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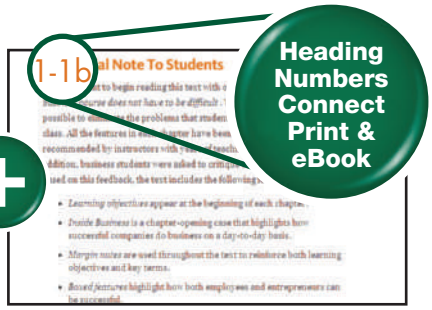

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Thanks to my family for their support. This book was written in large part during breaks at gymnastics events, horse shows, and band competitions in which my children participated. I dedicate this book to them and especially to my wife, Claudette, whose encouragement, support, and patience with my long hours of researching and writing made it possible for me to complete this textbook.

Dean Croushore
December 2013

CHAPTER 1

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INTRODUCTION TO MONEY and BANKING

People say, "Money makes the world go round." Whether this is true or not, money itself does go around the world with astonishing speed. Money has always been at the center of economic transactions—from the days when gold and silver were used for purchases to today's payments with a plastic card. No longer constrained by physical proximity, money flows around the globe through banking institutions and financial markets. This seemingly free flow of money is constrained, however, by rules under which banks and financial markets must operate, as dictated by government policy. In this chapter we will see how these policy decisions affect consumers, households, and businesses—the primary exchangers of money.

Caught up in the joy of spending, some people might think that their only contact with a bank is the occasional trip to an automatic teller machine (ATM) to withdraw cash. But banks intersect with people's lives in many ways. Banks issue the credit cards that consumers use to buy goods and

services. Banks lend people money to buy cars and houses. Banks process the checks that almost everyone uses to pay their bills. Banks play a large role—sometimes obvious and sometimes invisible—in our lives every day.

Economic policy determines the rules and regulations by which banks work. If those rules are poorly designed, the banking system will not work well. For example, with efficient rules for banks, the interest rate on a car loan might be 7 percent, but if inefficient rules raise banks' costs of making loans, the interest rate might be 10 percent.

People's lives are affected by the efficiency of money and banks, and policy affects that efficiency. We readily notice the impact of policy when things go wrong—for example, during the great inflation of the 1970s or the financial crisis of 2008. Policymakers in those periods deserve blame for the results of their policymaking. But policymakers also deserve credit when things go right, such as in the late 1990s, when inflation and unemployment rates reached their lowest levels in 30 years. It is not easy to isolate the specific policy measures that cause growth or decline in the economy because there are so many interrelated factors.

This book explores the connections between the banking system and the policies governing that system; you will see how those interactions affect your lives and the economy overall. By comprehending these interactions, you will learn why financial markets and institutions are structured the way they are. You will learn how money affects the economy and begin to grasp the economic theory that demonstrates how the force of policy steers financial markets. This book emphasizes the role of the Federal Reserve System in the payments system (the way economic transactions are conducted), in regulating banks, and in setting monetary policy. By the time you have finished this book, you should understand why the financial system takes its present shape and how economic forces can change it. You also will have a framework for understanding the worldwide financial system and the world economy. This framework will enable you to comprehend economic policy and analyze the effects of different policies on financial markets and on your well-being.

Though the subject matter of money and banking is personal, it has national and international implications. People make decisions about how much money to keep in their wallets, how often to go to the bank, and whether to pay for the goods they buy by using cash, writing a check, or using a credit card, all of which are subjects in this course on money and banking. But when we consider the decisions made by millions of people and look at the overall impact of those decisions, we enter the realm of macroeconomics, where we see the impact of the sum of those individual decisions on macroeconomic variables such as the inflation rate, interest rates, the unemployment rate, and the economy's growth rate.

1-1 What Is in This Text?

This book uses economic theory and data from the U.S. and foreign economies to cover a wide variety of topics. Two aspects of this coverage are particularly noteworthy: (1) applications to everyday life and (2) the purposes and implications of government policy.

1-1a The Value of Money and Banking for Everyday Life

In early 2013, the interest rate on new car loans fell to the lowest level in history (at least since 1972 when

such interest rates were recorded), at 4.8 percent. Why? Because in 2007 the economy went into recession, in fall 2008 there was a major financial crisis, and from 2009 to 2013 the economy remained very weak. The Federal Reserve (called the Fed for short) reduced the interest rate in the market in which banks borrow money from each other (the federal funds market), and the reduced interest expense faced by banks led to a decline in the interest rate on U.S. government bonds, which, in turn, determined the interest rate on new car loans. What will happen to the interest rate on new car loans in future years? No one knows yet. That depends on the Fed's future actions, the strength of the economy, and the inflation rate. Thus, if you plan to borrow to buy a car, the amount you will repay depends on what the Federal Reserve does (which we will study in Chapters 15 through 18), as well as the growth of the economy and the rate of inflation (considered in Chapters 10 to 14).

A house is the biggest purchase of most people's lives. Homebuyers usually take out a mortgage loan to buy their house and pay the loan off in 30 years, which is most of their working lives. The interest rate on a mortgage loan is influenced by a number of factors, including the Federal Reserve's monetary policy (as was the case for the interest rate on new car loans), the worldwide demand for loans, the health of the banking system, the inflation rate, and the size of the federal government's budget deficit. We will examine all these factors in this textbook so that you will know what factors influence the mortgage interest rate.

Should you invest in the stock market? Every investor wants to make the biggest profit possible, but you must understand the risks inherent in buying stocks. You do not want to make the same mistakes as those who invested heavily in technology stocks in the late 1990s and then lost a substantial portion of their wealth in 2000. This book discusses the stock market in Chapter 7. The discussion will explore what is possible and what is not possible for investors. But you also will learn that your ability to profit from the stock market depends mainly on the profits that corporations earn, which depend, in turn, on economic growth in the United States and the rest of the world; this, in turn, is discussed in Chapters 10 and 14.

Understanding what determines the interest rates on loans or what causes the stock market to fluctuate will help you make good decisions about borrowing and investing. Thus, the knowledge you gain from this book could be valuable to you in the future.

1-1b Why Is Government Policy So Crucial for Money and Banking?

Economic policy affects the entire financial system, including the amount of money in the economy, how financial securities are traded, how banks operate, how fast the economy grows, how rapidly the prices of goods and services grow over time, and what the value of the U.S. dollar is in terms of foreign currencies.

Throughout this book we will examine government policies that concern financial markets and institutions, money, banking, and the economy. In our modern financial system, government regulations and actions influence how markets perform. In some industries, such as small-appliance manufacturing, the government has very little role. However, because of externalities (situations in which one firm's decisions affect others whose interests were not taken into account by the first firm), the government plays a vital role in the financial system. For example, bank runs, which occur when many people withdraw their funds from banks at the same time, were commonplace in the 1800s and early 1900s in the United States and often led to economic downturns. The government took several steps to prevent such runs, creating several new institutions, including the system of deposit insurance in 1933.

Who are the policymakers, and why are they so important? Policy is a part of every aspect of the financial system, and thus there are many different types of policymakers. Their decisions affect the nation in many ways—some obvious and some subtle. One such institution is the Securities and Exchange Commission (SEC), which sets the rules for trading bonds and stocks. Those rules are designed to ensure that insiders (those who work in companies) do not profit by taking advantage of less knowledgeable people who purchase the bonds or stocks of those companies. In 2002, the accounting scandals that rocked several major corporations gave proof that, even with strict rules, some insiders cannot resist the temptation to defraud the system for their own gain. Now investors will shy away from investing in firms that engage in questionable accounting practices. Another important institution is the Federal Deposit Insurance Corporation (FDIC), which came into being to insure deposits at banks, helping to prevent bank runs. As a result, people poured money into banks in the financial crisis of 2008 because they knew their deposits were guaranteed by the government, even though some banks found themselves in trouble because of bad loans.

What is the Federal Reserve? The policymaking institution that we will study most carefully in this book is the Federal Reserve System, which determines the money supply, sets the rules for how checks are cleared and how banks obtain new currency, and determines what activities banks may or may not engage in and whether banks are operating in a prudent fashion. Eight times a year the Federal Reserve decides whether to take actions that increase or decrease the interest rate in a small, obscure market for overnight loans between banks (the federal funds market). That market may be small and obscure, perhaps, but the decision is vitally important to nearly everyone in the U.S. economy because it ultimately determines the interest rate you pay on your car loan, the amount of interest you receive on funds in your bank account, and the rate of inflation over the next few years. Showing the connections between that Federal Reserve decision and your life is one goal of this book.

Throughout this book we will connect the theory of money and banking to the practical decisions of policymakers and to their influence on your everyday life.

RECAP

1. The money and banking system affects your daily life by making credit cards available, by providing loans that allow you to buy a car or a house, and by enabling you to pay your bills conveniently.
2. Policy decisions affect the efficiency of the money and banking system when they cause problems, such as in the financial crisis of 2008, or when they help the economy grow rapidly, as in the 1990s.
3. The Federal Reserve is a key policymaking institution that is responsible for making sure that our system of payments works well for monitoring banks and for determining the nation's money supply.

1-2 Ten (Surprising) Facts Concerning Money and Banking

Before getting into the details of the money and banking system, here are 10 important facts about money, banking, and financial markets that may surprise you. Each of these facts will be explored more fully in later chapters. Many of them demonstrate the interdependence of policy, the money and banking system, and an individual's financial decisions.

1-2a Most Financial Formulas—No Matter How Complicated They Look—Are Based on the Compounding of Interest

Using this book, you will learn formulas that are useful in understanding financial transactions. Some look very complicated and involve fractions and terms raised to various powers. But they are all based on one idea—that the gains to investing (or the costs of borrowing) grow at a compound rate over time.

If you have ever had a bank account or taken out a loan to buy a car, you may be familiar with the concept of interest. For instance, if you put $1,000 into a savings account at a bank, and it grew to $1,600 in 10 years, the extra $600 would represent the interest you earned over those 10 years. Or if you borrowed $5,000 to buy a car and then repaid $6,000 over five years, the amount you repaid would represent the borrowed amount ($5,000) plus $1,000 in interest.

The key feature of interest is that it compounds over time, which means that interest accrues on interest from previous years. Consider what happens when you invest money. In one year, you earn some interest. The following year, you earn interest on your original investment and on your first year's interest. The next year, you earn interest on the original amount invested as well as on the interest from previous years. As the years roll on, this compounding of interest adds up.

For example, if you invest $1,000 in an investment that pays interest of 10 percent each year, you will have $1,100 after 1 year, $2,594 after 10 years, $10,835 after 25 years, and $117,391 after 50 years. Without compounding, the amount after 50 years would be just

$6,000. Thus, compounding makes a huge difference over long periods.

Once you understand compounding of interest, financial formulas of all types become easily comprehensible. For example, when you borrow the funds to buy a car, the car dealer punches a set of numbers into a computer or calculator. The calculation the dealer is performing is nothing more than the compounding of interest in reverse—your dealer is calculating the monthly payment needed to pay off the car loan, accounting for the compounding of interest. Similar calculations can be used to figure out the return you made over the past five years on your investments in the stock market, the gain you expect to make from an investment, how much you would need today to pay off your car loan, or which of two different loans you should take out.

In Chapter 2 we will examine how money flows from lenders to borrowers through financial intermediaries and markets. In Chapter 4 we will learn about compounding and the related notion of present value. We will apply these notions to interest rates (in Chapters 5 and 6) and to the stock market (in Chapter 7).

1-2b More U.S. Currency Is Held in Foreign Countries than in the United States

Naturally, U.S. citizens buy goods and services with dollars, the national currency of the United States. But more U.S. dollars circulate outside the United States than within.

Some foreigners prefer U.S. dollars because of inflation. Prices of goods in terms of their local currency keep rising rapidly over time. Instead of using their own currencies in their own countries, these people import U.S. dollars to spend. Using U.S. dollars helps them to avoid the problems caused by high rates of inflation. That inflation, in turn, is caused by their central banks (the government agencies that determine their money supplies), which allow the money supply to grow too rapidly.

Should Americans worry about all the dollars being held abroad? Not really, because our taxes are lower as a result. It costs the U.S. government about 4 cents to produce a piece of currency; so the government profits by about $19.96 for every $20 bill held overseas and $99.96 for a $100 bill. Higher government profits (which we call *seignorage*) mean lower taxes for U.S. citizens—to the tune of about $80 billion per year from 2010 to 2012.

We will discuss the uses of money and how payments are made in the United States and around the world in Chapters 3 and 11. We will look at interactions between the economies of different countries in Chapter 14.

1-2c Interest Rates on Long-Term Loans Generally Are Higher than Interest Rates on Short-Term Loans

Newspapers and business magazines often refer to "the" interest rate. In fact, there are many different interest rates, each of which is relevant for a different loan.

In general, the longer the time before a loan is paid off, the higher the interest rate. For example, a mortgage loan (a loan for buying a house) might have an annual interest rate of 3.5 percent if it is repaid in 15 years and 4.0 percent if it is repaid in 30 years. The difference in interest rates on loans that are repaid over different periods may be substantial.

To understand why long-term loans pay more interest than short-term loans, we need to consider several aspects of investing, including lender's preferences (they like to make short-term loans in case they need their money), the riskiness of the loans (long-term loans carry more risk), and the expected future changes in short-term interest rates. These elements combine to make the interest rates on long-term loans higher, almost always, than the interest rates on short-term loans.

The difference between short- and long-term interest rates is an indicator of the state of the economy and is also useful in forecasting how fast the economy will grow. We will learn all about the factors that influence interest rates on long-term compared with short-term loans in Chapter 5.

1-2d To Understand How Interest Rates Affect Economic Decisions, You Must Account for Expected Inflation

The interest rate on a bank deposit tells you how many dollars you will earn. It does not tell you how much you will be able to buy with those dollars. To figure out how much you will be able to buy when you earn interest, you must consider that the prices of the goods you buy change over time. For example, suppose that you have your eyes on a new stereo system that costs $1,100, but you have only $1,000. If you invest $1,000

and earn interest of $100 after one year, you will have the $1,100 you need. However, you can buy the stereo system only if its price has not gone up over the course of the year. If there is inflation, that is, if the average prices of goods have risen, you still may not have enough funds to make your purchase.

A person's decision about how much to save or invest depends not just on the interest rate but also on how much that person expects prices to change. The expected rate of change of prices is called the *expected inflation rate*. Thus, to understand consumer decisions about saving and investing, we need to examine both the interest rate and the expected inflation rate.

How do people form expectations about the future inflation rate? As we will see, the formation of expectations depends on circumstances. If inflation has been fairly stable over time, as it was in the United States in the 1950s and early 1960s and again in the 1990s and 2000s, expectations are likely to be based on the historical average rate of inflation. However, if inflation should begin to rise dramatically, as it did in the late 1960s and through the 1970s, or if inflation should begin to fall sharply, as it did in the early 1980s, then consumer expectations of inflation are likely to become more complicated. For example, the surprising increase in inflation that began in the late 1960s led people to examine the Federal Reserve's role in creating money, which was the source of inflation. As a result, people began monitoring the Federal Reserve's actions and adjusting their expectations about inflation according to the growth rate of the money supply.

How consumers form expectations about the future inflation rate influences their investment decisions. The most important variable determining those decisions is the *real interest rate*, which equals the nominal (or dollar) interest rate minus the expected inflation rate. The real interest rate is particularly relevant to the formation of economic policy. In periods when the expected inflation rate was based on the historical average of inflation, policymakers knew that their policies would not immediately affect expected inflation. Thus, if they wanted to affect the real interest rate, all they had to do was to change the nominal interest rate, knowing that there would be a one-for-one change in the real interest rate. However, when policymakers' actions began to influence people's expectations, policymaking became more complicated. If policymakers tried to reduce the real interest rate, expected inflation might increase, and interest rates (both nominal and real) might rise rather than fall. Thus, the effect of policy on public expectations about inflation actually made policymaking more difficult.

As we will see in Chapter 6, people's expectations of future inflation are a key variable that affects interest rates. We will explore the implications for policymaking from changes in people's expectations in Chapters 12, 13, 17, and 18.

1-2e Buying Stocks Is the Best Way to Increase Your Wealth—and the Worst

If you had wealth to invest, how would you decide what to do? Would you buy safe securities, such as U.S. government securities? Or would you take on more risk, such as buying a small business in your community? Or would you put your funds into the stock market, buying shares in U.S. corporations? Deciding what to do with your wealth depends on your willingness to take risk.

If you look at the returns that investors have made in the past few decades, you might want to invest in the stock market. Investors in the stock market made especially large gains in the 1980s and 1990s. But investing in the stock market is also very risky. Therefore, although investing in the stock market produces high returns on average, you also can lose a lot of your wealth. For example, the average stock lost 40 percent of its value from 2007 to 2009.

The stock market may seem mysterious, but it is much simpler than it first appears. Buying stocks gives you a share of ownership in America's largest corporations. As a stockholder, you get to vote on corporations' major decisions. To profit in the stock market, you need to realize both the big picture—how the stock market fits into the grand scheme of the financial system—and the little details—how likely a particular stock is to increase your wealth.

To invest efficiently, you need to understand the risks that you face in the stock market and on other investments, as we will detail in Chapter 7.

1-2f Banks and Other Financial Institutions Made Major Errors That Led to the Financial Crisis of 2008

The banking system was remarkably healthy in the 1990s and the early 2000s. Banks had substantial cushions against losses, most were very well capitalized (having a large amount of equity capital relative to

potential losses on loans), and not a single bank failed in 2005 or 2006, an unprecedented event.

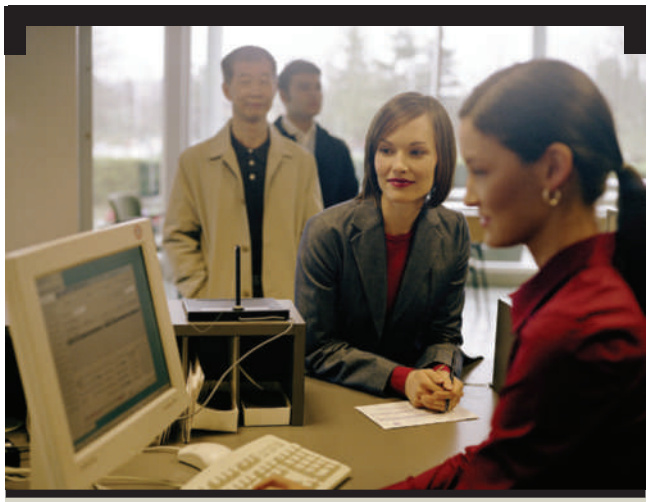
But in 2007, trouble began to brew. The rapid growth in housing prices led banks and mortgage brokers to become complacent about making mortgage loans, and they made many loans to people who did not have sufficient income to pay them back. The banks were counting on the houses' appreciating, so the owners could pay back the loans based on the increased value of the houses. But when housing prices stopped rising, banks began to realize that many of these subprime loans would never be repaid. As they foreclosed on such houses, housing prices fell further, making the problem even worse.

Many banks thought they had avoided any risk from subprime mortgage loans because they had sold the loans off to other firms. But they owned mortgage-backed securities, which indirectly owned subprime loans, and those securities plummeted in value as everyone in the market realized that most of the subprime loans would never be repaid. In addition, the two major government-sponsored agencies that helped finance mortgages, Fannie Mae and Freddie Mac (formally, the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation), owned so many subprime mortgages that they both went bankrupt and were taken over by the federal government.

The problems from U.S. subprime mortgages cascaded all over the world. Many investment banks were highly leveraged, having borrowed much of the funds that they invested. When losses on mortgage-backed securities became surprisingly high, the investment banks veered toward bankruptcy. As their situation became precarious, other financial firms stopped trading with them, fearing that they would default on their loan agreements. The entire financial system came to a screeching halt, as investment firms all over the world attempted to sell financial assets at the same time, causing the prices of stocks and bonds to plummet. Investors worldwide sold any risky asset and poured their funds into banks (which benefited from deposit insurance) and into U.S. government bonds. A deep recession ensued, with real GDP (gross domestic product) declining more than 8 percent (at an annual rate) in the United States, and nearly 20 percent in some Asian countries, in the fourth quarter of 2008.

The main lesson that banks and their regulators learned from the financial crisis of 2008 is to be wary when things are going well. A wise adage in banking is, "The worst loans are made in good times," which bankers seemed to have forgotten when they began to make subprime loans. Banking regulations have been strengthened since the crisis to attempt to keep banks out of trouble.

Ryan McVay/Jupiter Images



Banks like this one offer a wide variety of services for their customers, including ATM and online access 24 hours a day.

You will learn how banks operate in Chapter 8, and how deposit insurance and other regulations affect banks in Chapter 9.

1-2g Recessions Are Difficult to Predict

A recession occurs when the overall level of business activity in the economy declines persistently. In December 2007, for example, the economy entered a recession. In that month, a variety of economic indicators began to show that the economy was faltering. The number of people employed in the economy began to decline as more and more people lost their jobs and fewer new jobs were created. Not all economic variables turned down at the same time, however. The housing market had begun to decline early in 2007 and was the main cause of the recession, leading consumers to have less wealth; so they reduced their spending. The recession was fairly mild until September 2008, when the financial crisis caused most of the major sectors of the economy to decline sharply.

Because recessions cause major problems, including unemployment and declining profits, economists spend much effort attempting to forecast when they will occur. At different times, various indicators have seemed to predict recessions. Over time, however, no indicator has maintained an ability to forecast recessions. For example, if you look at declines in the stock market as a predictor of recessions, you would

have predicted recessions far more often than they occurred. Another popular predictor was the difference between interest rates on two different government securities, which worked well in the 1970s and 1980s. But that indicator gave misleading forecasts in the 1990s.

Recessions simply cannot be predicted with any degree of accuracy. The best way to think about recessions is that the economy is strong at times and weak at other times. When it is weak, the economy may be more subject to falling into recession if some shock hits the economy. Such a shock might be a sudden rise in oil prices or a major change in government policy. Thus, although economists cannot predict recessions with much accuracy, they can tell you the probability that a recession is likely to occur.

We will look at how the economy grows and what might cause recessions in Chapter 10. Then we will develop several different models of how the economy works in Chapters 12 and 13.

1-2h The Federal Reserve Creates Money by Changing a Number in Its Computer System

To create additional money in the economy, the Federal Reserve, often called the Fed, for short, buys government securities from certain Wall Street firms. In exchange for the securities, the Fed increases the number in its computer system that shows how much the banks at which those Wall Street firms keep their accounts have on deposit at the Fed. Thus, money is created simply by changing a number in a computer.

Have you ever thought about where dollar bills come from? They are issued by the government, of course, but how does the government put them into circulation? The answer is that the Fed gives them to banks in exchange for reducing the number in the Fed's computer system that represents the amount of funds that banks have on deposit.

This process of money creation clearly has the potential for being abused. If the Fed creates too much money, the prices of goods and services throughout the economy will rise; that's *inflation*. Inflation is bad for the economy, so the Fed tries to reduce the amount of it.

To study how money is created, we must understand the inner workings of the Fed, which we will do in Chapter 15. We will see how the Fed controls the amount of money in the country in Chapter 16.

1-2i In the Long Run, the Only Economic Variable the Federal Reserve Can Affect Is the Rate of Inflation—the Fed Has No Effect on Economic Activity

The Federal Reserve can change the amount of money circulating in the economy—the money supply. Economists long ago discovered that when the Fed increases the money supply, the economy speeds up a bit; people buy more goods and services. Thus, when the economy is sluggish, the Fed can help the economy by increasing the money supply. The increase in the money supply causes interest rates to decline, so people buy more goods and services. On the other hand, when the economy is overheating, the Fed can reduce the money supply to slow the economy down. Doing so causes interest rates to rise, so people become more reluctant to spend.

However, there are limits on how much the Fed can do to affect economic activity. And in the long run, the economy adjusts and achieves the same level of economic activity no matter how much money is in the economy. The Fed's actions cannot affect either the long-run real interest rate or the underlying long-run growth rate of the economy. Ultimately, therefore, the only major economic variable the Fed can affect by changing interest rates and the money supply is the amount of inflation in the economy. When the Fed increases the growth rate of the money supply, the inflation rate rises; when the Fed decreases money growth, the inflation rate falls. Fear of the long-run impact of policy changes on inflation prevents the Fed from stimulating the economy very much in the short run.

We will see how the Fed's actions affect the economy in the short run and the long run in Chapter 17.

1-2j You Can Predict How the Federal Reserve Will Change Interest Rates Using a Simple Equation

We know that the Federal Reserve changes interest rates to affect economic growth in the short run and to affect inflation in the long run. But can we use that knowledge to predict what the Fed will do when it meets eight times each year to set interest rates?

Some economists think that predicting what the Fed will do is not very difficult. They note that the Fed bases

its policy decisions mostly on two major variables: the output gap and the inflation rate. The *output gap* is the percentage by which real gross domestic product (GDP) is above or below its potential level. If Fed policymakers think that the economy is producing more output than is sustainable, they will raise interest rates; if they think the economy is running below par, they will lower interest rates. The inflation rate also influences policymakers' decisions. If inflation is above its target level of 2 percent, policymakers are inclined to raise interest rates; if inflation is below target, policymakers will feel comfortable reducing interest rates.

An equation that relates the interest rate to the output gap and the inflation rate is known as the *Taylor rule*, named after the economist John Taylor of Stanford University, who suggested it. Taylor showed that his equation did a good job of modeling how the Fed acted in changing interest rates in the 1980s and 1990s. The Taylor rule is used widely in the United States and in many foreign countries. Economists use the rule to show how the Fed in the United States and the central banks in other countries respond to changes in the economy through the impact of those changes on the output gap and the inflation rate. Central banks around the world use the Taylor rule as a benchmark in setting policy, often noting when and why they are deviating from the rule.

The Taylor rule is not an infallible predictor, of course. It is based on only two economic variables, whereas central banks collect data on hundreds of economic variables. The rule does not predict interest rates very well in times of crisis, such as around September 11, 2001, and during the financial crisis of 2008. But it does quite well in normal times. Thus, anyone can now predict changes in interest rates.

We will examine the Taylor rule and other recent approaches to policymaking in Chapter 18.

RECAP

Ten surprising facts about money and banking are:

1. Most financial formulas—no matter how complicated they look—are based on the compounding of interest.
2. More U.S. currency is held in foreign countries than in the United States.
3. Interest rates on long-term loans generally are higher than interest rates on short-term loans.
4. To understand how interest rates affect economic decisions, you must account for expected inflation.
5. Buying stocks is the best way to increase your wealth—and the worst.
6. Banks and other financial institutions made major errors that led to the financial crisis of 2008.
7. Recessions are difficult to predict.
8. The Federal Reserve creates money by changing a number in its computer system.
9. In the long run, the only economic variable the Federal Reserve can affect is the rate of inflation—the Fed has no effect on economic activity.
10. You can predict how the Federal Reserve will change interest rates using a simple equation.

Keep these 10 surprising facts in mind as you read through this book. They underscore the importance of understanding the interplay among money, banks, financial markets, and policymakers to explain events within the money and banking system.