to encourage more widespread borrowing and lending to get the economy moving. However, continuing weakness led to the Fed's 2010–2011 ground-breaking move in launching a further \$600 billion purchase of Treasury debt. While some claim the move is essential for economic recovery, critics fear it may stimulate destructive spiraling inflation¹⁷

The Changing Money and Banking System

The U.S. money and banking systems continue to change today. Government emergency intervention aims to stabilize a troubled financial system. Enforcement of anti-terrorism regulations deters criminal misuse of the financial system. And with

5 Identify three important ways in which the money and banking system is changing.

Monetary Policy management of the nation's economic growth by managing the money supply and interest rates

Reserve Requirement percentage of its deposits that a bank must hold in cash or on deposit with the Fed

Discount Rate interest rate at which member banks can borrow money from the Fed

Federal Funds Rate (Key Rate) interest rate at which commercial banks lend reserves to each other, usually overnight

Open-Market Operations the Fed's sale and purchase of securities in the open market

the expansion of banking services, electronic technologies affect how you obtain money and how much interest you pay for it.

Government Intervention for Stabilizing the U.S. Financial System

The financial world was shaken with the 2008 collapse of Lehman Brothers, the leading U.S. investment bank. Lehman's bankruptcy was soon followed by the threat of another giant's demise, as Bear Stearns teetered and then was bought by JPMorgan Chase. But JPMorgan Chase's purchase of Bear Stearns became possible only when the Federal Reserve stepped forward with \$26 billion to guarantee potential losses on Bear Stearns's assets. With a goal of stabilizing the fractured financial system, the government continues its unprecedented infusion of funding for U.S. financial institutions.

Government Emergency Investment By mid-2009, the Fed's investments reached nearly \$300 billion, mostly in lending programs to commercial banks. Banks used the loans to get rid of bad mortgages and other hard-to-sell assets, thereby gaining cash for lending to bank customers. Another source of funds, the Troubled Asset Relief Program (TARP), a temporary program under the U.S. Treasury, was included in the government's bailout efforts. TARP support included \$15 billion to auto-financing companies at risk of failure and \$235 billion in direct investments to some 600 banks to encourage lending. Other government sources provided over \$130 billion to rescue Freddie Mac and Fannie Mae, two government-sponsored enterprises on the verge of financial failure. Freddie Mac and Fannie Mae (also known as FM2) buy home mortgages from the original lenders—for example, from banks—and hold them or resell them. In 2008, FM2 held 80 percent of U.S. home mortgages, many of which turned bad in the collapsed housing market, and many more that continue to default today. As a result, critics are questioning whether the government should be involved in the mortgage loan business.¹⁸

Assurances of Repayment In return for its investments, the government imposes various kinds of assurances. The Fed's loans to banks, for example, are secured by the banks' assets. That is, the Fed holds some of the banks' assets, such as commercial loans, residential mortgages, and asset-backed securities as collateral until the banks repay the Fed. In return for TARP funds, the U.S. Treasury holds preferred stock (dividend-paying ownership shares) of the banks. The Treasury also holds *warrants*—which give the right to buy shares of the banks' stock in the future at a preset price. In addition to creating the government's precedent-setting part ownership, TARP also imposes stricter executive compensation requirements. In the bailout of Freddie Mac and Fannie Mae, both firms were taken over by the Federal Housing Finance Agency (FHFA) because the failure of either would severely damage global financial markets along with the U.S. economy. FHFA took full control over the two firms' assets and operations.¹⁹

Anti-Crime and Anti-Terrorism Regulations

Enforcement of anti-terrorism regulations deters criminal misuse of the financial system. Under provisions of the *Bank Secrecy Act (BSA)*, the U.S. Department of the Treasury imposed a \$24 million fine on the New York branch of a Jordan-based Arab Bank for failing to implement required monitoring and record-keeping methods to deter funding of crimes. The enforcement of BSA regulations includes tracking and reporting on suspicious transactions, such as a sudden increase in wire transfers or cash transactions exceeding \$10,000, to cut off funding of criminal and terrorist activities.²⁰

Banks are subject to prosecution when they fail to maintain systems for identifying and reporting suspicious activities that indicate possible drug transactions and money laundering. In violation of the BSA, a Miami, Florida, bank agreed to pay a \$55 million penalty to the U.S. government following charges that it did not operate an effective anti-money laundering program. A Puerto Rico bank was assessed a \$21 million penalty for not filing suspicious activity reports when repeated cash deposits were made into one account, often in paper bags in small denominations, totaling \$20 million. A California bank was cited for not maintaining an effective

anti-money laundering program when proceeds from cocaine sales were transferred from Mexico for deposit into accounts at the bank.²¹

The *USA PATRIOT Act*, passed in 2001 and designed to reduce terrorism risks, requires banks to better know the customer's true identity by obtaining and verifying their name, address, date of birth, and Social Security (or tax identification) number. They must also implement a *customer identification program (CIP)* to verify identities, keep records of customer activities, and compare identities of new customers with government terrorist lists. Enforcement resides with examiners from the Department of the Treasury.

The Impact of Electronic Technologies

Banks are among the most enthusiastic adopters of technology to improve efficiency and customer service. In addition to EFT systems and mobile devices, banks offer access via telephone, TV, and Internet banking, which allow customers to make around-the-clock transactions. Each business day, trillions of dollars exist in and among banks and other financial institutions in purely electronic form. Each day, the Fed's Fedwire funds transfer system—the world's largest electronic payments system—processes about \$4 trillion in transactions for some 8,900 financial institutions.

Automated Clearing House (ACH) Network ACH is an electronic funds transfer system that provides interbank clearing of electronic payments for the nation's financial institutions. The ACH network allows businesses, government, and consumers to choose an electronic-over-paper alternative for payments (instead of written checks); the system is green, safe, and efficient.

ACH payments include:

- Internet-initiated debit and credit payments by businesses and consumers
- B2B electronic payments
- Direct deposit of payroll, Social Security benefits, and tax refunds
- Federal, state, and local tax payments
- E-checks
- Direct payment of consumer bills: mortgages, loans, utility bills, and insurance premiums
- E-commerce payments

In 2009, the ACH system processed some 19 billion payments that were initiated or received by customers at 15,000 U.S. businesses and financial institutions. Those payments totaled more than \$30 trillion. With the federal government's use of ACH, each direct deposit that replaces a check saves \$0.925. With more than 1 billion direct deposits for 2009, the federal savings was more than \$1 trillion.

The ACH system is governed by NACHA—The Electronic Payments Association—which administers and enforces the association's strict *NACHA Operating Rules* for sound risk management practices. Although NACHA was formed within the American Bankers Association, it later became an independent not-for-profit association that launched the Accredited ACH Professional program and established the system's operating rules.²²

Check 21: Making the Paper Check Go Away The *Check Clearing for the 21st Century Act (Check 21)*, which became federal law in 2004, allows a receiving bank to make an electronic image of a paper check and electronically send the image to the paying bank for instant payment instead of waiting days for the paper check to wind its way back to the sender. More banks are adopting check image processing (Check 21) and benefitting from its speed and cost efficiency: less paper handling, reduced reliance on physical transportation, faster collection times, and elimination of expensive float. Today, almost 99 percent of the items processed by the Fed are images instead of in paper form. The days of writing a check, mailing it, and having several days to put money in the account to cover it are numbered, due to faster check clearing.²³

ENTREPRENEURSHIP AND NEW VENTURES

Cultivating a Social Side for Community Banking

While the U.S. banking system struggles in a distressed economy, smaller community banks are confronted with vigorous challenges from larger banks that stretch across state lines, competing for local consumers and commercial customers. State-chartered Fidelity Bank, serving Central Massachusetts, is an example. With headquarters in Leominster (population 41,000) and full-service facilities in five nearby towns, Fidelity's primary competitive advantage is its commitment to long-term community relationships developed since being established in 1888.

Unlike many smaller banks across the nation, Fidelity experienced a relatively successful year, remaining financially sound through the challenging 2009 economic environment. Consumer and business deposit accounts increased, a record number of first mortgage loans were issued, many borrowers refinanced their homes at lower interest rates to reduce monthly payments, and the bank's commercial lending operation gained recognition by the Small Business Administration for offering new business loan products, with faster and more effective approval processes. By streamlining its services, customers can use mobile banking—"like carrying a branch bank in your pocket"—for "anywhere/anytime" access to their accounts, and text-messaging provides quick information on account balances.²⁴

Fidelity's newest initiative, launched in 2011, is a social media program for strengthening customer and community relationships. It aims for broader exposure of the bank's brand through a visible and widespread presence in the social media. The focal resource is a publicly accessible blog, available at Fidelity's website, designed to encourage communications among customers, bank employees, and the local communities-at large. Its content is then broadcast outward in digital space via connectivity with social media including Twitter, YouTube, LinkedIn, and Facebook. Aided by social media specialists—Digital Brand Expressions—Fidelity's upgraded media reach involves increasing the bank's listings in major search engines, expanding key-word links from other websites,

and utilizing podcasts for competitive advantage. The program enables monitoring of how Fidelity is being talked about in the social media, frequencies of messages, and then taking steps to guide employees toward more effective communicating with constituents. Measurements of frequencies for social network mentions and types of message content can then be compared to changes in product acceptance—savings, loans, investments, and insurance—among consumers and business customers. The results will enable the bank to determine the success of its social media program in terms of profitability and customer satisfaction.²⁵

MyBizLab



Paul Rapson/Alamy

Blink Credit Card "Blink" technology uses a computer chip that sends radio-frequency signals in place of the magnetic strips that have been embedded in credit cards for the past 30 years. The "contactless" payment system lets consumers wave the card in front of a merchant's terminal, at a gas pump or in a department store, without waiting to swipe and sign. Radio-frequency identification, while new to credit cards, is familiar on toll roads with electronic passes that allow drivers to avoid waiting in line to pay.

Debit Cards Unlike credit cards, **debit cards** do not increase the funds at an individual's disposal but allow users only to transfer money between accounts to make retail purchases. Debit cards are used more than credit cards as payment for U.S. consumer transactions. However, the risk of financial loss is greater for debit cards.

Federal law limits the credit card user’s liability to \$50 for stolen or fraudulent use. Protection against debit card losses can be higher—ranging up to \$500—depending on how quickly the lost card is reported.²⁶

Many stores use **point-of-sale (POS) terminals** to communicate relevant purchase information with a customer’s bank. A customer inserts a card, and the bank automatically transfers funds from the customer’s account to the store’s account.

Smart Cards A **smart card** has an embedded computer chip that can be programmed with “electronic money.” Also known as *electronic purses* or *stored-value cards*, smart cards have existed for more than a decade. They are most popular in gas-pump payments, followed by prepaid phone service, ATMs, self-operated checkouts, vending machines, and automated banking services.²⁷

International Banking and Finance

Electronic technologies permit nearly instantaneous financial transactions around the globe. These business exchanges—the prices asked and paid—are affected by *values of the currencies* among the various nations involved in the transactions. Once agreements are reached, the *international payments process* that moves money between buyers and sellers on different continents is not subject to any worldwide policy system beyond loosely structured agreements among countries.

Currency Values and Exchange Rates

Euros, pesos, dollars, and yen—money comes in all sizes and stripes. With today’s global activities, travelers, shoppers, investors, and businesses often rely on banks to convert their dollars into other currencies. When it comes to choosing one currency over others, the best choice changes from day to day. Why? Because every currency’s value changes, reflecting global supply and demand—what traders are willing to pay—for one currency relative to others. One index for the value of the U.S. dollar, for example, is the average of its foreign exchange values against the currencies of a large group of major U.S. trading partners. The resulting **exchange rate**—the value of one currency compared to the value of another—reveals how much of one currency must be exchanged for another. At any one time, then, some currencies are “strong”—selling at a higher price and worth more—while others are “weak.” Rates of exchange among currencies are published daily in financial media around the world, and at online foreign currency exchange (forex) markets.²⁸

6 Discuss some of the institutions and activities in international banking and finance.



Citizens of the Republic of Belarus, along with visitors from other countries, rely on information about current exchange rates between the Belarusian ruble (Br) and currencies of other countries. The BelarusBank is a local provider of currency exchange services.

Tatyana Zenkovich/Photoshot

Debit Card plastic card that allows an individual to transfer money between accounts

Point-of-Sale (POS) Terminal electronic device that transfers funds from the customer’s bank account to pay for retail purchases

Smart Card credit-card-sized plastic card with an embedded computer chip that can be programmed with electronic money

Exchange Rate the value of one currency compared to the value of another

Strong Currency or Weak: Which Is Better? Most people would prefer a “strong” currency, right? Well, not so fast. It depends on how it will be used. Using money for international activities, such as taking a vacation, for example, is one of those “good news–bad news” situations.

Consider the euro, at times up as much as 83 percent against the U.S. dollar since 2002. As a citizen in one of the 23 euro-area countries—for example, France—you chose wisely in delaying that U.S. vacation until 2011. Each euro in 2011 paid for about \$1.45 of the trip, but it would have covered only \$0.87 in 2002. That’s the good news: The stronger euro means more purchasing power against the weaker dollar. It’s bad news, though, for French innkeepers because Americans go elsewhere to avoid expensive European travel—it takes \$1.45 for €1 of vacation cost, up from \$0.83 nine years earlier. Simply put, that \$0.83 cup of coffee at a French sidewalk café in 2002 now costs you \$1.45. In this example of the U.S. dollar to euro, your purchasing power has declined as the dollar has weakened against the euro.

The stronger euro has proven to be a stumbling block for Europe’s economy, especially for industries that export to non-euro countries with weaker currencies. Prices (in U.S. dollars) had to be increased, for example, on German-made Mercedes and BMW auto exports to the United States to cover the higher euro-based manufacturing costs, causing weaker U.S. demand and sales. While the weaker dollar has hurt many European firms that export products to the U.S., others have gained by increasing their U.S. investments. When DaimlerChrysler, for example, produces Mercedes M-class autos in Alabama, it pays in weaker dollars for manufacturing them, exports cars to Europe, and sells in euros for windfall profits. On balance, however, many euro-based firms have faced sagging sales, with slower revenue growth due to a strong euro.

Bank Policies Influence Currency Values In managing the money supply and interest rates, the Fed strongly influences the dollar’s strength against other currencies. The European Central Bank (ECB) has the same role in the euro zone. The raising of interest rates tends to increase an economic system’s currency value, whereas lowering the rate has the opposite effect. Europe’s economic recovery is slower than desired when the euro is strong because euro-zone companies are less competitive against global counterparts. Even so, the European Central Bank (ECB) refuses to weaken the euro by cutting interest rates. With lower rates, the supply of euros would increase, and the price of euros would fall—stimulating Europe’s economy. But, the ECB fears, it would also stimulate too much inflation.

In contrast, the U.S. Federal Reserve continues with low interest rate policies to stimulate the ailing economy, and in doing so contributes to weakening the dollar. The weaker dollar makes U.S. goods cheaper and more attractive on the world’s markets, thus increasing U.S. export sales. At the same time, the weaker dollar makes foreign imports more expensive, so U.S. consumers can afford fewer imported products, many of which are available only from foreign manufacturers. Some must-have commodities, too, such as petroleum, are priced worldwide in U.S. dollars, so as the dollar’s value falls, the price of oil increases because it takes more of those weaker U.S. dollars to buy each barrel.²⁹ We see, then, some of the ways that banking and banking policies significantly influence currency values.

The International Payments Process

Financial settlements between buyers and sellers in different countries are simplified through services provided by banks. For example, payments from U.S. buyers start at a local bank that converts them from dollars into the seller’s currency—for example, into euros to be sent to a seller in Greece. At the same time, payments and currency conversions from separate transactions also are flowing between Greek businesses and U.S. sellers in the other direction.

If trade between the two countries is in balance—if money inflows and outflows are equal for both countries—then *money does not actually have to flow between the two countries*. If inflows and outflows are not in balance at the U.S. bank (or at the Greek

bank), then a flow of money—either to Greece or to the United States—is made to cover the difference.

International Bank Structure

There is no worldwide banking system comparable, in terms of policy making and regulatory power, to the system of any industrialized nation. Worldwide banking stability relies on a loose structure of agreements among individual countries or groups of countries.

Two United Nations agencies, the World Bank and the International Monetary Fund, help to finance international trade. Unlike true banks, the **World Bank** (technically, the International Bank for Reconstruction and Development) provides only a very limited scope of services. For instance, it funds national improvements by making loans to build roads, schools, power plants, and hospitals. The resulting improvements eventually enable borrowing countries to increase productive capacity and international trade.

Another U.N. agency, the **International Monetary Fund (IMF)**, is a group of some 150 nations that have combined resources for the following purposes:

- To promote the stability of exchange rates
- To provide temporary, short-term loans to member countries
- To encourage members to cooperate on international monetary issues
- To encourage development of a system for international payments

The IMF makes loans to nations suffering from temporary negative trade balances. By making it possible for these countries to continue buying products from other countries, the IMF facilitates international trade. However, some nations have declined IMF funds rather than accept the economic changes that the IMF demands. For example, some developing countries reject the IMF's requirement that they cut back social programs and spending in order to bring inflation under control.

World Bank UN agency that provides a limited scope of financial services, such as funding improvements in underdeveloped countries

International Monetary Fund (IMF) UN agency consisting of about 150 nations that have combined resources to promote stable exchange rates, provide temporary short-term loans, and serve other purposes



Jeffrey Blackler/Alamy

Continued from page 387

Shakeups Bring a Wakeup Call to Banking

The failure of Crescent Bank and Trust in Jasper, Georgia, will cost the FDIC more than \$240 million and that's just one example among the 157 U.S. bank failures in 2010, after another 140 closures in 2009, the highest since 1992.³⁰ The nation's remaining 6,400 lenders, too, are shaken by the housing market collapse. As uncollectable loans increase, banks are left with unsellable foreclosed properties, and housing values are continuing to fall.

Along with industry giants, hundreds of smaller U.S. banks face additional losses of billions on commercial loans for office buildings, shopping malls, and apartment projects. Revenues lost from uncollectable loans are unavailable to lend, and banks are trying to shore up cash by selling off assets, cutting costs, or hoarding funds rather than making loans. As cash dwindles, financial losses foreshadow more bank closures.

To regain profits, larger banks are charging for formerly "free" services. Bank of America, for example, charges additional monthly fees for an account if you want to get paper statements or want to bank with a teller. "Free checking" is dwindling away as banks begin charging a fee for each check. Smaller banks, in contrast, hope to keep those traditionally free services as a strategy for attracting customers for survival.³¹

Adding fuel to the revenue fire is the Federal Reserve Board's proposal to limit debit-card fees that banks and credit card companies charge merchants when customers pay with debit cards. Stores pay usage fees between 1 and 2 percent of each sale, totaling some \$16 billion from 38 billion debit card transactions annually. The Fed proposal would limit the fee to 12 cents per transaction, thus reducing bank/card company revenues down to just \$5 billion. The issue for banks then becomes one of finding new revenue sources to make up for such large losses.³²

Taking lessons from the continuing financial crisis, regulators are proposing broader rules to provide future global stability in banking. Regulators from more than 20 nations have proposed the "Basel (Switzerland) III Requirements" to be adopted by 2019. They call for banks to keep larger cushions of cash on hand to guard against future losses, with tighter rules on loans to businesses and consumers.³³

QUESTIONS FOR DISCUSSION

- 1 Under what economic conditions might you expect the Fed to raise interest rates? To lower them? Explain.
- 2 With continuing high unemployment, increasing numbers of home buyers are unable to meet home mortgage payments, forcing banks to either foreclose on these properties, or find other ways to handle non-payments on loans. What action would you propose instead of foreclosure? Identify the consequences you would expect from that action.
- 3 Suppose you are a businessperson planning to build a new facility in either the United States or the euro zone. How might your choice of where and when to build be influenced by monetary policies of the European Central Bank and the Fed?
- 4 Why do economically stressed countries with massive debt have difficulty borrowing outside money needed for economic recovery? Explain.
- 5 If banks are required to keep larger cushions of cash on hand rather than loaning out that money (as proposed in the Basel III Requirements), in what ways will the U.S. economy be affected?

SUMMARY OF LEARNING OBJECTIVES MyBizLab

- 1. Define money and identify the different forms that it takes in the nation's money supply. (pp. 388–390)**
 Any item that's *portable, divisible, durable, and stable* satisfies the basic characteristics of money. Money also serves as a *medium of exchange, a store of value, and a measure of worth*. The nation's money supply is usually measured in two ways. *M-1*, the spendable money supply, includes the most liquid (or spendable) forms of money: currency (cash), checks, and checking accounts (demand deposits). *M-2* includes *M-1* plus other forms of money that are not quite as liquid but are converted easily to spendable forms: time deposits, money market funds, and savings accounts.
- 2. Describe the different kinds of financial institutions that compose the U.S. financial system and explain the services they offer. (pp. 390–395)**
Commercial banks offer checking accounts and accept deposits that they use to make loans and earn profits for shareholders. They also offer (1) pension and trust services, (2) international services, (3) financial advice and brokerage services, (4) ATMs, and (5) other forms of electronic banking. *Savings and loan associations* are owned by shareholders. *S&Ls* accept deposits and make loans, and offer many of the same services as commercial banks. In *mutual savings banks*, all depositors are owners of the bank, and all profits are divided among them. *Credit unions* are nonprofit cooperative financial institutions, owned and run by their members who pool their funds to make loans to one another at reasonable rates. Other organizations called *nondeposit institutions*—pension funds, insurance companies, finance companies, and securities investment dealers—take in money, provide interest or other services, and make loans.
- 3. Explain how financial institutions create money and describe the means by which they are regulated. (pp. 395–396)**
 The money supply expands because banks can loan out most of the money they take in from deposits. The loans create additional deposits as follows: Out of a deposit of \$100, the bank may hold \$10 in reserve and loan 90 percent—\$90—to borrowers. There will still be the original \$100 on deposit, and borrowers (of the \$90) will also deposit the \$90 loans in their banks. Now, the borrowers' banks have \$81 of new deposits available for new loans (90 percent of \$90). Banks, therefore, have turned the original \$100 deposit into \$271 (\$100 + \$90 + \$81) of deposits.
 The government regulates commercial banks to ensure a sound financial system. The *Federal Deposit Insurance Corporation (FDIC)* insures deposits and guarantees the safety of all deposits up to \$250,000. To ensure against failures, the FDIC examines the activities and accounts of all member banks and thrift institutions.
- 4. Discuss the functions of the Federal Reserve System and describe the tools that it uses to control the money supply. (pp. 396–399)**
 The *Federal Reserve System (the Fed)* is the nation's central bank. As the government's bank, the Fed produces currency and lends money to the government. As the bankers' bank, it lends money to member banks, stores reserve funds for banks, and clears checks for them. The Fed's Open Market Committee is responsible for formulating the monetary policies to promote economic stability and growth by managing the nation's money supply. Among its tools for controlling the money supply, the Fed specifies *reserve requirements*, it sets the *discount rate* at which it lends money to banks, and it conducts *open-market operations* to buy and sell securities.
- 5. Identify three important ways in which the money and banking system is changing. (p. 399–403)**
 (1) The Federal Reserve took unprecedented investment actions to stabilize the U.S. financial system following the collapse of major banks in 2008. Commercial banks received massive loans to cover bad mortgages and other toxic assets, and to encourage lending to stimulate the sagging economy. (2) Anti-crime and anti-terrorism regulations have been enacted to detect and abate use of the financial system for illegal purposes. The Bank Secrecy Act requires financial institutions to deter funding of crimes by tracking and reporting suspicious transactions. The USA PATRIOT Act requires banks to implement a customer identification program to verify identities and compare them with government lists of terrorists. (3) In addition to EFT systems and mobile devices, banks offer access through telephone, TV, and Internet banking. *Electronic check clearing* speeds up the check-clearing process, and the "blink" credit card speeds up consumer check-out by replacing magnetic strip cards with contactless cards. *Debit cards* allow the transfer of money from the cardholder's account directly to others' accounts.
- 6. Discuss some of the institutions and activities in international banking and finance. (pp. 403–405)**
 Changes in currency values and exchange rates reflect global supply and demand for various currencies. Policies by central banks on money supplies and interest rates influence the values of currencies on the foreign currency exchange markets. Country-to-country transactions rely on an international payments process that moves money between buyers and sellers in different nations. If trade between two countries is in balance—if money inflows and outflows are equal for both countries—money does not have to flow between the two countries. If inflows and outflows are not in balance, then a flow of money between them is made to cover the difference.

Because there is no worldwide banking system, global banking stability relies on agreements among countries. Two United Nations agencies help to finance international trade: (1) The *World Bank* funds loans for national improvements so borrowers can increase productive capacity and

international trade. (2) The *International Monetary Fund* makes loans to nations suffering from temporary negative trade balances and to provide economic and monetary stability for the borrowing country.

KEY TERMS MyBizLab

automated teller machine (ATM) (p. 394)	federal funds rate (key rate) (p. 399)	mutual savings bank (p. 392)
banker's acceptance (p. 393)	Federal Reserve System (the Fed) (p. 396)	open-market operations (p. 399)
check (p. 389)	finance company (p. 393)	pension fund (p. 392)
checking account (demand deposit) (p. 389)	individual retirement account (IRA) (p. 393)	point-of-sale (POS) terminal (p. 403)
commercial bank (p. 391)	insurance company (p. 392)	prime rate (p. 392)
credit union (p. 392)	International Monetary Fund (IMF) (p. 405)	reserve requirement (p. 398)
currency (cash) (p. 389)	letter of credit (p. 393)	savings and loan association (S&L) (p. 392)
debit card (p. 402)	M-1 (p. 389)	securities investment dealer (broker) (p. 393)
discount rate (p. 399)	M-2 (p. 390)	smart card (p. 403)
electronic funds transfer (EFT) (p. 394)	monetary policy (p. 398)	time deposit (p. 390)
exchange rate (p. 403)	money (p. 388)	trust services (p. 393)
Federal Deposit Insurance Corporation (FDIC) (p. 396)	money market mutual fund (p. 390)	World Bank (p. 405)

QUESTIONS AND EXERCISES

QUESTIONS FOR REVIEW

1. Explain the four characteristics of money.
2. What are the components of M-1 and M-2?
3. Explain the roles of commercial banks, savings and loan associations, credit unions, and nondeposit institutions in the U.S. financial system.
4. Describe the structure of the Federal Reserve System.
5. Show how the Fed uses the discount rate to manage inflation in the U.S. economy.

QUESTIONS FOR ANALYSIS

6. Do you think credit cards should be counted in the money supply? Why or why not? Support your argument by using the definition of *money*.
7. Should commercial banks be regulated, or should market forces be allowed to determine the kinds of loans and the interest rates for loans and savings deposits? Why?
8. Customers who deposit their money in online-only checking and savings accounts can often get higher interest rates than

at brick-and-mortar banks. Why do you think that online banks can offer these rates? What might be some drawbacks to online-only banking?

APPLICATION EXERCISES

9. Consider historical currency exchange rates for the U.S. dollar versus China's yuan and Japan's yen. If you had bought those currencies with dollars five years ago, what would be their dollar values today?
10. Start with a \$1,000 deposit and assume a reserve requirement of 15 percent. Now trace the amount of money created by the banking system after five lending cycles.
11. Interview the manager of a local commercial bank. Identify the ways in which the bank has implemented requirements of the Bank Secrecy Act and the USA PATRIOT Act. What costs has the bank incurred to implement the federal requirements?

BUILDING YOUR BUSINESS SKILLS

Four Economists in a Room

Goal

To encourage you to understand the economic factors considered by the Fed in determining current interest rates.

Background Information

One of the Fed's most important tools in setting monetary policy is the adjustment of the interest rates it charges member banks to borrow money. To determine interest rate policy, the Fed analyzes current economic conditions from its 12 districts. Its findings are published eight times a year in a report commonly known as the "Beige Book."

Method

Step 1

Working with three other students, access the Fed's website at www.federalreserve.gov/. Look for the heading "A-Z Index," and then in the index click on the subheading "Beige Book." When you reach that page, read the summary of the current report.

Step 2

Working with group members, study each of the major summary sections:

- Consumer spending
- Manufacturing
- Construction and real estate
- Banking and finance
- Nonfinancial services
- Labor market, wages, and pricing
- Agriculture and natural resources

Working with team members, discuss ways in which you think key information contained in the summary might affect the Fed's decision to raise, lower, or maintain interest rates.

Step 3

Using an online search engine, find articles published in *Barron's*, the highly respected financial publication. Look for articles published immediately following the appearance of the most recent "Beige Book." Search for articles analyzing the report. Discuss with group members what the articles say about current economic conditions and interest rates.

Step 4

Based on your research and analysis, what factors do you think the Fed will take into account to control inflation? Working with group members, explain your answer in writing.

Step 5

Working with group members, research what the Fed chairperson says about interest rates. Do the chairperson's reasons for raising, lowering, or maintaining rates agree with your group's analysis?

FOLLOW-UP QUESTIONS

1. What are the most important factors in the Fed's interest rate decision?
2. Consider the old joke about economists that goes like this: When there are four economists in a room analyzing current economic conditions, there are at least eight different opinions. Based on your research and analysis, why do you think economists have such varying opinions?

EXERCISING YOUR ETHICS: INDIVIDUAL EXERCISE

Telling the Ethical from the Strictly Legal

The Situation

When upgrading services for convenience to customers, commercial banks are concerned about setting prices that cover all costs so that, ultimately, they make a profit. This exercise challenges you to evaluate one banking service—ATM transactions—to determine if any ethical issues also should be considered in a bank's pricing decisions.

The Dilemma

A regional commercial bank in the western United States has more than 300 ATMs serving the nearly 400,000 checking and savings accounts of its customers. Customers are not charged a fee for their 30 million ATM transactions each year, as long as they use their bank's ATMs. For issuing cash to noncustomers, however, the bank charges a \$3 ATM fee. The bank's officers are reexamining their policies on ATM surcharges because of public protests against other banks with similar surcharges in Santa Monica, New York City, and Chicago. Iowa has gone even further, becoming the

first state to pass legislation that bans national banks from charging ATM fees for noncustomers. To date, the courts have ruled that the access fees are legal, but some organizations—such as the U.S. Public Interest Research Group (PIRG)—continue to fight publicly against them.

In considering its current policies, our western bank's vice president for community relations is concerned about more than mere legalities. She wants to ensure that her company is "being a good citizen and doing the right thing." Any decision on ATM fees will ultimately affect the bank's customers, its image in the community and industry, and its profitability for its owners.

QUESTIONS TO ADDRESS

1. From the standpoint of a commercial bank, can you find any economic justification for ATM access fees?
2. Based on the scenario described for our bank, do you find any ethical issues in this situation? Or do you find the main issues legal and economic rather than ethical?
3. As an officer for this bank, how would you handle this situation?

EXERCISING YOUR ETHICS: TEAM EXERCISE

Banker's Predicament: National Security Versus Customer Privacy

The Situation

With recent increases in crime and terrorism, many citizens are hearing about information activities by organizations that previously were considered intrusive. Under provisions of the Bank Secrecy Act and the USA PATRIOT Act, for example, financial institutions now scour transactions of customers more intensely than before. Does increased monitoring of transactions information raise any ethical problems for customers, owners, or employees?

The Dilemma

Bill Decker got irritated when his application to open a checking account at Forthright National Bank was delayed by lengthy identification-verifying procedures at the bank. Months later he was offended to learn that the bank was tracking deposit and checking activities in his account. As he vented his anger to Gloria Liu, the employee that reviews customers' transactions, she tried to explain the bank's obligations to do their part in detecting suspicious activities and preventing terrorism. Surprised by these comments, Bill insisted on finding out just how much Gloria knows about his personal financial situation. "Do you know who I have transactions with through your bank? Are you tracking them, too? With whom are you sharing this information? Does it affect my credit rating?" As the conversation heated up, Gloria decided that her boss, Carolyn Kleen, should be called, especially when Bill indicated that assistance from a civil liberties group might be appropriate for addressing his privacy concerns.

Team Activity

Assemble a group of four students and assign each group member to one of the following roles:

- Bill Decker (bank customer)
- Gloria Liu (bank employee)
- Carolyn Kleen (vice president, financial security)
- Karl Marcks (bank stockholder, investor)

ACTION STEPS

- 1 Before hearing any of your group's comments on this situation, and from the perspective of your assigned role, do you think there are any ethical issues with Forthright National Bank's security-screening program? If so, write them down.
- 2 Before hearing any of your group's comments, and from the perspective of your assigned role, what do you think are the main problems with the bank's security-screening program? Write them down.
- 3 Return to your group and share the ethical issues and problems identified by each member. Were the issues and problems the same among all roles, or did difference in roles result in different issues and problems?
- 4 Among the ethical issues identified, decide as a group which one is most important for the bank to resolve. Likewise, for potential problems, which is the most important one for the bank?
- 5 What does your group recommend be done to resolve the most important ethical issue? How should the most important problem be resolved?

VIDEO EXERCISE MyBizLab

BANCFIRST

Learning Objectives

The purpose of this video is to help you:

- 1 Relate the characteristics of money to the U.S. currency system.
- 2 Explain the functions of money and the role that financial institutions play in this process.
- 3 Describe the role of the Fed in regulating the money supply.

Synopsis

BancFirst is an Oklahoma-based bank with over 75 branches and many more ATM locations. While there were many causes of the recent financial crisis, banking institutions were at the center. Banks like BancFirst take deposits from individuals and businesses and make loans with this money. Before making loans, lending officers evaluate the credit-worthiness of applicants and try to make loans to those who are likely to repay their loans in full and on time. In spite of their best efforts, some loans will not be repaid and banks will have to write these off, removing them from their books and financial statements. Normally, banks expect that less than one percent of their loans will be uncollectible. However,

during the recent financial crisis, the default rate soared. As a result, banks became overly cautious and made very few loans. With few loans, the money supply became tighter, prompting the Fed to take action.

DISCUSSION QUESTIONS

- 1 What is money? Relate the four characteristics of money to the U.S. currency system.
- 2 Money plays an important role in our economy. What are the functions of money?
- 3 How do financial institutions like BancFirst create money? How would tighter credit standards affect this process?
- 4 What is the Federal Reserve? What are the major functions of the Fed?
- 5 Explain the tools that the Federal Reserve uses to control the money supply.

Online Exploration

Deposits at BancFirst (www.bancfirst.com) are insured by the FDIC, an independent agency of the U.S. government. Follow the link from BancFirst's website to the FDIC (www.fdic.gov). What does the FDIC insure and what are the limitations of this insurance? What implications does this have for depositors?

END NOTES

- ¹ “Why Did the ECB Raise Interest rates?” <http://www.ibtimes.com/articles/131734/20110407/why-ecb-raise-interest-rates.htm>; “Central Bank Raises Interest Rates Again,” <http://www.bendbulletin.com/article/20110406/NEWS0107/104060346/>; “China Raises key Interest Rates By Quarter Percentage...,” <http://www.startribune.com/business/119239139.html>; “India Raises Interest Rates for Eighth Time...,” <http://www.bloomberg.com/news/2011-03-17/india-raises-interest-rates-for-eighth-time-in-a-year-to-reduce-inflation.html>; “Patricia Kowsmann and Charles Forelle, “Portugal Pleads for Rescue,” *The Wall Street Journal*,” April 7, 2011, Page A1; “EU/IMF Bailout for Ireland...,” *International Business Times*, <http://hken.ibtimes.com/articles/84575/20101122/ireland-bailout.htm>; Michael Winfrey, “Past EU/IMF Bailouts Show Risks, Pluses for Greece,” *Reuters*, May 4, 2010, <http://www.reuters.com/article/2010/05/04/us-greece-bailouts-analysis-idUSTRE6434XY20100504>.
- ² Steve Schifferes, “‘\$10 Trillion’ Credit Crunch Cost,” *BBC News*, July 31, 2009, <http://news.bbc.co.uk/2/hi/8177814.stm>; Kimberly Amadeo, “Value of the U.S. Dollar,” January 10, 2011, at http://useconomy.about.com/od/tradepolicy/p/Dollar_Value.htm.
- ³ See David B. Caruso, “Official: Money Network Linked to NYC Terror Suspect,” Associated Press, May 14, 2010, accessed at <http://www.aolnews.com/2010/05/14/u/>.
- ⁴ “Money Stock Measures,” Federal Reserve, at <http://www.federalreserve.gov/releases/h6/>, accessed April 16, 2011.
- ⁵ *Ibid.*
- ⁶ *Federal Reserve Bank of San Francisco*, Accessed April 18, 2011, at <http://www.frbsf.org/education/activities/drecon/2005/0509.html>.
- ⁷ *Board of Governors of the Federal Reserve System*, April 15, 2011, at <http://www.federalreserve.gov/releases/h8/current/default.htm>.
- ⁸ Watson Wyatt, “2010 Global Pension Assets Study,” *Towers Watson*, accessed April 16, 2011 at <http://www.towerswatson.com/assets/pdf/966/GPAS2010.pdf>; Joshua Brockman, “Stocks Weigh Down U.S. Pension Funds,” *NPR*, July 15, 2009, at <http://www.npr.org/templates/story/story.php?storyId=100818937>; William Selway, “U.S. Government Pensions Gain 5.5% as Stock Market Rises,” *Bloomberg*, March 31, 2011, at <http://www.bloomberg.com/news/2011-03-31/u-s-government-pensions-gain-5-5-as-stock-market-rises-1-.html>; “Private Pension Plan Bulletin,” *U.S. Department of Labor Employee Benefits Security Administration*, December 2010, at <http://www.dol.gov/ebsa/pdf/2008pensionplanbulletin.pdf>.
- ⁹ Shane M. Sherland, “The Past, Present, and Future of Subprime Mortgages,” *Finance and Economics Discussion Series, Divisions of Research and Statistics and Monetary Affairs: Federal Reserve Board* (Washington, DC; November 2008); Michael Gerrity, “MBA Reports Mortgage Loan Delinquencies, Foreclosure Starts Decrease in Q2,” *World Property Channel*, August 26, 2010, at <http://www.worldpropertychannel.com/us-markets/residential-real-estate-1/real-estate-news-mortgage-bankers-association-national-delinquency-survey-delinquency-rate-for-mortgage-loans-foreclosure-actions-bank-foreclosures-loan-default-rates-3077.php>.
- ¹⁰ Richard Bitner, “Confessions of a Subprime Lender,” *Newsweek* (March 12, 2008), at <http://www.newsweek.com/id/121512/page/1>; Tyler Cowen, “So We Thought. But Then Again...” *New York Times* (January 13, 2008), at http://www.nytimes.com/2008/01/13/business/13view.html?_r=2&scp=1&sq=Tyler+Cowen&oref=login&oref=slogin; Robert H. Frank, “Don’t Blame All Borrowers,” *Washington Post* (April 27, 2008), at <http://www.washingtonpost.com/wp-dyn/content/article/2008/04/25/AR2008042502783.html>.
- ¹¹ Bert Ely, “Don’t Push Banks to Make Bad Loans,” *The Wall Street Journal*, February 2, 2009, page A17; Jeannine Aversa, “Banks Aren’t Budging on Tight Lending Standards,” *HuffingtonPost.com*, February 2, 2009, at http://www.huffingtonpost.com/2009/02/02/banks-arent-budging-on-ti_n_163325.html; Jeremy M. Simon, “Lending Standards Keep Tightening, Fed Says,” *CreditCards.com*, May 4, 2009, at <http://www.creditcards.com/credit-card-news/2009-q1-senior-loan-officers-survey-lending-standards-tighten-1276.php>; Danny King, “Banks Tighten Mortgage Standards for FHA-Insured Loans,” *DailyFinance*, November 17, 2010, at <http://www.dailyfinance.com/story/credit/banks-tighten-mortgage-standards-for-fha-insured-loans-fico-score/19722792/>; Rex Nutting, “Most Banks Tighten Credit Standards Further, Fed Says,” *Market Watch*, May 4, 2009, at <http://www.marketwatch.com/story/most-banks-tighten-credit-standards-further>.
- ¹² “Electronic Funds Transfer,” Accessed April 20, 2011, at <http://fms.treas.gov/eft/index.html>; “Government to Phase Out Checks in March 2013,” *Columbia Daily Tribune*, December 21, 2011 at <http://www.columbiatribune.com/news/2010/dec/21/government-to-phase-out-checks-in-march-2013/>.
- ¹³ “China to Become World’s Largest ATM Market by 2015,” *SmartCards Trends*, September 30, 2010, at http://www.smartcardstrends.com/det_atc.php?idu=12793&main=ea272859892ed0adacb020e361fae6e0; Frederick Lowe, “China Expected to Become the World’s Top ATM Market,” *ATM Marketplace*, September 30, 2010, at http://www.atmmarketplace.com/article_print/176973/China-expected-to-become-the-world-s-top-ATM-market; “Global ATM Market to Pass 2.5 Million by 2013,” *the-infoshop.com* (press release), September 10, 2008, at http://www.the-infoshop.com/press/rbr71603_en.shtml.
- ¹⁴ Brian W. Smith and Melissa R. Hall, “Troubled Banks and Failed Banks: Opportunities for Investment,” *Pratt’s Journal of Bankruptcy Law*, accessed April 20, 2010 at http://www.lw.com/upload/pubContent/_pdf/pub2296_1.pdf; Ralph F. MacDonald III, Christopher M. Kelly, Brett P. Barragat, Kevyn D. Orr, and James C. Olson, “United

- States: Bank Failures in 2008 and a Look Ahead to 2009," *Jones Day*, January 28, 2009, at <http://www.mondaq.com/article.asp?articleid=72796>; "2008-2011 bank Failures in the United States," *Wikipedia*, at http://www.wikipedia.org/wiki/2008_United_States_bank_failures, accessed April 20 2011; Rob Williams, "How Secure Is the FDIC Deposit Insurance Fund?" *Charles Schwab*, September 16, 2009, at http://www.schwab.com/public/schwab/research_strategies/market_insight/investing_strategies/other_choices/how_secure_is_the_fdic_deposit_insurance_fund.html.
- ¹⁵ Katy Jacob, Daniel Littman, Richard D. Porter, and Wade Rouse, "Two Cheers for the Monetary Control Act," *Chicago Fed Letter (June 2010, Number 275): The Federal Reserve Bank of Chicago*, at http://www.chicagofed.org/digital_assets/publications/chicago_fed_letter/2010/cfljune2010_275.pdf; Paul W. Bauer and Geoffrey R. Gerdes, "The Check Is Dead! Long Live the Check! A Check 21 Update," *Federal Reserve Bank of Cleveland*, September 21, 2009, at <http://www.clevelandfed.org/research/commentary/2009/0609.cfm>; Jim Savage, "Federal Reserve Banks Complete Check Processing Infrastructure Changes," *Board of Governors of the Federal Reserve System*, March 2, 2010, at <http://www.federalreserve.gov/newsevents/press/other/20100302a.htm>.
- ¹⁶ "Intended Federal Funds Rate, Change and Level," *Board of Governors of the Federal Reserve System*, at <http://www.federalreserve.gov/monetarypolicy/openmarket.htm>, accessed April 21, 2011.
- ¹⁷ Jon Hilsenrath and Liz Rappaport, "Fed Inches Toward Plan to Purchase U.S. Bonds," *The Wall Street Journal*, January 29, 2009, page A4; Neil Irwin, "Fed to Pump \$1.2 Trillion into Markets," *The Washington Post*, March 19, 2009, at <http://www.washingtonpost.com/wp-dyn/content/article/2009/03/18/AR2009031802283.html>; Rita Nazareth, "Most U.S. Stocks Rise on Durable Goods, Pare Gains on Fed," *Bloomberg.com*, June 24, 2009, at http://www.bloomberg.com/apps/news?pid=20670001&sid=a_dIjb; Jon Hilsenrath, "Fed to Keep Lid on Bond Buys," *The Wall Street Journal*, June 12, 2009, at <http://www.online.wsj.com/article/SB124477575898508951.html>; Jon Hilsenrath, "Fed Treads Into a Once-Taboo Realm," *The Wall Street Journal*, November 5, 2010, page A6.
- ¹⁸ David Goldman, "CNNMoney.com's Bailout Tracker," *CNNMoney.com*, accessed April 21, 2011, at <http://money.cnn.com/news/storysupplement/economy/bailouttracker/>.
- ¹⁹ Michael R. Crittenden, "Regulators See Risk in U.S. Bank Stakes," *The Wall Street Journal*, April 24, 2009, at <http://online.wsj.com/article/SB124051525463449225.html>; Rebecca Christie, "Treasury May Keep U.S. Bank Stakes After Buyback (Update 3)," *Bloomberg.com*, April 17, 2009, at <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=a9F3N8vvrHgY>; David Goldman, "CNNMoney.com's Bailout Tracker," *CNNMoney.com*, April 21, 2011, at <http://money.cnn.com/news/storysupplement/economy/bailouttracker/>; Mark Jickling, Fannie Mae and Freddie Mac in Conservatorship," *CRS Report for Congress*, September 15, 2008, at <http://fpc.state.gov/documents/organization/110097.pdf>.
- ²⁰ "U.S. Authorities Fine Arab Bank," *Al Bawaba* (August 18, 2005), 1; Paul R. Osborne, "BSA/AML Compliance Provides Opportunity to Improve Security and Enhance Customer Experience," *ABA Bank Compliance*, July/August 2005, 4.
- ²¹ Jason Webb, "American Express Bank Forfeits \$55 Million for Bank Secrecy Act Violations," *Associated Content*, August 7, 2007, at http://www.associatedcontent.com/article/339208/american_express_bank_forfeits_55_million.html?cat=17; "Banco Popular de Puerto Rico Enters into Deferred Prosecution Agreement with U.S. Department of Justice," *U.S. Department of Justice*, January 16, 2006, at http://www.usdoj.gov/opa/pr/2003/January/03_crm_024.htm; Union Bank of California Enters into Deferred Prosecution Agreement and Forfeits \$21.6 Million to Resolve Bank Secrecy Act Violations," *U.S. Department of Justice*, September 17, 2007, at http://www.usdoj.gov/opa/pr/2007/September/07_crm_726.html.
- ²² "Supporting the Nation's Payment System," *The Federal Reserve Bank of Philadelphia*, April 22, 2011, at <http://www.philadelphiafed.org/about-the-fed/who-we-are/payment-system.cfm>; "Intro to the ACH Network," *NACHA: The Electronic Payments Association*, accessed April 22, 2011, at <http://nacha.org/c/intro2ach.cfm>; "NACHA Reports 18.76 Billion ACH Payments in 2009," *NSF Check Processing*, April 7, 2010, at <http://www.nsfcheckprocessing.com/achnetwork.htm>.
- ²³ Katy Jacob, Daniel Littman, Richard D. Porter, and Wade Rouse, "Two Cheers for the Monetary Control Act," *Chicago Fed Letter (June 2010, Number 275): The Federal Reserve Bank of Chicago*, at http://www.chicagofed.org/digital_assets/publications/chicago_fed_letter/2010/cfljune2010_275.pdf; Paul W. Bauer and Geoffrey R. Gerdes, "The Check Is Dead! Long Live the Check! A Check 21 Update," *Federal Reserve Bank of Cleveland*, September 21, 2009, at <http://www.clevelandfed.org/research/commentary/2009/0609.cfm>; Jim Savage, "Federal Reserve Banks Complete Check Processing Infrastructure Changes," *Board of Governors of the Federal Reserve System*, March 2, 2010, at <http://www.federalreserve.gov/newsevents/press/other/20100302a.htm>.
- ²⁴ "The New Normal: Annual Report 2009," *Fidelity Bank*, accessed April 13, 2011 at <http://www.fidelitybankonline.com/home/fiFiles/static/documents/AnnualReport2009.pdf>; "Fidelity Bank launches Innovative Social Media Program," *Citi biz list*, February 15, 2011, at <http://boston.citybizlist.com/7/2011/2/15/Fidelity-Bank-Launches-Innovative-Social-Media-Program-.aspx>.
- ²⁵ "Digital Brand Expressions," accessed April 12, 2011 at <http://www.digitalbrandexpressions.com>.
- ²⁶ Martin Kaste, "Consumers Opt For Debit Over Credit Cards," *NPR*, June 28, 2009, at <http://www.npr.org/templates/story/story.php?storyId=105974724>.
- ²⁷ "About Smart Cards: Introduction: Primer," *Smart Card Alliance*, accessed April 22, 2011, at <http://www.smartcardalliance.org/pages/smart-cards-intro-primer>.

- ²⁸ "Summary Measures of the Foreign Exchange Value of the Dollar," *Federal Reserve Statistical Release H:10*, accessed April 23, 2011 at <http://www.federalreserve.gov/releases/H10/Summary/>.
- ²⁹ Kimberly Amadeo, "Value of the U.S. Dollar," *About.com*, accessed April 23, 2011, at http://useconomy.about.com/od/tradepolicy/p/Dollar_Value.htm.
- ³⁰ "Bank Failures in Brief: 2010," *FDIC*, accessed April 4, 2011 at <http://www.fdic.gov/bank/historical/bank/2010/index.html>; Associated Press, "U.S. Bank Failures Surpass 100," *Columbia Daily Tribune*, July 26, 2010, Page 5B.
- ³¹ Associated Press, "Shrinking Profits Kill Bank Freebie," *Columbia Daily Tribune*, October 20, 2010, Page 5B.
- ³² Associated Press, "Bankers, Merchants Feud Over Fees," *Columbia Daily Tribune*, March 14, 2011, Page 7B.
- ³³ David Enrich and Damian Paletta, "Global Bank Pact Advances," *The Wall Street Journal*, June 4, 2010, page A1, A14; Associated Press, "Bankers Outline New Global Rules," *Columbia Daily Tribune*, September 13, 2010, page 6B.