

Chapter 14

Fiscal and Monetary Policy

How do policymakers use fiscal and monetary policy to stabilize the economy?

■ 14.1 Introduction

For anyone who follows economic news, 2008 was filled with gloom and doom. The year began with uncertainty caused by a meltdown in the housing market. After rising for years, home prices were dropping. Just how far they would plummet, no one knew. In most parts of the country, homes were worth less than they had been just months earlier—sometimes even less than their owners owed on their mortgages. And the bad news was only beginning.

Over the next few months, a breathtaking rise in oil prices caused the price of gasoline to increase from approximately \$3.00 to more than \$4.00 a gallon. Drivers of large cars and trucks watched in horror as the cost of filling their gas-guzzlers crept to more than \$100. The cost of food also rose at an alarming pace. Workers who used to go out to lunch began packing sack lunches at home to avoid soaring restaurant prices, and visits to food banks and soup kitchens increased as more people sought help in the face of rising living costs. Students returning to school in the fall saw the price of a cafeteria lunch go up by an average of 32 cents.

Job losses and falling stock prices added to the country's economic woes. Jobless workers, as well as those who feared for their jobs, cut back on spending.

The federal government and Federal Reserve both work to keep the economy growing smoothly.

Speaking of Economics

fiscal policy

Government policy regarding taxing and spending. Fiscal here means “relating to public revenues.”

monetary policy

Central bank policy aimed at regulating the amount of money in circulation. Monetary means “relating to money.”

deficit spending

Government spending in excess of what is collected in revenues.

stagflation

A combination of economic stagnation—or slowdown—and high inflation. During a period of stagflation, gross domestic product growth is slow or zero, unemployment is high, and prices are rising.

multiplier effect

A ripple effect in which a change in spending by one person or business leads to additional changes in spending by another person or business.

easy-money policy

A monetary policy designed to accelerate the rate of growth of the money supply in order to stimulate economic growth.

tight-money policy

A monetary policy designed to slow the rate of growth of the money supply in order to reduce inflation.

crowding-out effect

The possible effect of increased government borrowing on businesses and consumers. By driving interest rates up, high levels of government borrowing may crowd private borrowers out of the lending market.

The resulting store closures and business bankruptcies created still more pain and uncertainty. By June 2008, the consumer confidence index, a measure of how people feel about their jobs and the economy, had sunk to a 16-year low. “If consumers are not spending, then the economy is in serious trouble,” said one economist when interviewed about the mood of the country. “I think we’re in a recession right now.” Years later, people in the United States and in other countries were still facing the consequences of the 2008 recession.

“Recessions,” points out economics writer Charles Wheelan, “are like wars: If we could prevent them, we would. Each one is just different enough from the last,” he adds, “to make it hard to ward off.” Moreover, once recessions begin, they tend to spread across borders. If jobless Americans, for example, stop buying German cars, Chinese toys, or Mexican oil, then the economies of those countries will also suffer.

So, who is responsible for monitoring the U.S. economy to prevent recessions, or, at the very least, to minimize the pain they cause? The answer today is the federal government and the Federal Reserve System (the Fed). The federal government uses **fiscal policy**, the government’s power to tax and spend, to get a stagnant economy moving again or to address inflation. The Fed uses **monetary policy**, a central bank’s control over the money supply and interest rates, to dampen inflation or to stimulate growth. This chapter explores how both approaches are used to stabilize the economy.

Like a broken-down car in need of a mechanic, the U.S. economy sometimes needs help from the Federal Reserve to get it going again. During times of economic slowdown, the Fed can use monetary policy—its control over the money supply and interest rates—to help stimulate the economy.

14.2 What Are the Origins of Modern Fiscal and Monetary Policy?

Before the 1930s, the federal government rarely intervened in the economy, during good times or bad. The Great Depression, however, caused such widespread misery that when running for president in 1932, Franklin Delano Roosevelt promised he would no longer be bound by this hands-off approach. “I pledge you, I pledge myself,” FDR said, “to a new deal for the American people.” But just what this “new deal” should be and how it would end the Depression was not clear.

Classical Economics and the Role of Government

When the Depression began, most U.S. economists belonged to a school of thought known as **classical economics**. Begun by Adam Smith, classical economics focused on the decisions of producers and consumers in a free market. Recessions were thought to be caused by events outside the market, such as wars and crop failures. Given time, the market would adjust and return to equilibrium.

Classical economists believed that the government’s role in the economy should be minimal. Fiscal policy should focus on keeping taxes and spending low and balancing the federal budget. In their view, every tax dollar spent by the government was one less dollar spent by producers or consumers to stimulate business activity. The government’s borrowing to fund a budget deficit only made matters worse by sucking still more money out of the private sector.



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Roosevelt, like most politicians, accepted these views when the Depression began. During the 1932 presidential campaign, he blasted his opponent, President Herbert Hoover, for running a budget deficit. If elected, FDR promised to balance the federal budget. After taking office, he launched a flurry of new programs to get the economy moving again. But he never gave up trying to balance the budget—at least not until he encountered the ideas of a British economist named John Maynard Keynes.

The Revolutionary Ideas of John Maynard Keynes

Keynes looked at economics in a different way. Instead of focusing on the role of individuals in the marketplace, he studied the economy as a whole. In his landmark work, *The General Theory of Employment, Interest, and Money*, Keynes sought to explain why economies experience crises like a depression. He also discussed how political leaders could end the Great Depression and avoid similar crises in the future.

Keynes's basic idea was simple. During a recession, overall demand for goods and services decreases because people who are out of work stop spending. In response, businesses cut expenses and lay off workers. Some businesses even close their doors. When that happens, more people lose their jobs, depressing demand still further. The result is a downward economic spiral.

The fastest way to break that downward spiral, Keynes argued, is for political leaders to use fiscal policy to increase overall demand. This increase could be achieved by cutting taxes, which would leave people with more money to spend, or it could be done by boosting government spending. To be effective, however, increased government spending should be financed by borrowing money rather than by raising taxes. Higher taxes would only take more money out of consumers' pockets.

Taken together, these ideas form the basis of **Keynesian economics**. This school of thought holds that government intervention in the economy is the best way to ensure economic stability. If total spending by individuals and businesses is not enough to stimulate economic growth, then the government should step in to increase demand. Rising demand stimulates production. More production puts people back to work, so the economy begins growing again.



The British economist John Maynard Keynes was so influential that an entire school of economic theory bears his name. He argued that during economic downturns, governments should increase spending to shore up overall demand. Once revolutionary, the idea of fiscal stimulus is now widely accepted.

Although widely accepted today, Keynes's ideas were revolutionary in the 1930s. He rejected the view of classical economists, who believed that in the long run, the Depression would run its course and the economy would grow on its own. "This *long run* is a misleading guide to current affairs," Keynes observed. "*In the long run we are all dead.*"

Using Fiscal Policy to End the Depression

In the early years of the Depression, Keynes had a hard time convincing political leaders to try out his ideas. He even paid a personal visit to Roosevelt in 1934, urging him to do more deficit spending to increase overall demand in the economy. **Deficit spending** occurs when a government spends more money than it collects in revenue. To finance such spending, governments often borrow money by selling bonds.

When Roosevelt came out of his meeting with Keynes, he was more confused than convinced. "He left a whole rigmarole of figures," the president complained to his secretary of labor. "He must be a mathematician rather than a political economist."

By 1938, however, Roosevelt was desperate. Despite his efforts to spark a recovery with government spending on public works and job-creation programs, the Depression was deepening again.



Between 1933 and 1944, President Franklin Roosevelt delivered a series of 30 radio broadcasts. He often used these “fireside chats” to explain and urge support for his New Deal economic programs. Letters poured into Washington after each broadcast, putting pressure on lawmakers to enact the president’s proposals.

Reluctantly, FDR gave up trying to balance the budget and decided to give Keynes’s ideas a try. “We suffer primarily from a failure of consumer demand because of lack of buying power,” FDR said in a radio broadcast to the nation. “It is up to us [the government] to create an economic upturn.”

Roosevelt went on to propose a multibillion-dollar spending program, much of it to be funded by borrowed money, but even then, the economy was slow to respond. Only with the onset of World War II did the federal government pump enough money into the economy to end the Depression. Between 1939 and 1945, the federal budget deficit soared from under \$3 billion to more than \$47 billion. At the same time, the unemployment rate dropped from 17 to 2 percent, while the nation’s gross domestic product (GDP) almost doubled.

Postwar Economic Policy: “All Keynesians Now”

Keynes died a year after World War II ended, but his ideas lived on in the Employment Act of 1946, which called on the federal government to keep the economy from sliding back into recession. The act did not specify how that was to be accomplished, but by then, most economists agreed with Keynes that the government could and should use its power to stabilize the economy.

Keynesian economics was put to the test in the early 1960s, when growth slowed and unemployment began to rise. To halt the downward slide, President John F. Kennedy called on Congress to stimulate demand by cutting taxes. In an address laying out his plan, the president declared,

The . . . best means of strengthening demand among consumers and business is to reduce the burden on private income . . . imposed by our present tax system . . . Too large a tax cut, of course, could result in inflation and insufficient future revenues—but the greater danger is a tax cut too little, or too late, to be effective.

—John F. Kennedy, Address to the Economic Club of New York, Dec. 14, 1962

“I gave them straight Keynes,” Kennedy later said of this speech, “and they loved it.”

Kennedy was assassinated before Congress took action on his tax proposal, but when finally enacted in 1964, the Kennedy tax cuts sparked a long period of economic expansion. Unemployment declined, just as Kennedy had hoped. At the same time, however, inflation began to rise.

By the end of the 1960s, the idea that the government could use fiscal policy to fine-tune the economy to keep it balanced between inflationary booms and high unemployment busts was widely accepted. Even Richard Nixon, who had campaigned against “runaway government” in 1968, would proclaim after being elected president, “We are all Keynesians now.”

Milton Friedman and the Rise of Monetarism

Within a few years, however, cracks began to appear in the Keynesian consensus. One of the most influential critics of Keynes was an American economist named Milton Friedman. Like Keynes, Friedman lived through the Great Depression, but he had a very different explanation for its causes and cure. Along with his coauthor Anna Schwartz, he laid out this explanation in *A Monetary History of the United States, 1867–1960*, published in 1963.

Friedman and Schwartz argued that the Depression was caused less by a lack of demand than by a drop in the money supply. As Figure 14.2A shows, between 1929 and 1933, the amount of money in the economy dropped sharply as banks failed and wiped out the accounts of depositors. As the money

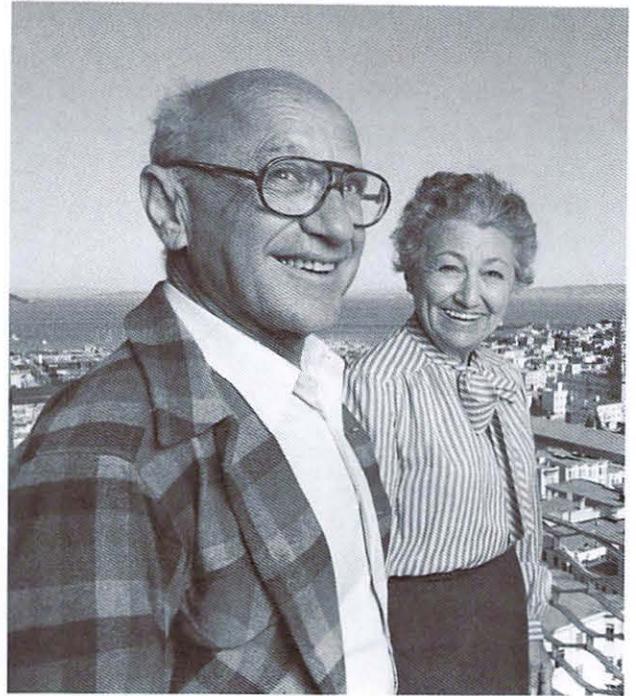
supply shrank, people hoarded what dollars they had. Friedman and Schwartz called the result the “great contraction,” a period of falling prices, rising unemployment, and declining incomes.

The cure, in their view, lay not in fiscal but in monetary policy. The Federal Reserve should have reacted to the crisis, the economists argued, by expanding the money supply. Later in this chapter, you will read how this expansion is done. With more money in circulation, spending would have picked up and the economy would have started to grow again. As Friedman would later write,

The Fed was largely responsible for converting what might have been a garden-variety recession, though perhaps a fairly severe one, into a major catastrophe. Instead of using its powers to offset the depression, it presided over a decline in the quantity of money by one-third from 1929 to 1933 . . . Far from the depression being a failure of the free-enterprise system, it was a tragic failure of government.

—Milton and Rose Friedman,
Two Lucky People, 1998

Friedman’s ideas about the importance of the money supply and monetary policy became the basis for the school of economic thought known as monetarism. According to **monetarism**, changes in the money supply play a primary role in the



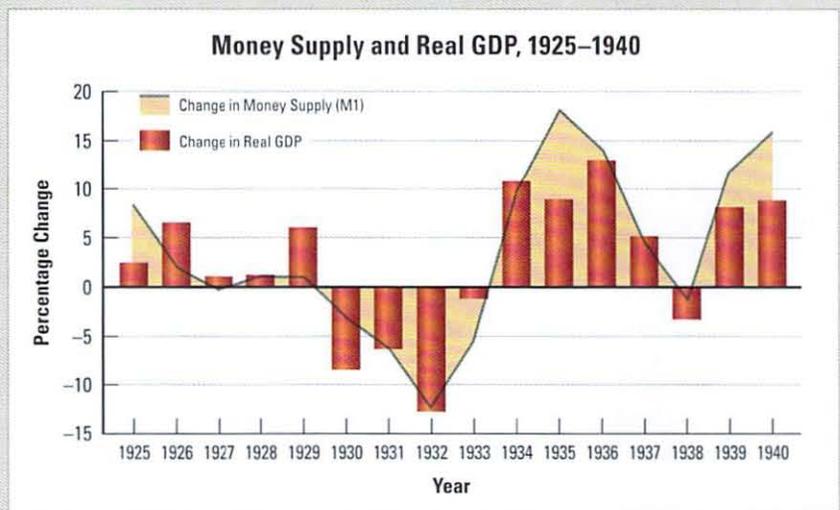
Milton Friedman was one of the early recipients of the Nobel Prize for Economics, a recognition of his many contributions to the field. He is best known for his work on monetarism. With his wife Rose, Friedman created a television series on economics called *Free to Choose*.

ups and downs of the economy. If the money supply grows too rapidly, inflation results. With more money in their pockets, consumers demand more goods and services than firms can supply, driving

Figure 14.2A

Analyzing the Relationship Between the Money Supply and Economic Growth

Milton Friedman argued that the Federal Reserve turned a recession into a depression by allowing the money supply to contract sharply between 1929 and 1932. The line graph shows changes in the money supply during Depression years. The bars show the rate of change in real gross domestic product (GDP). What relationship do you see between the two measures?



Source: U.S. Census Bureau.

prices up. If the money supply grows too slowly, deflation results, and spending and investment slow. Therefore, the goal of monetary policy should be to increase the money supply just fast enough to keep up with economic growth—but no faster.

Friedman died in 2006, but as with Keynes, his ideas have influenced a generation of economists. In a 2002 speech honoring the economist on his 90th birthday, Ben Bernanke, then a member of the Board of Governors of the Federal Reserve System,

recognized Friedman’s many contributions to economics. Bernanke concluded with this pledge:

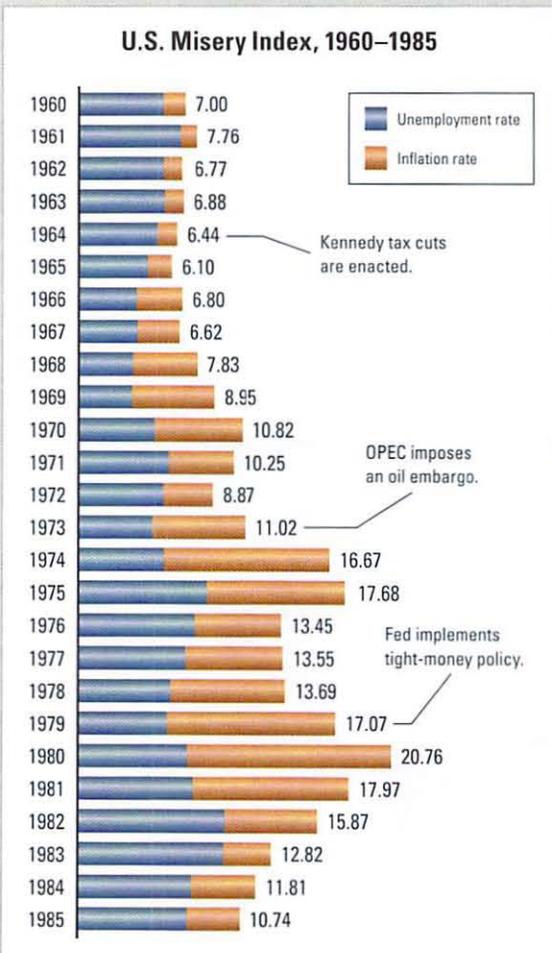
Let me end my talk by abusing slightly my status as an official representative of the Federal Reserve. I would like to say to Milton and Anna: Regarding the Great Depression. You’re right, we did it. We’re very sorry. But thanks to you, we won’t do it again.

—Ben Bernanke, Nov. 8, 2002

Figure 14.2B

Analyzing the Misery Index

The misery index is the unemployment rate added to the inflation rate. Economists studying this index have observed that crime rates tend to rise and fall along with the combined inflation and unemployment rates. As you can see, the index rose throughout the 1970s and peaked in 1980.



Source: www.miseryindex.us.

Using Monetary Policy to Fight Stagflation

The use of monetary policy to stabilize the economy was put to the test in the late 1970s. Early in that decade, the economy received a shock when the Organization of the Petroleum Exporting Countries (OPEC) imposed an oil embargo on the United States and other oil-importing countries. Supplies of oil dwindled, driving up the price of gas. The inflation rate, which had already reached worrying levels, soared into double digits. As the economy struggled with rising prices, business activity slowed, and the unemployment rate climbed. The result was an unhappy economic situation known as **stagflation**.

President Nixon tried to curb inflation by imposing temporary controls on wages and prices. As soon as the controls were lifted, however, prices shot up again. In 1974, President Gerald Ford launched an anti-inflation crusade called Whip Inflation Now, or WIN, but inflation remained a problem. While running for president in 1976, Jimmy Carter scolded Ford for letting the “misery index” rise to more than 13 percent. The **misery index** is the sum of the inflation and unemployment rates. After taking office, Carter watched helplessly as the index climbed to more than 20 percent.

In 1979, President Carter appointed Paul Volcker as chair of the Federal Reserve Board to bring inflation under control. Influenced by Friedman’s writings on monetary policy, Volcker set out to slow the growth of the money supply. The result of his slow-growth policy was a far faster reduction in the inflation rate than most economists thought possible. Inflation dropped from 13.6 percent in 1980 to 3.2 percent in 1983.

This achievement was not without costs, however. During this same period, interest rates soared to historic highs. With the cost of borrowing so high,

business activity plummeted and unemployment reached almost 11 percent—its highest rate since the Great Depression.

The Focus of Fiscal and Monetary Policy Today

Over the past half-century, mainstream economists have come to view both fiscal and monetary policy as useful in managing the economy. Since the end of World War II, both have been used with some success to, as economists put it, “tame the business cycle.”

In an ideal world, policymakers using fiscal and monetary policy would keep the economy growing steadily, while keeping inflation and unemployment low. In the real world, the economy still follows the ups and downs of the business cycle, but there is much that can be done to alleviate the worst effects.

14.3 What Tools Does Fiscal Policy Use to Stabilize the Economy?

Fiscal policy consists of decisions made by the government regarding how much money to spend and how much to collect in taxes. At the national level, Congress makes these decisions based on recommendations from the president. Fiscal policy is used to pursue a

number of economic goals. These goals include low unemployment, stable prices, and economic growth. The tools that fiscal policymakers use to achieve those goals are aimed at expanding or contracting economic activity.

How Taxes and Spending Expand or Contract the Economy

Early in 2008, Congress enacted an economic stimulus bill in response to worries that the economy was sliding into a recession. More than 130 million households received stimulus checks that year. Payments in the form of a tax rebate—a return of tax money to taxpayers—began at \$300 for a single person and rose from there, depending on the size of each family. President George W. Bush described the stimulus as “a booster shot for our economy.”

Stimulus checks are just one tool the government can use as part of an **expansionary fiscal policy**. The goal of this policy is to promote economic activity by increasing government spending, cutting taxes, or both. These tools can be used to help businesses grow—for example, by increasing government spending on goods and services. Or they can be aimed at boosting consumer spending, which was the purpose of sending Americans stimulus checks.

Key Concept

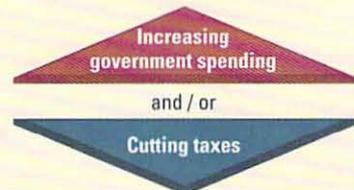
Fiscal Policy Tools

When the federal government follows an expansionary fiscal policy, it increases spending or cuts taxes. Both actions put money into the economy, increasing overall demand. When the government follows a contractionary policy, it cuts spending or raises taxes. Both actions pull money out of the economy, decreasing overall demand.



Expansionary Fiscal Policy

The goal of this policy is to increase economic activity by



Contractionary Fiscal Policy

The goal of this policy is to decrease economic activity by



In contrast, the goal of a **contractionary fiscal policy** is to cool an overheated economy. When buyers demand more goods and services than the economy can produce, overall prices tend to rise. When this happens, Congress can use the same tools to dampen excessive demand. That is, Congress can cut government spending, increase taxes, or both. As demand drops, prices tend to stabilize.

Using Tax Cuts to Stimulate Growth

In the early 1980s, a debate arose over how tax cuts might best be used to encourage economic growth. On one side of the debate were supporters of Keynesian economics. This school of thought is also known as **demand-side economics**. Demand-siders believe that the best way to deal with a sluggish economy is to stimulate overall demand by cutting individual income taxes. As consumers spend their tax savings on goods and services, business will pick up and the economy will begin to grow.

On the other side of the debate were advocates of a theory called **supply-side economics**. Supply-siders

hold that the best way to deal with an economic slowdown is to stimulate overall supply. This can be done by cutting taxes on businesses and high-income taxpayers. As businesses and investors use their tax savings to expand production, the supply of goods and services will increase, spurring economic growth.

Inspired by supply-side theories, President Ronald Reagan pushed for major tax cuts in 1981. In response, Congress lowered the corporate income tax rate at the highest bracket from 48 to 34 percent. It also slashed the top marginal income tax rate from 70 to 28 percent over the next seven years.

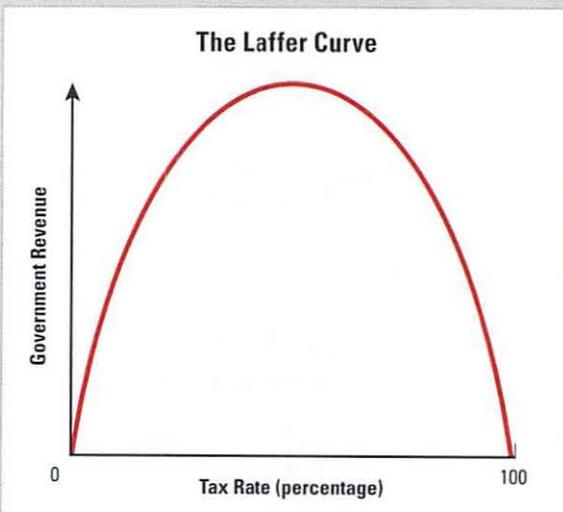
Critics of the Reagan tax cuts argued that the cuts would starve the government of needed revenue. In response, supply-siders claimed that the tax cuts would actually increase, not reduce, tax revenues. They supported their claim with a U-shaped graph, known as the **Laffer curve**. Popularized by economist Arthur Laffer, the graph shows a theoretical relationship between tax rates and tax revenues. As shown in Figure 14.3A, the Laffer curve suggests that increasing taxes beyond a certain point may lower revenue. Likewise, cutting taxes at that point may increase revenues.

The results of the Reagan tax cuts were mixed. Over the next few years, the economy grew, just as supply-siders had predicted. Tax revenues also increased, though less rapidly than had been hoped. As a result, budget deficits grew and the federal debt ballooned, just as supply-side critics had feared. Today, economists generally accept that both demand-side and supply-side approaches should be considered when developing fiscal policy.

Figure 14.3A

Analyzing the Laffer Curve

The Laffer curve illustrates a theoretical relationship between marginal income tax rates and tax revenues collected by the government. As tax rates rise from a low of 0 percent, government revenues rise as well, but at some point, revenues start to fall as tax rates discourage people from working harder to earn more income. The curve does not tell us, however, just where that turning point is.



How the Multiplier Effect Expands the Impact of Government Spending

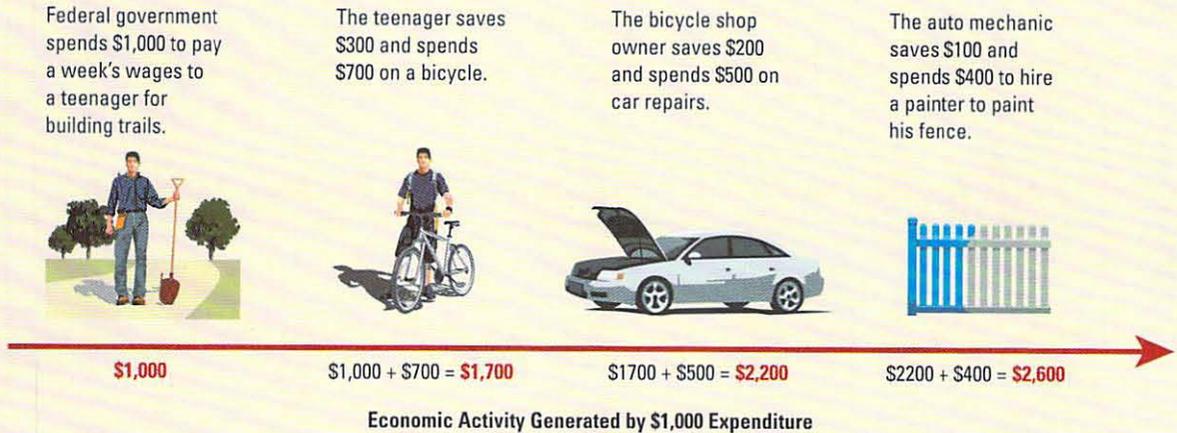
When the government spends money on goods and services, the impact on the economy is generally greater than the amount of money spent would suggest. The reason is that each dollar spent encourages still more spending, sending a ripple of economic activity through the economy. Economists call this rippling action the **multiplier effect**.

To see how the multiplier effect works, we will look at what happens when a government decides to hire teenagers to build trails in a local park. Suppose one of those teenagers is paid \$1,000 for a week's work and decides to put 30 percent, or \$300, in the bank.

Key Concept

The Multiplier Effect

The multiplier effect explains how money spent by an individual or a government generates additional economic activity as it moves through the economy. As the money passes from one person to another, each dollar of original spending encourages still more spending, benefiting a wider circle of people and creating more overall demand.



He spends the remaining \$700 on a bicycle. That \$700 now becomes the bike shop owner's income.

Now suppose the bike shop owner spends \$500 of that income on car repairs. That \$500 becomes income to the auto mechanic. The mechanic saves \$100 and uses the other \$400 to hire someone to paint his fence. And so it goes, with the original \$1,000 spent by the government rippling through the economy from one person to the next. Each time the money changes hands, some of it is spent again, creating more overall demand.

The multiplier effect works two ways. It can help the economy grow when the government increases spending. Or it can slow economic growth when the government cuts spending. Consider, for example, the impact of a cut in government spending on highways. Construction firms that depended on highway projects would lay off workers. The laid-off workers would cut back on spending. Local businesses would see their sales drop. In this way, a reduction in government spending sends ripples through the economy, reducing demand by some amount along the way.

How Automatic Stabilizers Smooth Out the Business Cycle

Congress increases or cuts highway spending as part of its discretionary spending budget. However, discre-

tionary spending accounts for only about one-third of the federal budget. The other two-thirds is devoted to mandatory spending. Mandatory spending includes transfer payments, such as Social Security benefits. These transfer payments, along with taxes, can act as automatic stabilizers. An **automatic stabilizer** helps counter the ups and downs of the business cycle without requiring policymakers to take any action.

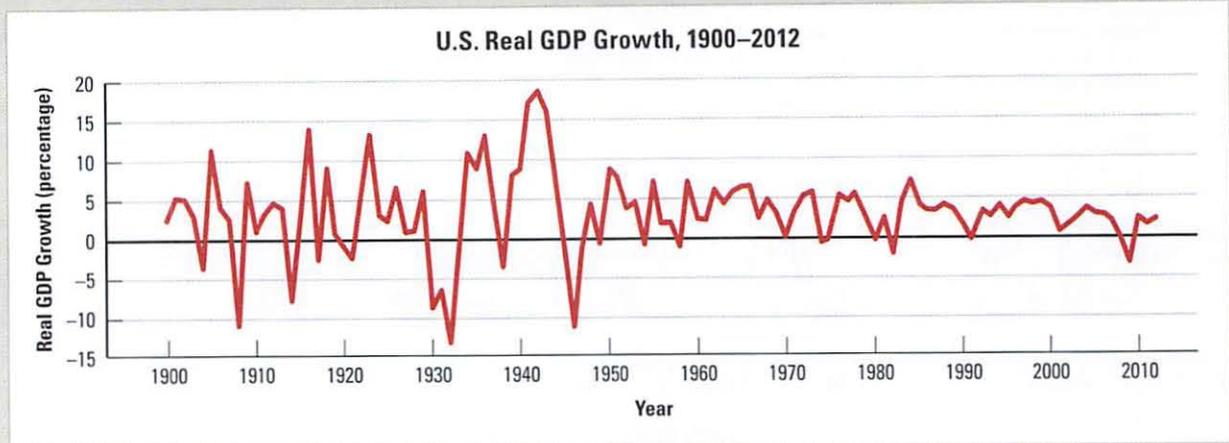
Automatic stabilizers work by increasing or decreasing overall demand. Suppose, for example, the economy enters a slowdown. As people spend less, demand for goods and services drops. Businesses respond by laying off workers or reducing their wages. As workers' earnings decline, many of them slip into lower federal income tax brackets. In the lower brackets, their tax bills go down at a faster rate than their incomes. This "tax cut" softens the impact of their reduced wages. Workers spend the money they save in taxes on goods and services, keeping the slumping economy from getting even worse.

Transfer payments also help boost demand during a downturn. As workers are laid off, many become eligible for unemployment benefits. Applications for food stamps and welfare payments also increase. By putting money in people's pockets, these payments encourage spending and keep demand from dropping as rapidly as it otherwise would.

Figure 14.3B

Analyzing the Effect of Automatic Stabilizers on the Business Cycle

Taxes and government transfer payments rise and fall with the business cycle. Since the end of World War II, these automatic stabilizers, combined with discretionary fiscal actions, have worked to limit the ups and downs of the economy. You can see their effect in this graph, which shows the growth of the gross domestic product since 1900.



Source: www.measuringworth.com.

Just the opposite happens during upswings in the economy. As earnings rise, wage earners move into higher tax brackets. With more of each additional dollar earned going to taxes, spending cannot rise as fast as wages. This slowing of consumer spending helps stabilize demand. In addition, as employment picks up, the number of people needing transfer payments drops. Government spending declines, just as it would have had Congress deliberately adopted a contractionary fiscal policy.

By themselves, these automatic stabilizers do not have the power to end economic expansions and contractions. But as Figure 14.3B suggests, they may help smooth out the highs and lows of the business cycle.

14.4 What Tools Does Monetary Policy Use to Stabilize the Economy?

Monetary policy consists of decisions made by a central bank about the amount of money in circulation and interest rates. In the United States, the Federal Reserve makes such decisions. Earlier you read about the Federal Reserve's role in overseeing the nation's banking system. The Fed also uses its control of monetary policy to help the economy grow steadily with full employment and stable prices. However,

unlike Congress, which controls fiscal policy, the Fed is not an elected body. It has the power to make decisions on its own without the approval of either Congress or the president.

The Structure of the Federal Reserve System

In creating a central bank, Congress gave the Federal Reserve enough power to act independently in monetary policy. At the same time, the Fed's structure ensures that its decisions take into account the needs and interests of all parts of the country.

A seven-member Board of Governors based in Washington, D.C., heads the Federal Reserve System. The rest of the country is divided into 12 Federal Reserve districts. One Federal Reserve Bank operates in each district. These regional Federal Reserve Banks oversee the activities of national and state-chartered banks in their districts. Figure 14.4A shows the 12 districts and their Federal Reserve Banks.

Members of the Board of Governors are appointed by the president and confirmed by the Senate to 14-year terms of office. Once confirmed, a member is limited to one term. In making appointments, the president is directed by law to select a "fair representation of the financial, agricultural, industrial, and commercial interests . . . of the country." To ensure geographic representation, only one

member may come from any one of the 12 Federal Reserve districts.

The president also selects one board member to chair the board for a four-year term. Ben Bernanke, who joined the Board of Governors in 2002, became its chairperson in 2006. President George W. Bush chose him for the position, but he was also renominated by President Barack Obama in 2009 after Bernanke's first term as chairperson ended. The chairperson serves as the primary spokesperson for the Fed, both with Congress and with the public.

The Board of Governors is responsible for the overall direction of monetary policy and for supervising the banking system. The board also publishes a wealth of statistics about the U.S. economy.

In addition, all board members serve on the powerful Federal Open Market Committee. The FOMC includes 5 of the 12 Federal Reserve Bank presidents as well. The president of the New York Federal

Reserve Bank is always on the FOMC, in recognition of New York City's status as the country's financial center. The other Federal Reserve Bank presidents rotate to fill the four remaining slots.

The FOMC holds eight regularly scheduled meetings each year to assess the state of the economy. At these meetings, the committee examines a wide range of economic indicators. From this information, it determines what changes, if any, the Fed should make in its monetary policy. As with fiscal policy, the decisions of the Fed may be expansionary or contractionary in their effects.

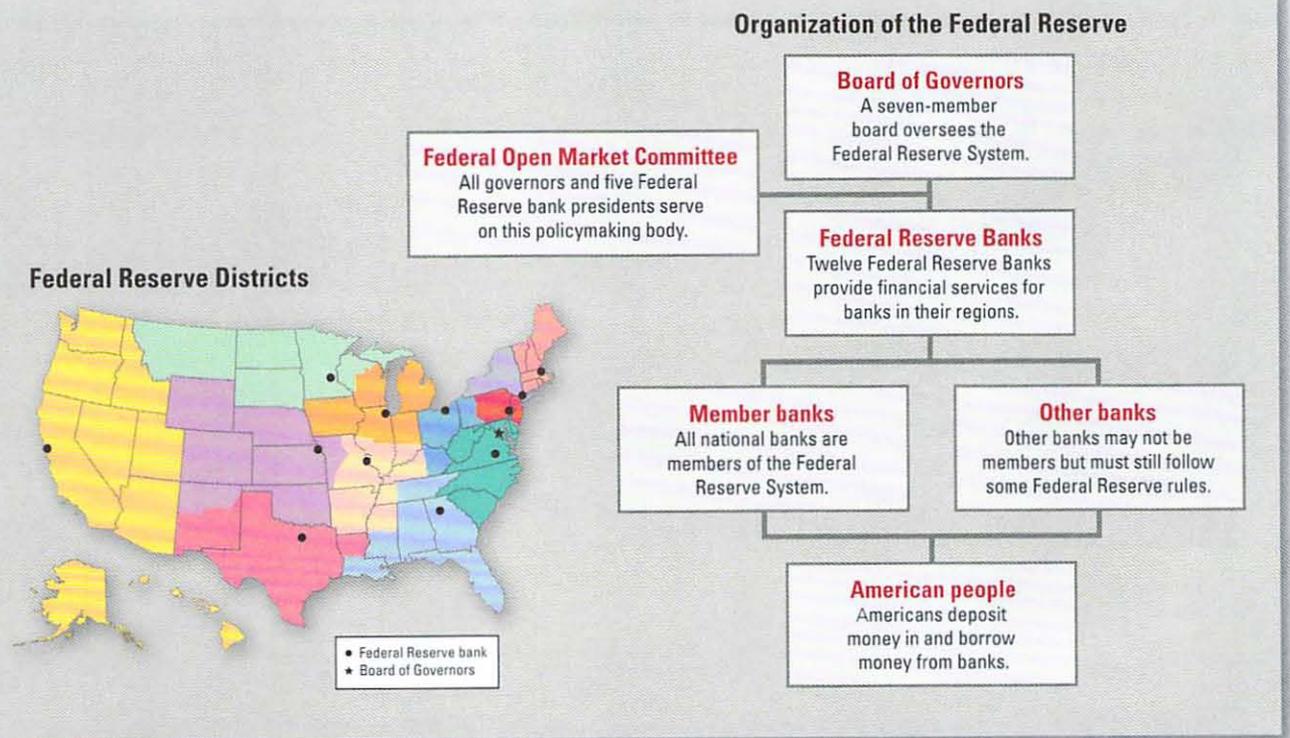
Fighting Recession and Inflation with Monetary Policy

The Fed adopts an expansionary monetary policy when it believes the economy is in danger of sliding into a recession. Also known as an **easy-money policy**, an expansionary monetary policy is intended to speed the growth of the money supply. As the amount of

Figure 14.4A

Mapping the Federal Reserve System

The Federal Reserve System serves as this nation's central bank. It is structured in a manner that ensures representation from different parts of the country on its Board of Governors and on the Federal Open Market Committee. Note the concentration of Federal Reserve districts and banks in the eastern half of the country. This pattern reflects the distribution of the population in 1913, the year the system was established.

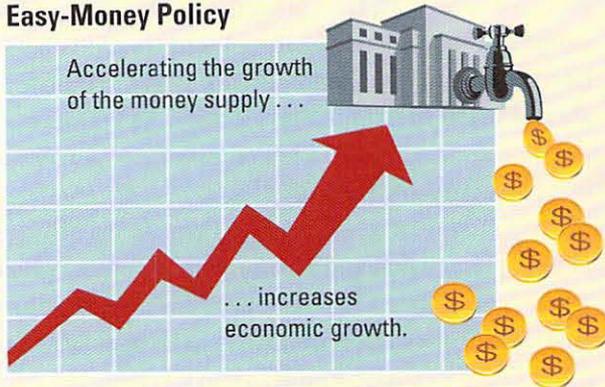


Key Concept

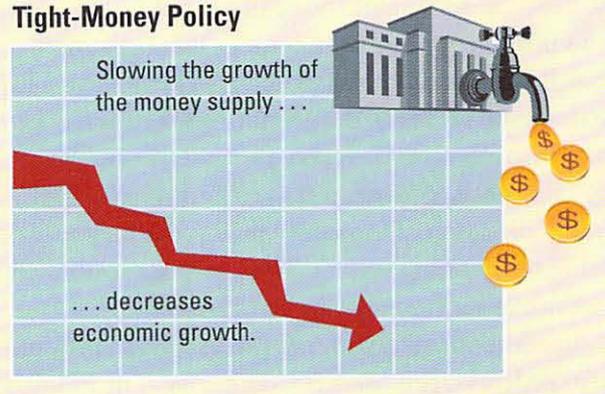
Easy-Money vs. Tight-Money Policies

The Federal Reserve follows an easy-money policy to encourage economic growth and thus lower the unemployment rate. The Fed adopts a tight-money policy in an effort to slow economic growth and thus decrease the inflation rate.

Easy-Money Policy



Tight-Money Policy



money flowing into the economy increases, interest rates drop and borrowing becomes cheaper and easier. With loans easier to get, households and firms spend more on goods and services. Demand increases, leading to more production, stronger economic growth, and a drop in the jobless rate.

On the other hand, the Fed pursues a contractionary monetary policy when rising prices threaten to trigger an inflationary wage-price spiral. Also known as a **tight-money policy**, a contractionary policy is intended to slow the growth of the money supply. With less money flowing into the economy, interest rates rise and

Figure 14.4B

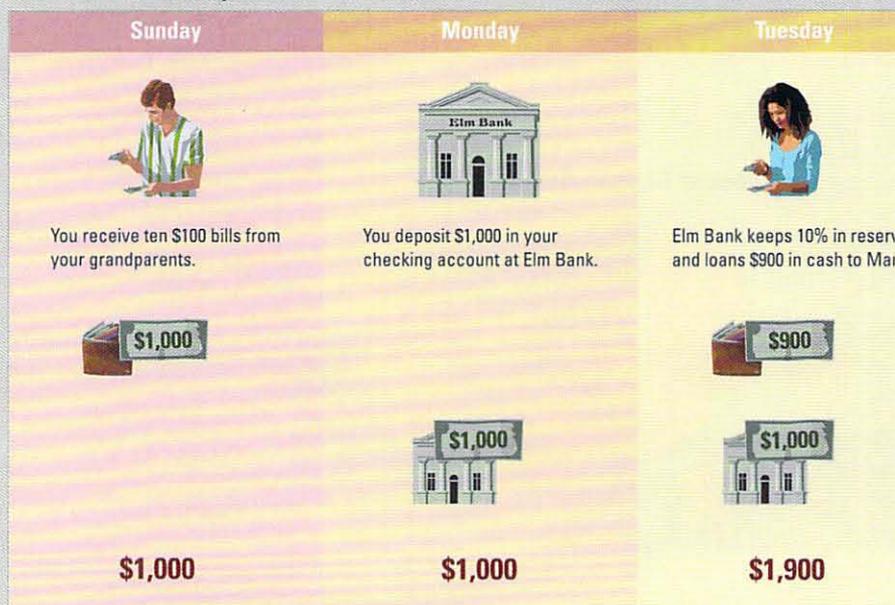
Analyzing How Banks Create Money

Banks create money by using the deposits in checking accounts to make loans. This illustration shows how the money-creation process works, starting with a gift of \$1,000.

- Notice that each time a bank receives a deposit, it keeps 10 percent in reserve and loans out the rest.
- Remember that the money supply includes both currency in circulation and deposits in checking accounts.



One Week of Money Creation



loans become costlier and harder to get. Households and firms cut back on borrowing as well as spending. Demand shrinks, leading to less production, weaker economic growth, and a drop in the inflation rate.

How Banks Create and Destroy Money

To understand how the Fed regulates the money supply, we need to look at how banks create or destroy money. Banks are in the business of taking in money from depositors and using it to make loans. They make their profit from the interest they charge on those loans. However, because of the **reserve requirement**—the regulation that banks must keep a certain percentage of deposits on hand to repay depositors—banks cannot loan out all the money they take in. They must hold some cash in their vaults or on deposit in a Federal Reserve Bank as a reserve fund.

Because it is not readily available for use, money held in reserve by banks is not considered part of the M1 money supply. M1 is the most common measure of the amount of money circulating in an economy. It includes all bills and coins in use, as well as traveler’s checks and money in bank checking accounts.

When you deposit money in a bank account, it goes into the bank’s reserves along with everyone

else’s deposits. Your account is credited with the amount of your deposit, which becomes part of the money supply. The bank can then loan the portion of your deposit that is not required to remain in reserve to someone else. The money loaned may be used to buy goods or services. Or it may end up in the borrower’s checking account. Either way, that money is now also part of the M1 money supply. In this sense, the bank has “created” money by making a loan.

The reverse happens when a borrower repays a bank loan. The money used to pay off the loan leaves the borrower’s checking account and goes back into the bank’s reserves. As the borrower’s checking account shrinks, the money supply also shrinks. In this sense, paying off a bank loan “destroys” money—at least until the bank loans that money out again.

The Federal Reserve can speed or slow money creation by making it easier or harder for banks to make loans. Whether its goal is to increase or decrease the money supply, the Fed uses the same three tools: open-market operations, the reserve requirement, and the discount rate. Of these, open-market operations are the most important.



The Fed's Most-Used Tool: Open-Market Operations

The Federal Reserve can inject money into the economy or pull it out using open-market operations. An open market is a market that is open to all buyers and sellers. The Fed's **open-market operations** involve the buying and selling of government securities in the bond market. The securities can be Treasury bonds, notes, bills, or other government bonds.

The decision to expand or contract the money supply in this way is made by the FOMC. When the FOMC adopts an easy-money policy, it instructs the Fed's bond traders to buy government securities. Every dollar the Fed pays for bonds increases the money supply.

When the FOMC adopts a tight-money policy, its bond traders sell securities in the bond market. The public pays for these bonds with cash or money taken out of banks. As this money goes out of circulation, the money supply shrinks. Moreover, because banks end up with smaller deposits, they have less money to lend, which also slows the growth of the money supply.

Open-market operations are relatively easy to carry out. They allow the Fed to make small adjustments in the money supply without new laws or banking regulations. For these reasons, the sale and purchase of securities is the monetary tool the Fed uses most to stabilize the economy.

The Fed's Least-Used Tool: The Reserve Requirement

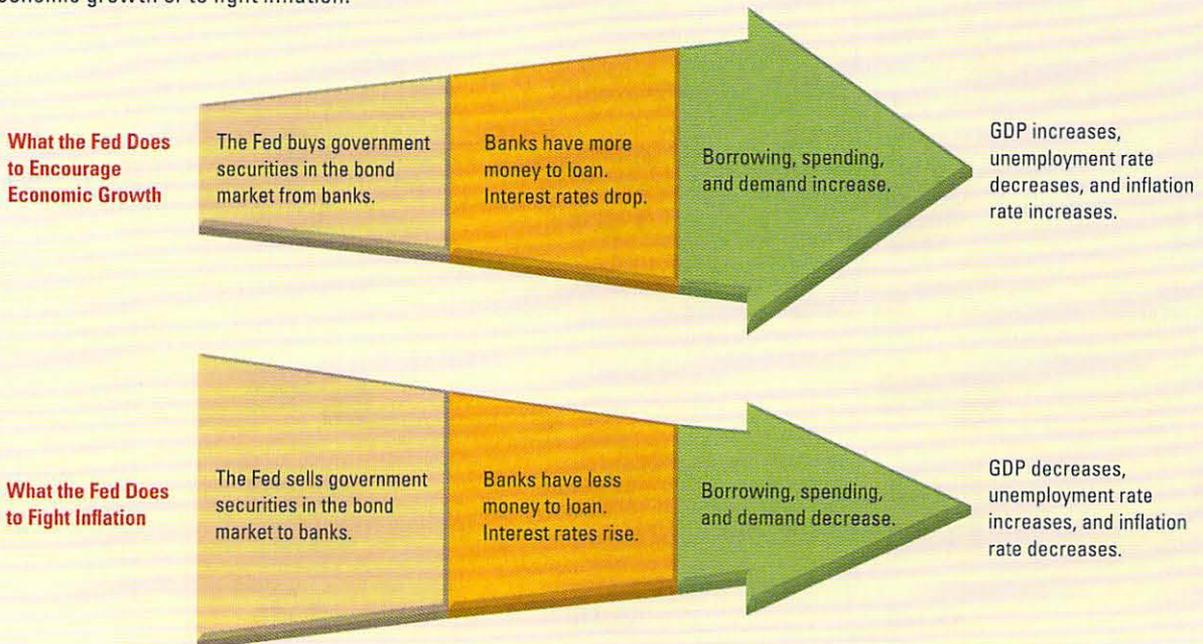
The Fed's least-used monetary tool is its power to set the reserve requirement for banks. The Fed's Board of Governors could expand or contract the money supply by adjusting the **required reserve ratio**. This ratio is the minimum percentage of deposits that banks must keep in reserves at all times. Lowering the ratio would allow banks to make more loans and create more money. Raising the reserve ratio would force banks to keep more cash in reserve and out of the money supply. This, in turn, would leave banks with less money to lend, slowing money creation.

In practice, changes in the required reserve ratio are infrequent—and for good reason. Think about what a change in the requirement might mean for

Key Concept

Open-Market Operations

The Federal Reserve buys and sells government securities in the bond market to expand or contract the money supply. This diagram shows how these open-market operations ripple through the economy in an effort either to encourage economic growth or to fight inflation.



banks. A lower percentage might not be a problem. Banks would be happy to have more money to lend. To meet a higher ratio, however, a bank would have to scramble for extra cash. It could borrow the needed money, but it would have to pay interest on the loans. Or the bank could refuse to renew loans as they come due. To avoid these negative impacts, the Fed seldom uses reserve requirements as a tool of monetary policy. For many years, the reserve requirement ratio has been 3 or 10 percent, depending on the amount of a bank's deposits.

The Fed's Third Tool: The Discount Rate

Even when the reserve requirement remains stable, banks sometimes need to borrow money to keep their reserves at the proper level. This might happen because a bank has made too many loans. Or it could be a result of unexpectedly large withdrawals. Whatever the reason, banks can borrow money from a Federal Reserve Bank to shore up their reserves. The interest rate on such loans, known as the **discount rate**, is the last tool in the Fed's toolbox.

The Federal Reserve Board of Governors controls the discount rate. A low rate makes it less costly for banks to borrow from the Fed. Banks can then use that money to make loans to customers, thereby expanding the money supply. Raising the discount rate has the opposite effect by discouraging banks from borrowing from the Fed. With money tight, banks make fewer loans, keeping the money supply in check.

Unlike the reserve requirement, the discount rate changes frequently over time. Between 1990 and 2013, it ranged from a high of 7.0 percent to a low of 0.50 percent. Whatever the rate, banks usually view the Federal Reserve as a lender of last resort. Borrowing from the Fed, they worry, may send a signal that the bank is in trouble.

Instead, banks generally borrow the funds they need from other banks. Knowing this, the Fed does not use the discount rate as its principal tool for managing interest rates. Instead, it targets the rate that banks charge one another for loans.

Targeting the Federal Funds Rate

When the Fed makes news, the story is almost never about changes in the money supply or the discount rate. Instead, the report is usually about a change in the **federal funds rate**. This is the rate that banks



The speaker in this cartoon believes that the Federal Reserve should have used its monetary policy tools to keep inflation in check by implementing a tight-money policy. The fact that the hot dog vendor is charging \$25 for a hot dog is a clear sign that inflation is out of control.

charge one another for very short—as short as overnight—loans. Such lending is common between banks with excess reserves and banks that need a quick loan to maintain their required reserves.

Unlike the discount rate, the federal funds rate is not a monetary policy tool. Banks, not the Fed, decide what they charge one another for loans. Still, the Fed has an interest in making sure that the rate banks are charging one another is in line with its general monetary policy. Therefore, the FOMC sets a target for the federal funds rate based on its view of the economy. It then uses open-market operations to nudge the federal funds rate toward that target.

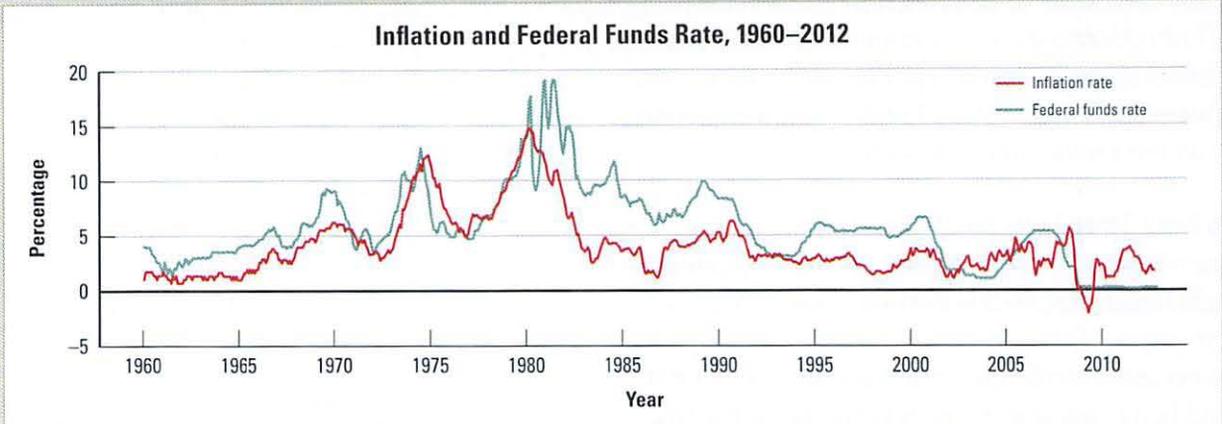
The FOMC focuses on the federal funds rate for two main reasons. First, it is the easiest bank rate for the Fed to change using open-market operations. Second, interest rates on everything from saving accounts and bonds to mortgages and credit cards are affected by the federal funds rate. Thus, a small change in the federal funds rate can have a powerful effect across the entire economy.

As with all of its activities, the Fed has two goals in mind when targeting the federal funds rate. One is

Figure 14.4C

Analyzing the Impact of Interest Rates on Inflation

The Federal Reserve targets the federal funds rate—the rate banks charge to loan each other money—to control inflation. In the early 1980s, Federal Reserve chairman Paul Volcker fought inflation by pushing the federal funds rate up to record highs. You can see the effects of his tight-money policy on this graph.



Sources: Board of Governors of the Federal Reserve System; www.miseryindex.us.

to control inflation, as you can see in Figure 14.4C. The other is to maintain healthy economic growth. Getting the rate right to do both is a challenging task, especially because it can take months for a change to work its way through the economy.

14.5 What Factors Limit the Effectiveness of Fiscal and Monetary Policy?

Despite the best efforts of policymakers, booms and busts still happen. One reason may be that the business cycle is simply a fact of life in a market-based economy. But other factors may also keep fiscal and monetary policy from being as effective as economists would like.

Time Lags Can Complicate Policymaking

At least two types of time lags plague economic policymaking. One lag comes from the time it takes to compile accurate economic data. Early estimates of GDP growth, for example, are often too high or too low. As a result, economists may miss the start of a recession. Only when the indicator is corrected months later does the actual state of the economy become clear. By then, corrective action may be too late to do much good.

Another time lag comes from the time it takes for actions begun today to work their way through the economy. The multiplier effect of federal spending can take months to stimulate or dampen overall demand. After studying efforts to use fiscal policy to combat recessions since World War II, historian Bruce Bartlett concluded,

The history of anti-recession efforts is that they are almost always initiated too late to do any good . . . The enactment of stimulus plans is a fairly accurate indicator that we have hit the bottom of the business cycle, meaning the economy will improve even if the government does nothing.

—Bruce Bartlett, “Maybe Too Little, Always Too Late,” *New York Times*, Jan. 2008

In general, monetary policy can be enacted more quickly than fiscal policy. Even so, a change in interest rates may take six months or more to have an effect on economic output or the inflation rate.

Economic Forecasts Can Mislead Policymakers

To implement economic policy successfully, policymakers must be able to forecast how the economy will behave months or even years into the future. To make such forecasts, economists monitor several economic

indicators. They also use economic models and computer programs to make sense of these data. Based on their models, they make educated guesses about the future. Policymakers use these forecasts to decide what actions to take to head off recessions or fight inflation.

Predicting the future is never easy, and sometimes forecasters guess wrong. An example of a prediction that did not come true occurred in 2001. As the first graph in Figure 14.5A shows, the federal government began that year with a budget surplus. The Congressional Budget Office responded with a report forecasting continued surpluses through 2011. The CBO also predicted that by 2009, the accumulated surplus

would be large enough to pay off the national debt. The second graph in Figure 14.5A shows just how wrong these forecasts turned out to be.

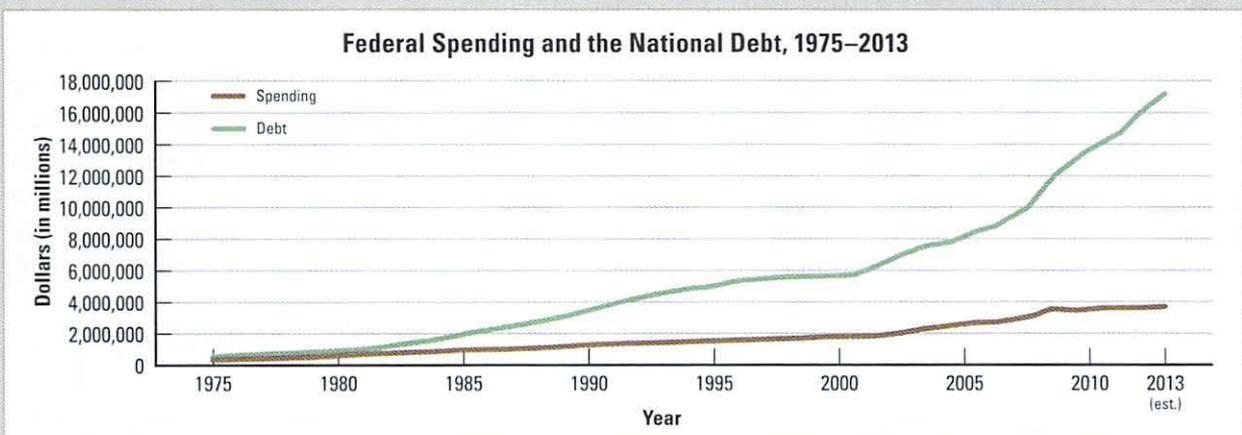
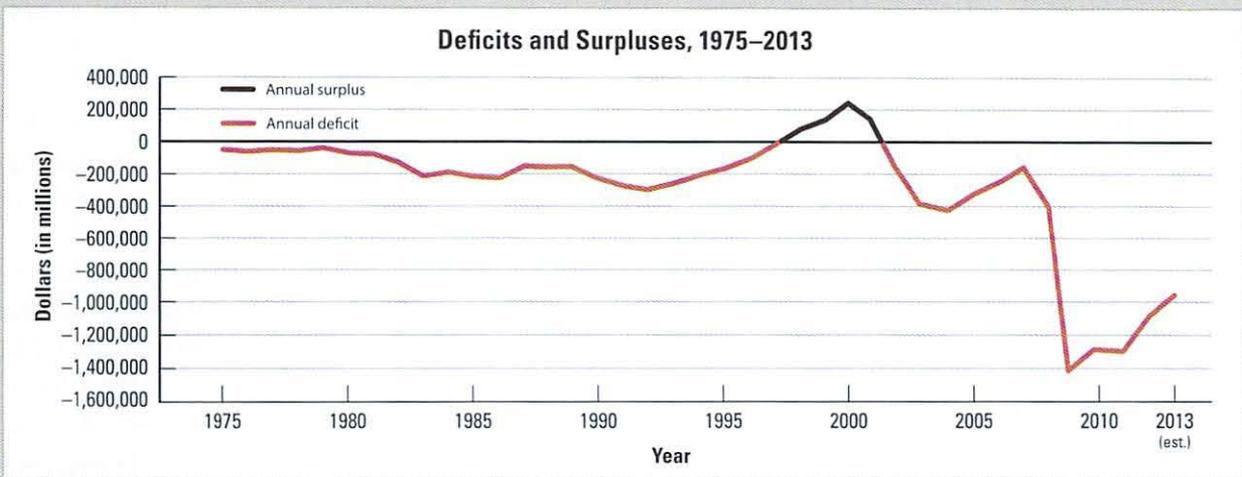
Concerns About the National Debt May Limit Government Spending

Worries about the size of the national debt may also complicate policymaking. When Keynes urged President Roosevelt to increase deficit spending, he did not mean that the federal government should run deficits forever. The result, Keynes realized, would be an ever-increasing national debt. Such a debt would not be in the long-term interests of the economy.

Figure 14.5A

Tracking Federal Budgets and the National Debt

The federal budget is in deficit when spending exceeds tax revenue. It is in surplus when revenue exceeds spending. Every budget deficit adds to the national debt, just as every surplus subtracts from the debt. Since 1975, budget deficits have been the rule, not the exception. As a result, the national debt topped \$16 trillion by early 2013.



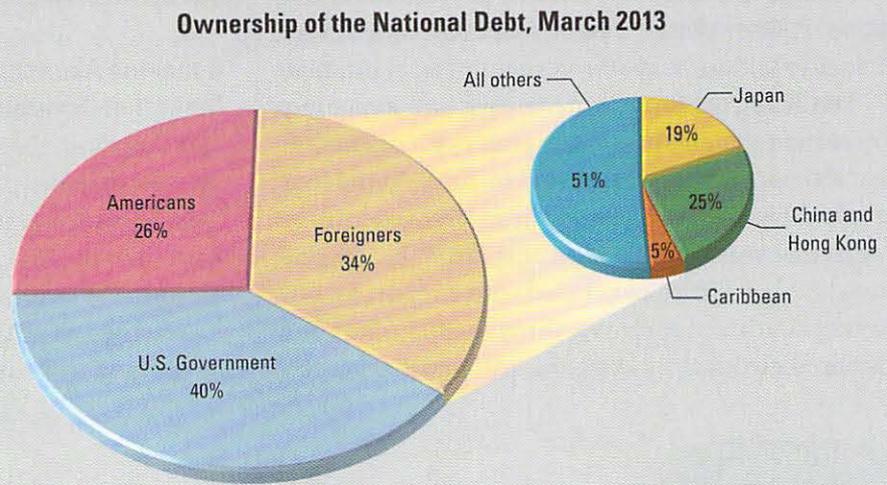
Source: Budget of the U.S. Government FY2014, Historical Tables.

Figure 14.5B

Analyzing Who Owns the National Debt

Economists often describe a portion of the national debt as money we owe ourselves. As this graph shows, however, about one-third of the debt is foreign owned. Some Americans view foreign ownership of U.S. government securities as a sign of confidence in the strength of the U.S. economy. Others worry that the federal government has become too dependent on foreign lenders.

Source: U.S. Treasury.



Instead, most economists advise that deficit spending be limited to times of national emergencies. Such emergencies include wars, natural disasters, and recessions. During good economic times, they say, Congress could run surpluses. These surpluses could then be used to pay down the national debt, balancing the federal budget over time.

That is the theory. Since the 1970s, however, the federal government has generally spent more than it receives in revenue in both good times and bad. The inability of Congress to keep spending under control has led some politicians to call for a constitutional amendment requiring a balanced budget. The Senate approved an early version of such an amendment in 1982. The House approved a later version in 1997.

Meanwhile, deficit spending continues. By January 2013, the national debt had climbed to about \$16 trillion. Each individual's share of that debt amounted to around \$50,000. The size of the national debt has many Americans deeply worried. Listed below are some of their concerns.

Fear of government bankruptcy. Some people worry the national debt will eventually bankrupt the federal government. Most economists, however, doubt that will happen. As long as the government can increase taxes or refinance the debt, it will not go into bankruptcy. To refinance the debt, the government sells new bonds and then uses that money to repay bondholders whose bonds have matured.

Concern about the burden on future generations.

Many people are concerned about the burden that a large national debt will place on the next generation—namely, you and your friends. Once again, however, many economists believe this worry is overblown. As shown in Figure 14.5B, about two-thirds of the national debt is owned by American individuals or institutions. Economists look at this portion of the debt as money we owe ourselves.

Taxpayers do bear the burden of paying interest on that debt, but much of that money goes right back to Americans who own government securities. Many retired people, for example, depend on the interest from government bonds to support themselves. They have no wish to ask any generation, including yours, to “pay off” the national debt.

Unease about foreign-owned debt. Citizens, government agencies, and financial institutions in foreign countries own about one-third of the national debt. This is not debt that we owe to ourselves. Foreign ownership of so much of the national debt concerns Americans for two reasons. First, they do not like seeing all of the interest owed to foreign bondholders flowing out of the U.S. economy. Second, they worry that Congress is becoming too dependent on foreign lenders to support its deficit-spending habits. What will happen, they ask, if foreigners suddenly decide they no longer want to buy U.S. government securities?

Many economists share these concerns to some degree. However, they point out that payments to foreign bondholders enable those bondholders to buy U.S. goods and services. Economists also note that many Americans invest in bonds issued by foreign governments. The interest these bondholders receive helps offset U.S. payments to foreigners. Finally, as long as our economy is strong, foreigners are unlikely to stop buying U.S. government securities.

Worries about the crowding-out effect. A widespread concern about the growth of the national debt is that federal government is crowding private borrowers out of the lending market. This **crowding-out effect** is said to happen when government borrowing drives interest rates up so high that people are no longer willing to borrow money to invest in businesses. This could trigger an economic downturn.

Economists agree that crowding out is a potential problem. However, they note that the negative effect

of the government's borrowing on long-term growth depends on how the money is spent. Government spending on highways and airports benefits private enterprise. So does spending on education and research, which improves this country's human capital.

Do all of these limitations and concerns mean the economy would be better off if policymakers did nothing to stabilize it? Some critics of fiscal and monetary policy would answer yes, but mainstream economists see an important role for both fiscal and monetary policy in keeping the economy healthy.

In your lifetime, you are likely to live through both recessions and periods of high inflation. Either situation can create hardships that you would rather not face. Still, knowing that the government has tools to help the economy recover from such ills may help you face them with confidence. For having learned how these tools work, you now know that the bad times will not last forever.

Summary

Governments and central banks use two broad policies to keep their economies running smoothly. Fiscal policy is based on the government's power to tax and spend. Monetary policy is based on the power of the Federal Reserve over the money supply and interest rates.

What are the origins of modern fiscal and monetary policy? British economist John Maynard Keynes championed the use of fiscal policy to fight recessions. Keynesian economics holds that government spending should be used to stimulate demand during recessions. American economist Milton Friedman promoted the use of monetary policy to control inflation. Monetarism holds that the control of the money supply is key to keeping inflation in check.

What tools does fiscal policy use to stabilize the economy? Expansionary fiscal policy tools include increased government spending and tax cuts. Contractionary fiscal policy tools include decreased government spending and tax increases. Automatic stabilizers can also serve to expand or contract the economy.

What tools does monetary policy use to stabilize the economy? The Federal Reserve works to stabilize the economy by managing the growth of the money supply and interest rates. Its tools include the power to establish bank reserve requirements and the discount rate. Through its open-market operations, it also regulates the federal funds rate.

What factors limit the effectiveness of fiscal and monetary policy? A number of factors keep fiscal and monetary policy from maintaining a stable course for the economy. These factors include lack of timely information, inaccurate forecasts, and time lags between actions and their effects.