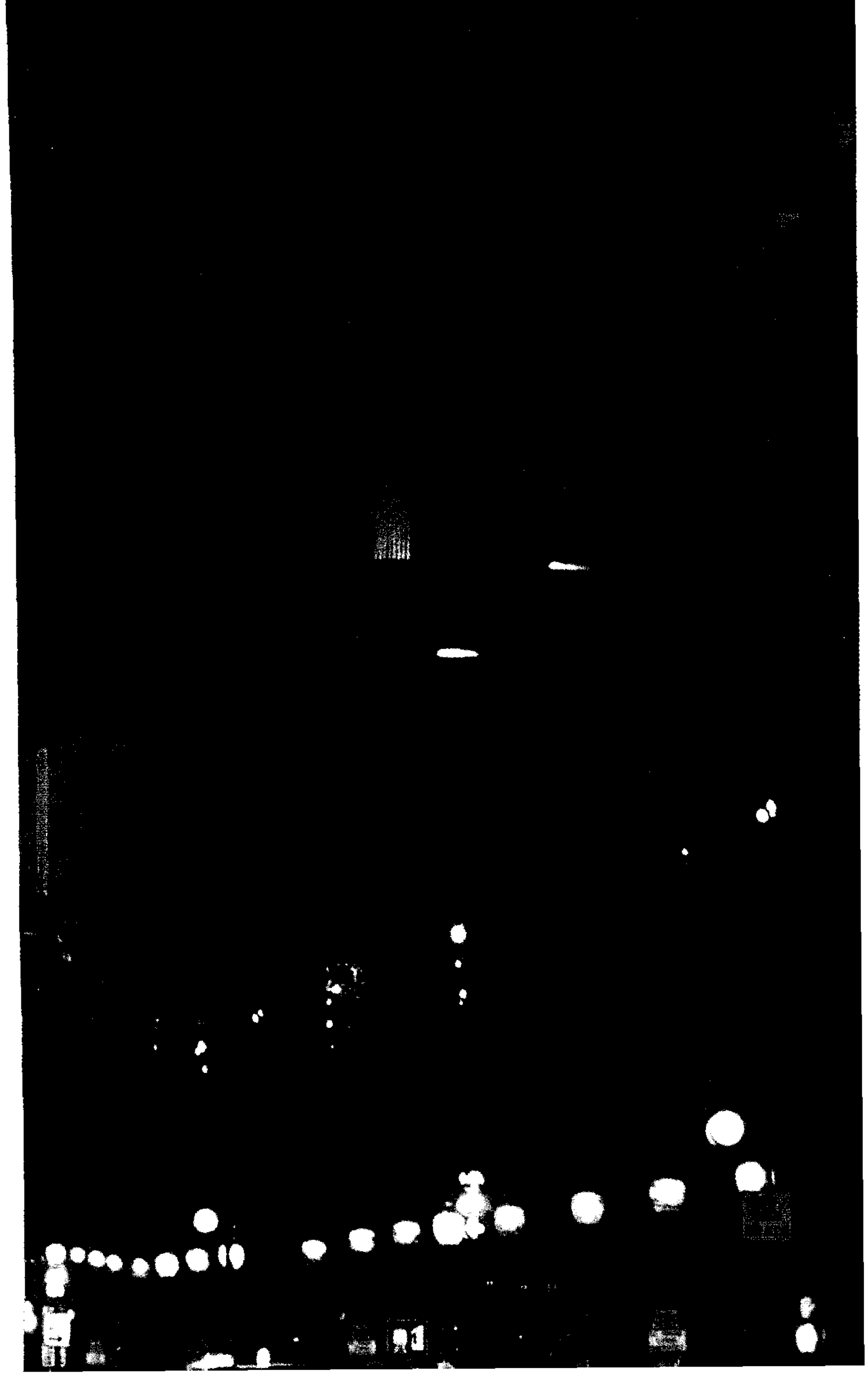
## Chapters in This Unit



# *It's April 15. Where's your tax return?*



Every year Americans rush to file their Federal Income Tax return by midnight on or around April 15. Whether you'll be receiving a refund or have to pay, you're probably asking yourself a few questions as you slip the envelope addressed to the IRS into the mail slot:

- What does the government do with all the money it collects?
- Why does the government sometimes spend more than it takes in?
- Is the national debt too large?

Governments, whether federal, state, or local, all need money to operate. This unit focuses on how governments gather financial resources, how they spend these resources, and the actions that the government sometimes takes to help ensure the health of the nation's economy.

### Focus Activity

Keep track of all the transactions you make in one day—whether you're buying a bottle of juice or putting money in a parking meter. Calculate what portion of all of your spending goes to the local, state, or federal government.

# Chapter 14 Taxes and Government Spending


You're looking forward to your first paycheck. You figure that at $6.00 per hour, you should be getting $120 for the 20 hours you worked. When you open the envelope, you find that the check is for much less than $120. Where did the money go? The answer is . . . taxes! The government uses tax money to pay for social programs, national defense, and a variety of other programs and projects, including disaster relief.

## Economics Journal

Keep track of the different types of taxes you pay over the next week, such as sales and gas taxes. If you have a job, include tax deductions from your paycheck.

## Keep It Current

Items marked with this logo are periodically updated on the Internet. Keep up-to-date with what's in the news. To get current information on taxes and government spending go to **www.phschool.com**

Section 1

# What Are Taxes?

## Preview

### Objectives

**After studying this section you will be able to:**

1. **Understand** how the government uses taxes to fund programs.
2. **Identify** the roots of the concept of taxation in the United States Constitution.
3. **Describe** types of tax bases and tax structures.
4. **List** the characteristics of a good tax.
5. **Identify** who bears the burden of a tax.

### Section Focus

Local, state, and national governments generate revenue by charging taxes. The Constitution spells out specific limits on governments' powers to tax. Taxation can take several different forms, and people disagree over which method of taxation is most fair.

### Key Terms

**tax**
**revenue**
**tax base**
**individual income tax**
**sales tax**
**property tax**
**corporate income tax**
**proportional tax**
**progressive tax**
**regressive tax**
**incidence of a tax**

Looking at all of the taxes taken from your paycheck can be discouraging. It can feel like all of that money is being taken from you for someone else's use. Frustration over taxes is, after all, what led American colonists to go to war against Britain and declare independence. How, then, is anything different today?

Although money is taken from your paycheck, it is not done without your consent. As citizens of the United States, we authorize the government, through the Constitution and our elected representatives in Congress, to raise money in the form of taxes. Why?

## Funding Government Programs

A **tax** is a required payment to a local, state, or national government. Taxation is the primary way that the government collects money. Taxes give the government the money it needs to operate.

The income received by a government from taxes and other nontax sources is called **revenue.** Without revenue from taxes, the government would not be able to provide the goods and services that we not only benefit from, but that we expect the government to provide. For example, we authorize the government to provide national defense, highways, education, and law enforcement. We also ask the government to provide help to people in need.

All of these goods and services cost money—in workers' salaries, in materials, in land and labor. All members of our society share these costs through the payment of taxes.

## Taxes and the Constitution

Taxation is a powerful tool. The founders of the United States did not, without careful consideration, give their new government the power to tax. The Constitution they created spells out specific limits on the government's power to tax.

### The Power to Tax

The Framers of the Constitution gave each branch of government certain powers and duties. The first power granted to Congress is the power to tax. This is Article 1, Section 8, Clause 1:

*To lay and collect taxes, duties, imposts and excises, to pay the debts, and provide*

**tax** *a required payment to a local, state, or national government*

**revenue** *income received by a government from taxes and nontax sources*

**tax base** *income, property, good, or service that is subject to a tax*

**individual income tax** *a tax on a person's earnings*

**sales tax** *a tax on the dollar value of a good or service being sold*

**property tax** *a tax on the value of a property*

**corporate income tax** *a tax on the value of a company's profits*

*for the common defense and general welfare of the United States; but all duties, imposts, and excises shall be uniform throughout the United States.*

This clause is the basis for federal tax laws.

### Limits on the Power to Tax

The Constitution specifically limits certain kinds of taxes. Two of those limits are in the taxation clause. First, the purpose of a tax must be for the "common defense and general welfare." A tax cannot bring in money that goes to individual interests. Second, federal taxes must be the same in every state. The federal gas tax, for example, cannot be $.04 a gallon in Maryland and $.10 a gallon in South Dakota.

Other provisions of the Constitution also limit the kinds of taxes Congress can impose. For example, Congress cannot tax church services because that would violate the freedom of religion promised by the First Amendment. Another clause of the Constitution prohibits taxing exports. The government can collect taxes only on imports—goods brought into the United States. (Congress can limit or prohibit the export of certain goods, however, such as technology or weaponry.)

Yet another clause of the Constitution (Article 1, Section 9, Clause 4) prohibits Congress from levying, or imposing, taxes unless they are divided among the states according to population. Because of this provision, it took the Sixteenth Amendment to legalize the income tax. This amendment was ratified in 1913.

## Tax Bases and Tax Structures

Despite these limits, the government actually collects a wide variety of taxes. Economists describe these taxes in different ways. First, they describe a tax according to the value of the object taxed. Second, they describe how the tax is structured.

### Tax Bases

A **tax base** is the income, property, good, or service that is subject to a tax. The tax base might be a person's earnings (**individual income tax**), the dollar value of a good or service being sold (**sales tax**), the value of a property (**property tax**), or the value of a company's profits (**corporate income tax**). When government policymakers create a

**Figure 14.1 Three Types of Tax Structures**

| Type of Tax | Description | Example | Ron's taxes on $50,000 income | Mary's taxes on $150,000 income |
|---|---|---|---|---|
| Proportional | A constant percentage of income is taken in taxes as income increases | "Flat" tax | $7,500, or 15 percent of income | $22,500, or 15 percent of income |
| Progressive | A larger percentage of income is taken in taxes as income increases | Income tax | $5,000, or 10 percent of income | $45,000, or 30 percent of income |
| Regressive | A smaller percentage of income is taken in taxes as income increases | Sales tax | $2,000, or 5 percent of total purchases of $40,000; tax bill is 4 percent of income | $3,000, or 5 percent of total purchases of $60,000; tax bill is 2 percent of income |

This chart shows how three different tax structures would affect a taxpayer named Ron with an income of $50,000 and a taxpayer named Mary with an income of $150,000.
**Income How does Mary's higher income affect the taxes she pays in each type of tax structure?**

new tax, they first decide what the base will be for the tax: income, sales, property, profits, or some other category.

Next, the government decides how to structure the tax on that particular base. As shown in Figure 14.1, economists describe three different tax structures: proportional, progressive, and regressive.

### Proportional Taxes

A **proportional tax** is a tax for which the percentage of income paid in taxes remains the same for all income levels. Leslie Wilson, a corporate executive, earns $350,000 a year. Tony Owens, a nurse, earns $50,000 a year. If a 6 percent proportional tax were levied on their incomes, Leslie would pay 6 percent of $350,000, or $21,000, in taxes. Tony would pay 6 percent of $50,000, or $3,000. With a proportional income tax, whether income goes up or down, the percentage of income paid in taxes stays the same.

### Progressive Taxes

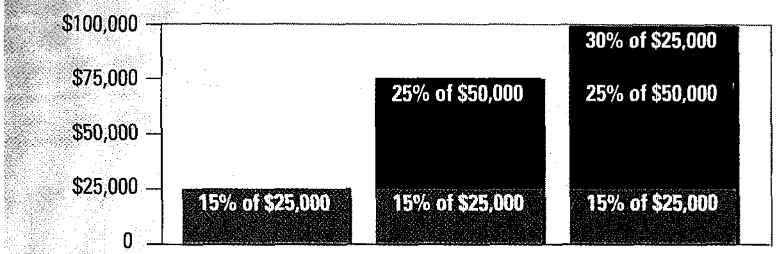
A **progressive tax** is a tax for which the percentage of income paid in taxes increases as income increases. As income rises, the percentage of income paid in taxes also rises. People with very small incomes might pay no tax at all.

The federal income tax is the clearest example of a progressive tax in the United States. A sample progressive income tax system is shown in Figure 14.2. Notice that the tax rate in this example rises from 15, to 25, and then to 30 percent as income rises. This is a progressive tax rate structure because as income rises, the percentage of income paid in taxes also rises.

### Regressive Taxes

A **regressive tax** is a tax for which the percentage of income paid in taxes decreases as income increases. For example, although the sales tax rate remains constant, a sales tax is regressive. This is because higher-income households spend a lower proportion of their incomes on taxable goods and services. As a result, although they may pay more actual dollars in sales taxes, the proportion of their income spent on sales taxes is lower than that of lower-income households.

***Figure 14.2* Progressive Income Tax**




**Total taxable income: $100,000**

| | |
|---|---|
| ❶ You would be taxed at a rate of 15 percent on the first $25,000 of your taxable income | **15% of $25,000 = $3,750** |
| ❷ You would be taxed at a rate of 25 percent on your taxable income above $25,000 but below $75,000 ($50,000) | **25% of $50,000 = $12,500** |
| ❸ You would be taxed at a rate of 30 percent on your taxable income above $75,000 ($25,000) | **30% of $25,000 = $7,500** |
| | **Total tax = $23,750** |

BUILDING KEY CONCEPTS

In a progressive tax structure, the higher a taxpayer's income, the greater percentage he or she must pay in taxes. This chart shows a sample progressive income tax for a taxpayer with total taxable income of $100,000.
**Income According to the chart, what would be the total tax on taxable income of $65,000?**

## Characteristics of a Good Tax

Though it is sometimes difficult to decide whether a specific tax is proportional, progressive, or regressive, economists do generally agree on what makes a good tax. A good tax should have four characteristics: simplicity, efficiency, certainty, and equity, or fairness.

- *Simplicity* Tax laws should be simple and easily understood. Taxpayers and businesses should be able to keep the necessary records, prepare their own tax forms, and pay the taxes on a predictable schedule.
- *Efficiency* Government administrators should be able to collect taxes without spending too much time or money. Similarly, taxpayers should be able to pay taxes without giving up too much time. They should also not have to pay too much money in fees.

**proportional tax** *a tax for which the percentage of income paid in taxes remains the same for all income levels*

**progressive tax** *a tax for which the percentage of income paid in taxes increases as income increases*

**regressive tax** *a tax for which the percentage of income paid in taxes decreases as income increases*


▲ **This political cartoon makes fun of the saying, "The only sure things in life are death and taxes." Why are taxes necessary?**

- *Certainty* Certainty is also a characteristic of a good tax. It should be clear to the taxpayer when a tax is due, how much money is due, and how the tax should be paid.
- *Equity* The tax system should be fair, so that no one bears too much or too little of the tax burden.

### Determining Fairness

Although everyone agrees that a tax system should be fair, people often disagree on what "fair" means. Over time, economists have proposed two different ideas about how to measure the fairness of a tax.

The first idea is called the benefits-received principle. According to this principle, a person should pay taxes based on the level of benefits he or she expects to receive. People who drive, for example, pay gasoline taxes that are used to build and maintain highways. In this way, the people who receive the most benefit from the roads also contribute the most to their upkeep.

**THE WALL STREET JOURNAL.**
**CLASSROOM EDITION**

***In the News*** *As the following excerpt from a* Wall Street Journal Classroom Edition *article shows, many Texans are benefiting from an annual "tax holiday" on which the state temporarily lifts its sales tax.*

"The Texas legislature, crediting a budget surplus, instituted the weekend tax holiday as an annual event this year [1999]. The measure is a simple yet attention-grabbing form of tax cut that carries fewer budgeting risks than other types of tax relief."

The second idea about fairness is called the ability-to-pay principle. According to this principle, people should pay taxes according to their ability to pay. The ability-to-pay principle is the idea behind a progressive income tax: people who earn more income pay more taxes.

### Balancing Tax Revenues and Tax Rates

How much revenue does a good tax generate? The answer is "enough, but not too much." That is, enough so that citizens' needs are met, but not so much that the tax discourages production. For example, if a company has to pay $100,000 in taxes, it will not be able to use that $100,000 to expand production. If tax rates are lower, however, the company can use more of its income to stimulate production rather than to pay taxes. Ultimately, many people argue, the economy benefits from lower, rather than higher, tax rates.

## Who Bears the Burden of a Tax?

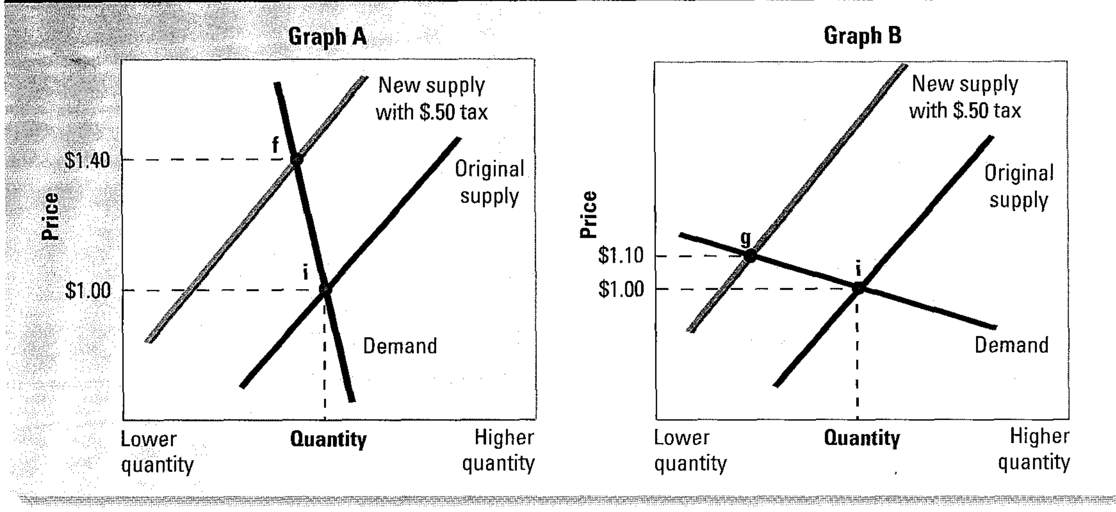
To fully evaluate the fairness of a tax, it is important to think about who actually bears the burden of the tax. Taxes affect more than just the people who send in the checks to pay them. Why? The answer lies in supply and demand analysis.

Suppose that the government imposes a gasoline tax of $.50 per gallon and collects the tax from service stations. You may think that the burden of the tax falls only on the service stations, because they mail the checks to the government. Graphs A and B in Figure 14.3, however, provide a different set of answers.

Both Graphs A and B show two supply curves: an original supply line and a line showing the supply after the $.50 tax is imposed. When a tax is imposed on a good, the cost of supplying the good increases. The supply of the good then decreases at each and every price level. This shifts the supply curve to the left.

Before the tax, the market was in equilibrium, and consumers bought gas at $1.00

**Figure 14.3 Elasticities of Demand and Tax Effects**




BUILDING KEY CONCEPTS

If demand for a good is relatively inelastic (Graph A), a new tax will increase the price by a relatively large amount, and consumers will pay a large share of the tax. **Supply and Demand Who bears the burden of a tax if demand is relatively elastic?**

per gallon. This is shown as point i on Graph A above. If demand for gas is relatively inelastic (that is, if consumers buy about the same amount no matter what the price), the tax will increase the price of each gallon by a relatively large amount. Consumers will bear a large share of the tax. This is shown in Graph A. Demand is inelastic, so the demand curve is relatively steep, and a \$.50 tax increases the equilibrium price by \$.40 (from \$1.00 to \$1.40 from point i to point f). In other words, consumers pay about four fifths of the tax.

In contrast, if demand is relatively elastic, the demand curve will be relatively flat, as in Graph B. Consumers will pay a relatively small part of the tax. As Graph B shows, a \$.50 tax increases the equilibrium price by only \$.10 (from \$1.00 to \$1.10 from point i to point g). In this case, consumers pay only one fifth of the tax. The service stations pay the other four fifths.

This example shows the **incidence of a tax**—that is, the final burden of a tax. When policymakers consider a new tax, they examine who will actually bear the burden. As in the example above, producers can "pass on" the burden to consumers. Generally, the more inelastic the demand, the more easily the seller can shift the tax to consumers. The more elastic the demand, the more the seller bears the burden.

**incidence of a tax** *the final burden of a tax*

## Section 1 Assessment

### Key Terms and Main Ideas

1. Why do governments impose taxes?
2. What is the difference between a **progressive tax** and a **regressive tax?**
3. What are the four characteristics of a good tax?
4. Describe the benefits-received principle. How does it differ from the ability-to-pay principle?

### Applying Economic Concepts

5. ***Try This*** Suppose that your town decides to levy a tax to raise funds for construction, maintenance, and other expenses for local schools. Should the tax be proportional, progressive, or regressive? Explain your answer.
6. ***Critical Thinking*** Analyze the impact of the power to tax as expressed in the Constitution on tax policies today.

***Take It to the NET*** Find out more about the tax-creation process. Then discuss your findings with a classmate. Use the links provided in the Social Studies area at the following Web site for help in completing this activity. **www.phschool.com**

Skills for
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Critical Thinking | Graphs and Charts | Social Studies | Technology

## Distinguishing Fact from Opinion

A fact is a statement that can be proved by reliable sources. An opinion is a judgment that reflects a person's beliefs or feelings. It may or may not be provable. Distinguishing fact from opinion is important when studying a political issue like taxation. Read the speech below by a member of Congress about a proposed tax cut; then answer the following questions.

1. **Determine which statements are facts.** Remember that facts can be verified by other sources. (a) List three statements about the tax relief bill that appear to be facts. (b) How could you prove that each of these statements is a fact?

**REPRESENTATIVE JENNIFER DUNN, ON A PROPOSED TAX CUT**

"...the Republican tax relief bill helps women throughout their lives both at home and in the job market.

The only people who think this tax relief bill is not good for women are those who don't believe we women can manage our own money.

So let's talk first about tax relief at home:

With this bill, the mothers of 41 million American children will be able to keep more of their own money. The $500 per child tax credit...is money mothers surely can use to make ends meet... money that can be used to pay for school clothes, or groceries, or the often unexpected expenses that come with raising children.

Women and their families will also receive help in sending their children to college. The cost of higher education is overwhelming these days.

Women are provided additional options to save for their retirement through expanded IRAs. The fact is that we live longer than men, yet we generally have less savings set aside. Our society shouldn't force women into choosing between shoes for their 8-year-old daughter or saving for their retirement."

2. **Determine which statements are opinions.** Sometimes authors signify opinions with phrases such as "I believe" or "I think," but often they do not. Other clues that indicate opinions are sweeping generalizations and emotion-packed words. (a) List two statements from the passage that are opinions. (b) How do you know that they are opinions?

3. **Determine how the writer uses facts to support her opinions.** Generally, an opinion is more persuasive when an author gives facts to support it. (a) How does Representative Dunn support her opinion that this tax relief bill helps women "throughout their lives"? (b) Does she present any evidence to support her statement that some people think the tax relief bill is "not good for women"? (c) In your opinion, has Representative Dunn supported her opinions well? Explain your answer.

### Additional Practice

Suppose that you are a member of Congress who opposes the tax relief bill and who will give a speech in response to Representative Dunn. Which of her opinions would you challenge, and how? What sort of facts might you research to support your case?

Section 2

# Federal Taxes

Preview

## Objectives

**After studying this section you will be able to:**

1. **Describe** the process of paying individual income taxes.
2. **Explain** the basic characteristics of corporate income taxes.
3. **Understand** the purpose of Social Security, Medicare, and unemployment taxes.
4. **Identify** other types of taxes.

## Section Focus

The federal income taxes that households and families pay help to fund government programs. Other types of taxes are levied on specific items for specific purposes.

## Key Terms

**withholding**
**tax return**
**taxable income**
**personal exemption**
**deductions**
**FICA**
**Social Security**
**Medicare**
**estate tax**
**gift tax**
**tariff**
**tax incentive**

During fiscal year 2001, the federal government took in more than $2 trillion in taxes. If you divide up this federal tax revenue among all the people in the United States, it comes to about $7,100 per person. How does the government get all this money?

The federal government has six major sources of tax revenue. They are individual and corporate income taxes, social insurance taxes, excise taxes, estate and gift taxes, and taxes on imports.

## Individual Income Taxes

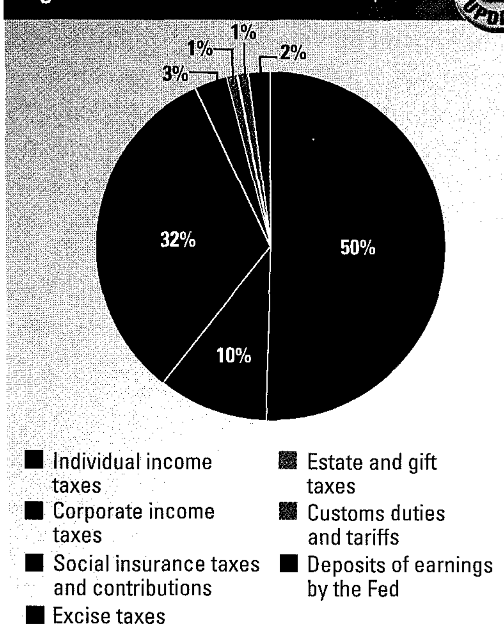
The federal government levies a tax on individuals' taxable income. As Figure 14.4 shows, individual income taxes make up the federal government's main source of revenue. About 49 percent of the federal government's revenues come from the payment of individual income taxes.

### "Pay-As-You-Earn" Taxation

The amount of federal income tax a person owes is determined on an annual basis. In theory, the federal government could wait until the end of the tax year to collect individual income taxes. In reality, that would be a problem for both taxpayers and the government. Like other employers, the government has to pay regularly for rent, supplies, services, and employees' salaries. A single annual payment from all the nation's taxpayers at once would make meeting these expenses difficult.

Similarly, many people might have trouble paying their taxes in one large sum. For these reasons, federal income tax is collected in a "pay-as-you-earn" system. This means that individuals usually pay

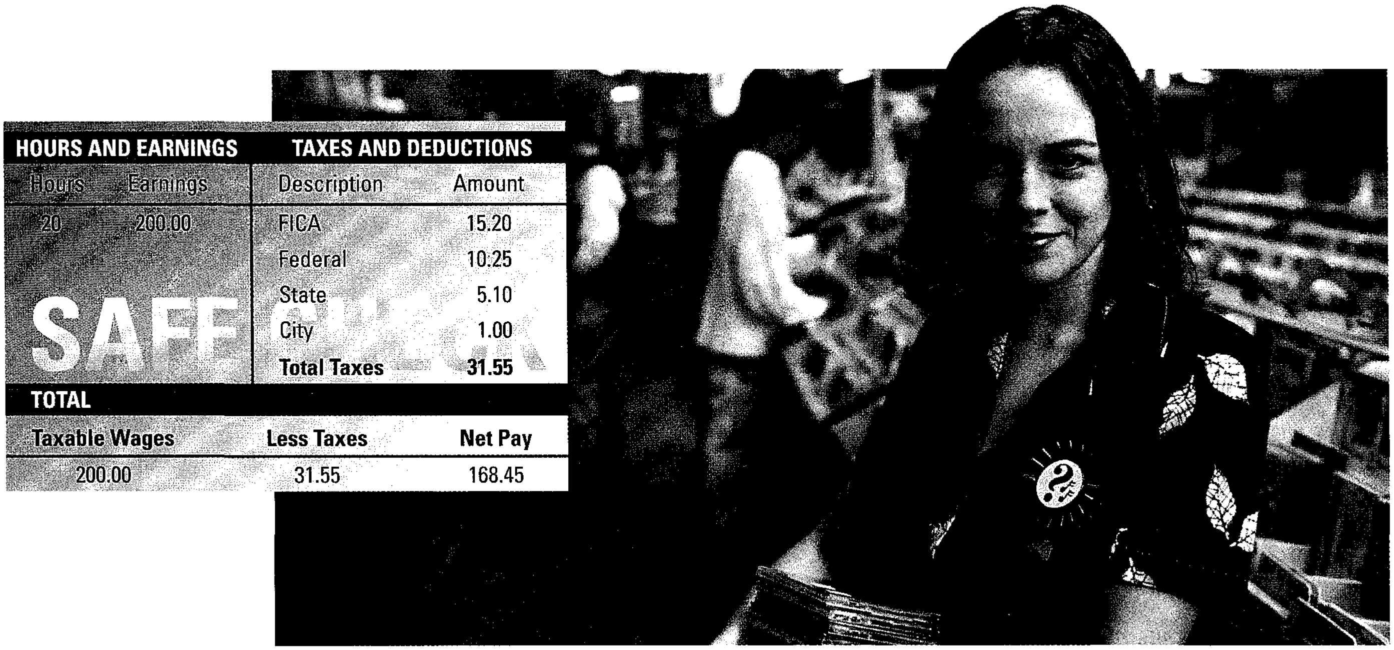
***Figure 14.4*** **Federal Revenue, 2000**




Note: Because of rounding, totals may be less or greater than 100 percent.
Source: U.S. Department of the Treasury

BUILDING KEY CONCEPTS

Sources of government revenue include the taxes shown on this graph. **Government Analyze the categories of revenue in the federal budget. What are the largest sources of federal revenue?**




▲ **This young worker's pay stub shows that her employer, as required by law, has withheld part of her earnings for taxes. What percentage of this worker's pay was withheld for federal taxes? For total taxes?**

**withholding** *taking tax payments out of an employee's pay before he or she receives it*

**tax return** *form used to file income taxes*

**taxable income** *income on which tax must be paid; total income minus exemptions and deductions*

**personal exemption** *set amount that you subtract from your gross income for yourself, your spouse, and any dependents*

**deductions** *variable amounts that you can subtract, or deduct, from your gross income*

most of their income tax throughout the year as they earn income. In mid-April, they pay any additional income taxes they owe.

### Tax Withholding

Employers are responsible in part for carrying out the system for collecting federal income taxes. They do so by **withholding,** or taking payments out of your pay before you receive it. The amount they withhold is based on an estimate of how much you will owe in federal income taxes for the entire year. After withholding the money, the employer forwards it to the federal government as an "installment payment" on your upcoming annual income tax bill. On the sample pay stub shown above, the employer has withheld $10.25 in federal income taxes from this employee's paycheck.

### Filing a Tax Return

At the end of the year, employers give their employees a report showing how much income tax has already been withheld and sent to the government. The employee then completes a tax return. A **tax return** is a form used to file income taxes. On it you declare your income to the government and figure out your taxable income.

**Taxable income** is a person's gross (or total) income minus exemptions and deductions. Gross income includes earned income—salaries, wages, tips, and commissions. It also includes income from investments such as interest on savings accounts and dividends from stock.

**Personal exemptions** are set amounts that you subtract from your gross income for yourself, your spouse, and any dependents. **Deductions** are variable amounts that you can subtract, or deduct, from your gross income. Deductions include such items as interest on a mortgage, donations to charity, some medical expenses, and state and local tax payments.

Completing a tax return allows you to determine whether the amount of income taxes you have already paid was higher or lower than the actual amount of tax you owe. If you have paid more than you owe, the government sends you a refund. If you have paid less than you owe, you must pay the balance to the government. All federal income tax returns must be sent to the Internal Revenue Service, or IRS, by midnight on April 15 (or the next business day if April 15 falls on a weekend).

### Tax Brackets

The federal income tax is a progressive tax. In other words, the tax rate rises with the amount of taxable income. The tax rate schedule in Figure 14.5 shows that in 2001, there were five rates. Each applied to a different range of income, or tax bracket. For example, married couples who filed a return together (a joint return) and had a taxable income of $45,200 or less paid 15 percent income tax. The highest rate—39.6 percent—was paid by high-income single people or married couples on the portion of their taxable incomes that exceeded $297,350. Each year, the IRS publishes new tax rate schedules that reflect any changes in the federal tax code.

## Corporate Income Taxes

Like individuals, corporations must pay federal income tax on their taxable income. Corporate taxes made up about 10 percent of federal revenues in recent years.

Determining a corporation's taxable income can be a challenge because businesses can take many deductions. That is, they can subtract many expenses from their income before they reach the amount of income that is actually subject to taxation. For example, companies can deduct the cost of their employees' health insurance. Many other costs of doing business can also be used as deductions.

Like individual income tax rates, corporate income tax rates are progressive—that is, tax rates increase as income increases. In 2001, rates began at 15 percent on the first $50,000 of taxable income. The highest rate was 39 percent on taxable corporate incomes between $335,000 and $10 million.

## Social Security, Medicare, and Unemployment Taxes

In addition to withholding money for income taxes, employers withhold money for another category of taxes authorized under the Federal Insurance Contributions Act, or FICA. **FICA** taxes fund two large government programs, Social Security and Medicare. Employees and employers share FICA payments.

### Social Security Taxes

Most of the FICA taxes you pay go to the Social Security Administration to fund Old-Age, Survivors, and Disability Insurance (OASDI), or **Social Security.** Social Security was established in 1935 to ease the hardships of the Great Depression.

**FICA** *taxes that fund Social Security and Medicare*

**Social Security** *Old-Age, Survivors, and Disability Insurance (OASDI)*

*Figure 14.5* **Federal Income Tax Rates, 2001**

| Schedule | If your taxable income is over– | but not over– | the tax is | of the amount over– |
|---|---|---|---|---|
| **Schedule X**– use if your filing status is **single** | $0 | $27,050 | ....... 15% | $0 |
| | $27,050 | $65,550 | $4,057.50 plus 28% | $27,050 |
| | $65,550 | $136,750 | $14,837.50 plus 31% | $65,550 |
| | $136,750 | $297,350 | $36,909.50 plus 36% | $136,750 |
| | $297,350 | ....... | $94,725.50 plus 39.6% | $297,350 |
| **Schedule Y**– use if your filing status is **married filing jointly** | $0 | $45,200 | ....... 15% | $0 |
| | $45,200 | $109,250 | $6,780.00 plus 28% | $45,200 |
| | $109,250 | $166,550 | $24,714.00 plus 31% | $109,250 |
| | $166,550 | $297,350 | $42,461.50 plus 36% | $166,550 |
| | $297,350 | ....... | $89,567.50 plus 39.6% | $297,350 |

According to these sample individual income tax tables, a single individual with $20,000 of taxable income would pay $20,000 X .15, or $3,000, in taxes.

**Income What would be the tax for a married couple filing jointly with $75,000 in taxable income?**

## Global Connections

***Value-Added Tax*** Individual income taxes and sales taxes play a smaller role in generating government revenue in many European nations than they do in the United States. Instead, in much of Europe, a value-added tax, or VAT, has been implemented. A VAT taxes the increase in value that a good gains in each step of its production. For example, in the United States, consumers usually pay taxes when they buy a car. Under a VAT system, the price of a car already includes the tax paid by the mine that extracts the iron ore used to make the car. It also includes the tax the steel mill paid based on the value added to the iron ore when it was turned into steel. Similarly, the car's price includes the tax the car manufacturer paid on the value the steel gained when it was made into a car. In this way, the consumer doesn't directly pay the tax. Rather, the total price of the car already includes the tax. **Would you recommend a VAT for the United States? Why or why not?**

**Medicare** *a national health insurance program that helps pay for health care for people over age 65 or with certain disabilities*

**estate tax** *a tax on the estate, or total value of the money and property, of a person who has died*

**gift tax** *a tax on money or property that one living person gives to another*

Originally, Social Security was simply a retirement fund to provide old-age pensions to workers. Today, it also provides benefits to surviving family members of wage earners and to people whose disabilities keep them from working.

Each year the government establishes an income cap for Social Security taxes. In 2000, the cap was $76,200. No Social Security taxes could be withheld from a taxpayer's wages and salaries above that amount.

### Medicare Taxes

FICA taxes also fund Medicare. The **Medicare** program is a national health insurance program that helps pay for health care for people over age 65. It also covers people with certain disabilities.

Both employees and self-employed people pay the Medicare tax on all their earnings. There is no ceiling as for Social Security payments.

**FAST FACT**

*In 1999, the United States had an average tax rate of 31 percent of income— one of the lowest rates among industrialized countries. Average tax rates in other industrialized countries range from 30.5 percent in Japan to over 58.7 percent in Sweden. Canada's average tax rate is 42.8 percent.*

### Unemployment Taxes

The federal government also collects an unemployment tax, which is paid by employers. In effect, the tax pays for an insurance policy for workers. If workers are laid off from their jobs through no fault of their own, they can file an "unemployment compensation" claim and collect benefits for a fixed number of weeks. In order to collect unemployment benefits, an unemployed person usually must show that he or she is actively looking for another job. The unemployment program is financed by both state and federal unemployment taxes.

## Other Types of Taxes

What are the taxes on gasoline and cable television service called? If you inherit money from your great aunt, will you have to pay a tax? Why are some imported products so expensive? To answer these questions, you need to look at excise, estate, gift, and import taxes.

### Excise Taxes

As you read in Chapter 5, an excise tax is a general revenue tax on the sale or manufacture of a good. Federal excise taxes apply to gasoline, cigarettes, alcoholic beverages, telephone services, cable television, and other items.

### Estate Taxes

An **estate tax** is a tax on the estate, or total value of the money and property, of a person who has died. It is paid out of the person's estate before the heirs receive their share. A person's estate includes not only money, but also real estate, cars, furniture, investments, jewelry, paintings, and insurance.

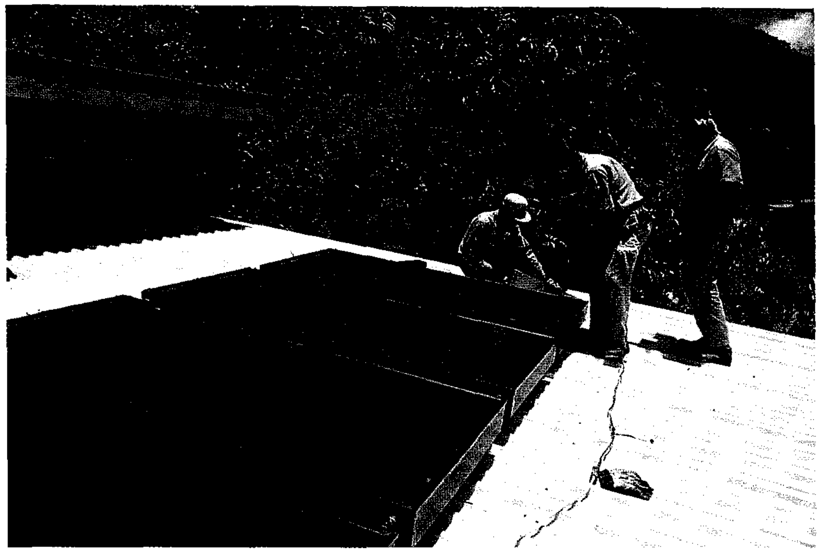
In 2002, if the total value of the estate is $700,000 or less, there is no federal estate tax. Because an estate tax is a progressive tax, the rate rises with increasing value. That is, a $5 million estate is taxed at a higher rate than a $750,000 estate.

### Gift Taxes

The **gift tax** is a tax on money or property that one living person gives to another. The goal of the gift tax, established in 1924, was to keep people from avoiding estate taxes by giving away their money before they died. The tax law sets limits on gifts, but still allows the tax-free transfer of fairly large amounts each year. Under current law, a person can give up to $10,000 a year tax-free to each of several different people.

### Import Taxes

Taxes on imported goods (foreign goods brought into the country) are called **tariffs.** Today, most tariffs are intended to protect American farmers and industries from foreign competitors rather than to raise revenue. Tariffs raise the price of foreign items and help keep the price of American products competitive. You will read more about tariffs in Chapter 17.



**▲ The owner of this house is installing solar panels. He or she may be able to take advantage of tax incentives designed to encourage energy conservation.**

### Taxes That Affect Behavior

The basic goal of taxation is to create revenue. However, governments sometimes use tax policies to discourage the public from buying harmful products. Taxes are also used to encourage certain types of behavior. The use of taxation to encourage or discourage behavior is called a **tax incentive.**

Federal taxes on tobacco products and alcoholic beverages are examples of so-called sin taxes. While they do bring in revenue, their main purpose is to discourage people from buying and using tobacco and alcohol.

Taxes have also been imposed on the purchase of vehicles that get low gas mileage. The goal of these taxes is to encourage people to purchase more fuel-efficient cars. Similarly, certain tax deductions encourage energy conservation. Homeowners and businesses may deduct some of the cost of certain improvements, such as adding solar heating, from their taxable income.

**tariff** *a tax on imported goods*

**tax incentive** *the use of taxation to encourage or discourage certain behavior*

## Section 2 Assessment

### Key Terms and Main Ideas

1. Explain "pay-as-you-earn" taxation.
2. Describe **withholding** and explain how it would affect a student with a part-time job.
3. What is the purpose of **FICA?**

### Applying Economic Concepts

4. ***Critical Thinking*** The founders of the United States wanted to avoid establishing a permanent aristocracy, or group of wealthy families who could control a great deal of the nation's wealth. How is this idea related to estate and gift taxes?
5. ***Try This*** Contributions to organizations such as the American Cancer Society are tax deductible (that is, they can be deducted from taxable income). Explain the reason for this tax policy.
6. ***Using the Databank*** Study the bar graph showing Government Receipts by Source on page 543 of the Databank. Approximately how much money (in billions of dollars) do the top three sources of government income generate?
7. ***You Decide*** Reread the Fast Fact on page 368. What factors might account for the differences in tax rates among the countries mentioned? What benefits might you expect as a trade-off with higher tax rates?

***Take It to the NET*** Explore the services the Internal Revenue Service provides, and learn what the IRS expects from United States citizens. Use the links provided in the Social Studies area at the following Web site for help in completing this activity. **www.phschool.com**

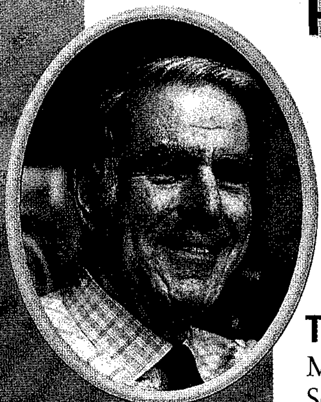
ECONOMIC

# Profile

Economist

Entrepreneur

## Henry J. Aaron (b. 1936)



*During the 1990s, a movement to "save Social Security" became a major crusade among Washington politicians. The debate worried many Americans, who wondered if the nation's retirement system was about to collapse. A prominent economist says, however, that the Social Security system works, so don't try to fix it.*

### The Sky Is Not Falling

Many studies predict that the Social Security system will go bankrupt once the Baby Boom generation begins to retire, despite hikes in the Social Security tax and huge surpluses in the program today. Not everyone agrees. Among the harshest critics of this alarming prediction is economist Henry Aaron.

### An Expert on Entitlements Issues

Henry Aaron is senior fellow in economic studies at the Brookings Institution, a Washington "think tank" that analyzes economic and social issues. Before joining Brookings, he served on the staff of the Council of Economic Advisors, and in the 1970s, served as Assistant Secretary for Planning in the Department of Health, Education, and Welfare.

In 1978, Aaron was selected to chair the Social Security Advisory Council, which reviews the status of the Social Security system every four years. He has become recognized as an expert on government entitlements and tax policy.

### The Dangers of Unwise Reforms

Much of the concern over Social Security has arisen because increasing numbers of retirees are being supported by the taxes of working Americans. Aaron agrees that the ratio of retirees to workers will continue to rise. However, he argues that this increase is offset by a lower ratio of children to workers and by growing numbers of women entering the work force. Both trends reduce the ratio of nonworking dependents per worker, Aaron argues, so the overall tax burden on workers' wages will remain about the same.

One popular proposal is to replace Social Security with a private retirement savings program. Aaron warns that this would require a 50-year transition, during which people would have to make their private contributions while also supporting current retirees through a 10 percent sales tax.

For those who would reform the existing system by raising the retirement age or reducing benefits, Aaron has dire warnings. He notes that no one really knows how expectations about old age affect the saving, working, and spending decisions that people make. Aaron cautions that major changes in the current system could have unforeseen consequences for the entire economy.

### CHECK FOR UNDERSTANDING

**1. Source Reading** Summarize in your own words the argument that Aaron makes to oppose any major changes in the Social Security system.

**2. Critical Thinking** What trends and conditions are responsible for the increase in the ratio of retirees to workers? Why might this development be a potential threat to the future of Social Security?

**3. Learn More** Research and report on changes that Congress has made in Social Security in recent years.

# Section 3 Federal Spending

## Preview

### Objectives

**After studying this section you will be able to:**

1. **Distinguish** between mandatory and discretionary spending.
2. **Describe** major entitlement programs.
3. **Identify** categories of discretionary spending.
4. **Explain** the impact of federal aid to state and local governments.

### Section Focus

Although the federal budget is extremely large, about three quarters of the government's spending is required by current laws. Major categories of government spending include Social Security, defense, interest on the national debt, Medicare, and health care.

### Key Terms

**mandatory spending**
**discretionary spending**
**entitlement**
**Medicaid**

Suppose that each year you were given over $2 trillion to spend. So much money! So many choices! In reality, when the federal government receives this amount of revenue in the form of taxes, most of it is already accounted for. That is, after the government fulfills all its legal obligations, only about 40 percent of the money remains. In this section you will look at the many items on which the federal government spends its tax revenues. In Chapter 15, you will read about how the federal government, as part of the budget process, plans for that spending.

## Mandatory and Discretionary Spending

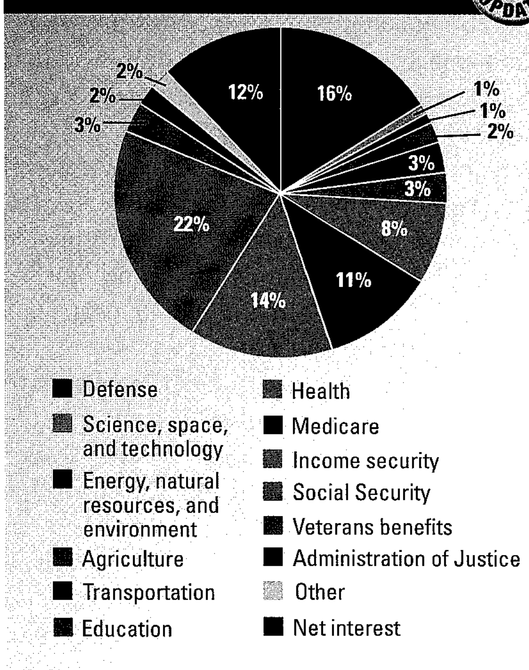
The graph in Figure 14.6 shows the major categories of federal spending. Some of these categories, such as Social Security and Medicare, are "mandatory." **Mandatory spending** refers to money that lawmakers are required by existing laws to spend on certain programs or to use for interest payments on the national debt. Others, such as defense and education, are "discretionary." **Discretionary spending** is spending about which government planners can make choices.

In general, the percentage of federal spending that is mandatory has grown in recent years. The percentage of discretionary spending has decreased. These trends worry many budget planners and politicians.

**mandatory spending** *spending on certain programs that is mandated, or required, by existing law*

**discretionary spending** *spending category about which government planners can make choices*

**Figure 14.6 Federal Spending, 2000** INTERNET UPDATE




Note: Because of rounding, totals may be less or greater than 100 percent.
Source: Office of Management and Budget

**BUILDING KEY CONCEPTS**

The federal government spends the funds it collects from taxes and other sources on a variety of programs. **Government Analyze the categories of expenditures in the federal budget. Which categories receive the most federal funds?**

▲ **People who receive entitlement benefits such as Social Security, Medicare, and Medicaid include veterans, people with disabilities, and the elderly.**

**entitlement** *social welfare program that people are "entitled to" if they meet certain eligibility requirements*

## Entitlement Programs

Except for interest on the national debt, most of the mandatory spending items in the federal budget are for entitlement programs. **Entitlements** are social welfare programs that people are "entitled to" if they meet certain eligibility requirements, such as being at a certain income level or age. The federal government guarantees assistance for all those who qualify. As the number of people who qualify rises, mandatory spending rises as well. As a result, managing costs has become a major concern.

Some, but not all, entitlements are "means-tested." In other words, people with higher incomes may receive lower benefits or no benefits at all. Medicaid, for instance, is means-tested, or dependent on income. Social Security is not. A retired person who has worked and paid Social Security taxes is entitled to certain benefits. Similarly, military veterans and retired federal employees are entitled to receive pensions from the government.

Entitlements are a largely unchanging part of government spending. Once Congress has set the requirements, it cannot control how many people become eligible for each kind of benefit. Congress can change the eligibility requirements or reduce the amount of the benefit in order to try to keep costs down. Such actions, however, require a change in the law.

### Social Security

Social Security is the largest category of federal spending. More than 45 million retired or disabled people and their families and survivors receive monthly benefits. The Social Security Administration became an independent agency in 1995. Before that, its spending was part of the budget for the Health and Human Services Department.

### Medicare

Medicare serves about 36 million people, most of them over 65 years old. The program pays for hospital care and for the costs of physicians and medical services. It also pays health care bills for people who suffer from certain disabilities and diseases.

Medicare is funded by taxes withheld from people's paychecks. Monthly payments paid by people who make certain levels of taxable income and receive Medicare benefits also pay for the program.

### Medicaid

**Medicaid** benefits low-income families, some people with disabilities, and elderly people in nursing homes. It is the largest source of funds for medical and health-related services for America's poorest people. The federal government shares the costs of Medicaid with state governments. The state share of the costs varies from 50 percent to 83 percent. In 1999, 27,890 million people were covered by Medicaid—about 10 percent of Americans.

### Other Mandatory Spending Programs

Other means-tested entitlements benefit people and families whose incomes fall below a certain level. Requirements vary from program to program. Federal programs include food stamps, Supplemental Security Income (SSI), and child nutrition. The federal government also pays retirement benefits and insurance for federal workers, as well as veterans' pensions and unemployment insurance.

### The Future of Entitlement Spending

Spending for both Social Security and Medicare has increased enormously in recent years and is expected to increase further in the next few decades. Social Security payments will rise as people in the large "baby boomer" generation, born between 1945 and 1964, start to retire. When the "baby boomers" reach 65, they will become eligible for Medicare as well.

Medicare costs have been growing rapidly, partly as a result of expensive technology, but also because people are living longer. Who will pay these costs? The following fact indicates the basic problem facing Medicare. In 1995, there were four people paying Medicare taxes for every Medicare recipient. By 2050, there will only be two people paying taxes for every recipient.

## Discretionary Spending

Spending on defense accounts for about half of the federal government's discretionary spending. The remaining funds available for discretionary spending are divided among a wide variety of categories.

### Defense Spending

Defense spending has dropped somewhat since the end of the cold war as a percentage of the federal budget. As you can see from the graph in Figure 14.6, defense spending consumes about 16 percent of the federal budget.

The Department of Defense spends most of the defense budget. It pays the salaries of all the men and women in the army, navy, air force, and marines, as well as the department's civilian employees. There are about 1.37 million men and women in uniform, along with about 703,000 civilian workers, working for the armed forces.

Defense spending, of course, also buys weapons, missiles, battleships, tanks, airplanes, ammunition, and all the other equipment the military needs. The defense budget also includes funds for maintaining equipment and military bases.

### Other Discretionary Spending

You may be surprised at how small a portion of federal spending goes into the category that could be labeled "everything else." Here are some of the many programs that this category of federal spending pays for.

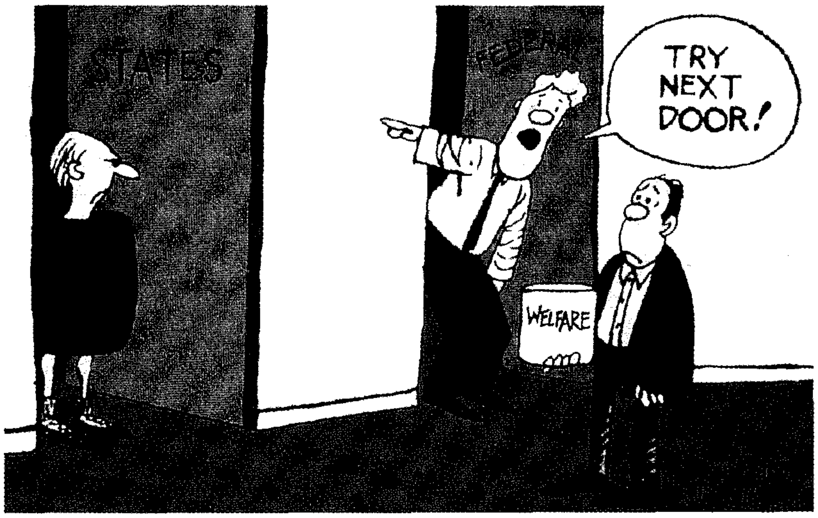
- education
- training
- scientific research
- student loans
- technology
- national parks and monuments
- law enforcement
- environmental cleanup
- housing

THE WALL STREET JOURNAL.
**CLASSROOM EDITION**

***In the News*** *As the following excerpt from a* Wall Street Journal Classroom Edition *article shows, the states bear a large share of the responsibility for the Medicaid program.*

"The federal government provides broad national guidelines to the states under which they establish their own eligibility standards; determine the type, amount, duration, and scope of services; set the rates of payment for services; and administer their own programs. So Medicaid programs vary considerably from state to state, as well as within each state over time."

**Medicaid** *entitlement program that benefits low-income families, some people with disabilities, and elderly people in nursing homes*




▲ **As the federal government reduces its size, the burden of providing public assistance programs falls more heavily on the states. How does the cartoonist portray the ability of state governments to handle this responsibility?**

- land management
- transportation
- disaster aid
- foreign aid
- farm subsidies

This part of the federal budget also pays the salaries of the millions of people who work for the civilian branches of the federal government. They include members of Congress, Cabinet secretaries, park rangers, FBI agents, file clerks, geologists, CIA agents, meat inspectors, and many others.

## Federal Aid to State and Local Governments

Some federal tax dollars find their way to state and local governments. In total, about $284 billion a year in federal monies is divided among the states. This is an average of about $1,000 per person.

As you have read, state and federal governments share the costs of some social programs, including Medicaid, unemployment compensation, and some of the programs that help children, families, refugees, and others. State and federal governments also share the costs of some highway construction. Additional federal money goes to the states for education, lower-income housing, mass-transit, health care, highway construction, employment training, and dozens of other programs.

Federal grants-in-aid are grants of federal money for certain closely defined purposes. States must use the federal funds only for the purpose specified and obey the federal guidelines for which aid is given. Beginning with the Reagan administration in the early 1980s, many grant-in-aid programs were converted to a block grant format. As you read in Chapter 13, block grants are lump sums of money intended to be used in a broadly defined area of public need, such as education or highways.

## Section 3 Assessment

### Key Terms and Main Ideas

1. How does **discretionary spending** differ from **mandatory spending?**
2. What is an **entitlement** program?
3. Why is the cost of the Social Security program expected to increase in the next decades?
4. What is the largest category of **discretionary spending?** Identify three additional examples of discretionary spending.

### Applying Economic Concepts

5. ***Try This*** Suppose that you are running for political office. **(a)** Would you propose any new entitlement programs? If so, what would they be? **(b)** Would you propose eliminating or modifying any existing entitlement programs? Explain your answers.
6. ***You Decide*** Which categories of federal spending would you lower? Which would you raise? Give specific reasons for the changes you suggest.

***Take It to the NET***

The level and distribution of government spending are sources of continuous debate in the United States. Read several debates on government spending, and summarize your findings in a brief, well-organized essay. Use the links provided in the Social Studies area at the following Web site for help in completing this activity. **www.phschool.com**

Section 4

# State and Local Taxes and Spending

Preview

### Objectives

**After studying this section you will be able to:**

1. **Explain** how states use a budget to plan their spending.
2. **Identify** where state taxes are spent.
3. **List** the major sources of state tax revenue.
4. **Describe** local government spending and sources of revenue.

### Section Focus

Like the federal government, state and local governments use the revenue from taxes to pay for a variety of programs and services. In general, states spend the largest amounts on grants to local governments, education, and public welfare.

### Key Terms

**operating budget**
**capital budget**
**balanced budget**
**tax exempt**
**real property**
**personal property**
**tax assessor**

You and your family are thinking about colleges. Which one offers the courses you want? How much does it cost? During your research, you find that colleges within your state's university system are far less expensive than private schools. The reason is that your state government is paying part of the cost of running the state colleges. In fact, higher education is one of the largest areas of state government spending.

What else do states spend money on? In this section you will look at patterns of taxing and spending by state and local governments.

## State Budgets

Like families and individuals, governments must plan their spending ahead of time. The federal government has just one budget for all kinds of spending. States have two budgets: operating budgets and capital budgets.

### Operating Budgets

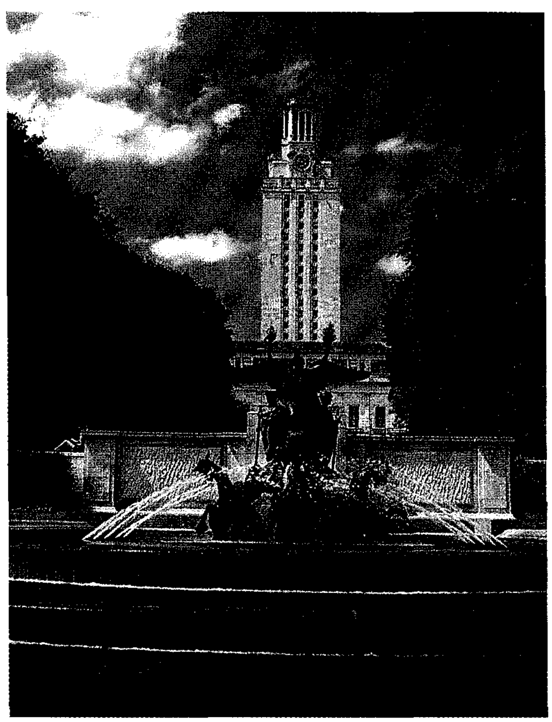
A state's **operating budget** pays for day-to-day expenses. Those include salaries of state employees, supplies such as computers or paper, and maintenance of state facilities, from the state capitol to recreation areas and roadside parks.

### Capital Budgets

A state's **capital budget** pays for major capital, or investment, spending. If the state builds a new bridge or building, the money comes from this budget. Most of these expenses are met by long-term borrowing or the sale of bonds.

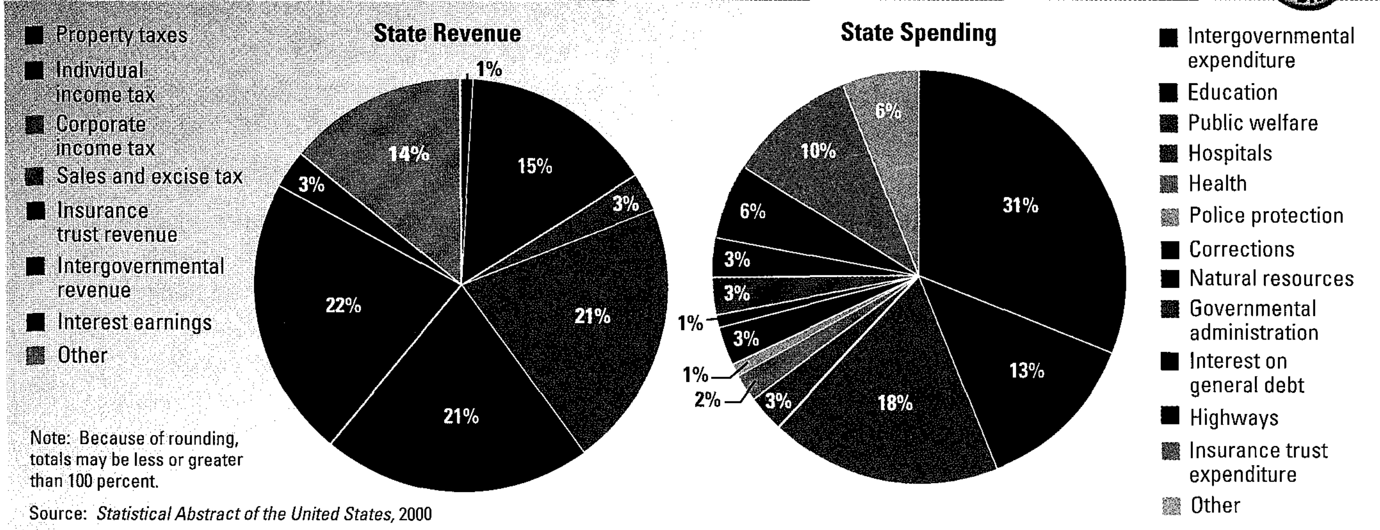
**operating budget** *budget for day-to-day expenses*

**capital budget** *budget for major capital, or investment, expenditures*



▲ **State colleges and universities, such as the University of Texas at Austin, receive state funding.**

*Figure 14.7* **State Revenue and Spending, 1999**




Note: Because of rounding, totals may be less or greater than 100 percent.

Source: *Statistical Abstract of the United States,* 2000

BUILDING KEY CONCEPTS

Major sources of state revenue include individual income taxes, sales and other taxes, insurance premiums, and local and federal funds ("intergovernmental revenue"). **Government What are the major categories of state government spending?**

**balanced budget** *budget in which revenues are equal to spending*

## Balancing State Budgets

In most states, the governor prepares the budget with the help of a budget agency. The legislature then discusses and eventually approves the budget.

Unlike the federal government, states have laws that require **balanced budgets**—budgets in which revenues are equal to spending. These laws, however, apply only to the operating budget, not the capital budget. That makes it easier to balance state budgets than to balance the federal budget.

Some states can borrow money or carry a deficit for several years. In states with stricter laws, however, state lawmakers may have to cut programs or raise taxes to balance the budget.

# Where Are State Taxes Spent?

Spending policies differ among the fifty states. You are probably most familiar with state spending on education, highways, police protection, and state recreation areas. You can see other significant spending categories in Figure 14.7.

## Education

Every state has at least one public state university. Some, such as California, have large systems with many campuses throughout the state. In many states, tax dollars also support agricultural and technical colleges, teacher's colleges, and two-year community colleges.

State governments also provide financial help to their local governments, which run elementary, middle, and high schools. Some states pay a larger share of local schools' costs than other states do. The amount of money that each state spends per student also varies. The national average is $6,251 per student per year.

## Public Safety

State police are a familiar sight along the nation's highways. This police force enforces traffic laws and helps motorists in emergencies. State police also maintain crime labs that can assist local law-enforcement agencies.

State governments build and run corrections systems. These institutions house people convicted of state crimes.

### Highways and Transportation

Building and maintaining highway systems is another major state expense. State crews resurface roads and repair bridges. Some money for roads comes from the federal government. In turn, states contribute money to federal and interstate highway systems.

States pay at least some of the costs of other kinds of transportation facilities, such as waterways and airports. Money for such projects may also come from federal and local government budgets.

### Public Welfare

States look after the health and welfare of the public in various ways. State funds support some public hospitals and clinics. State regulators inspect water supplies and test for pollution.

As you read in Section 2, states also help pay for many of the federal programs that assist individuals, such as unemployment compensation benefits. Because states determine their own benefits, they can meet local needs better than the federal government can. For example, during a local recession, they may decide to extend the number of weeks that people can claim benefits.

### Arts and Recreation

If you've hiked in a state forest or picnicked in a state park, you've enjoyed another benefit of state tax dollars. Parks and nature reserves preserve scenic and historic places for people to visit and enjoy. States also run museums and help fund music and art programs.

### Administration

Besides providing services, state governments need to spend money just to keep running. Like the federal government, state governments have an executive branch (the governor's office), a legislature, and a court system. State tax revenues pay the salaries of all these and other state workers, including maintenance crews in state parks, the governor, and state court judges.

## State Tax Revenue

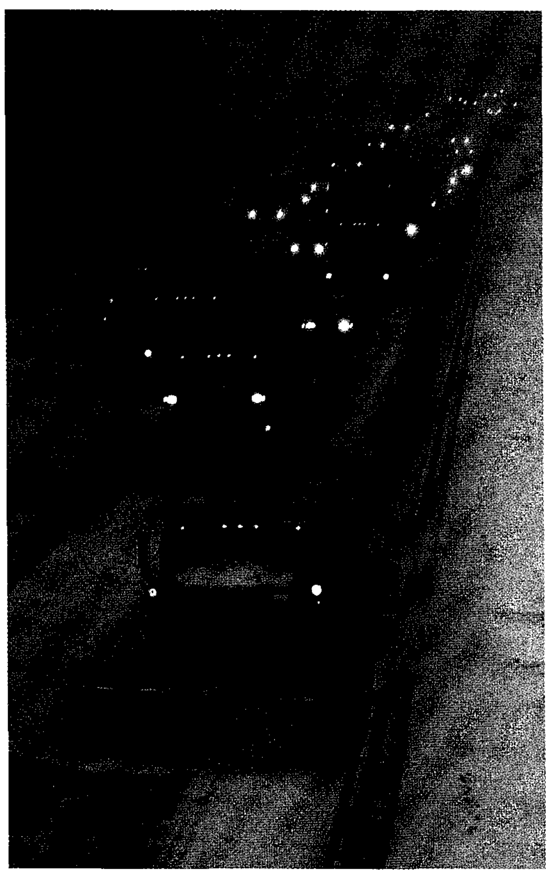
For every dollar a state spends, it must take in a dollar in revenue. Otherwise, it cannot maintain a balanced budget. The 50 states now take in nearly $500 billion a year from taxes. Where does this money come from? Sales and individual income taxes provide the largest part of state revenues. The pie chart on the left in Figure 14.7 shows you other sources of state revenue.

### Limits on State Taxation

Just as the United States Constitution limits the federal government's power to tax, it also puts limits on the states. Because trade and commerce are considered national enterprises, states cannot tax imports or exports. They also cannot tax goods sent between states.

State governments cannot tax federal property, such as military bases. Nonprofit organizations, religious groups, and charities are usually **tax exempt**; that is, they are not subject to taxes.

**tax exempt** *not subject to taxes*



**◀ Funds for plowing state highways are included in state budgets. Would you expect these funds to be included in a state's operating budget or capital budget?**

**real property** *physical property such as land and buildings*

**personal property** *possessions such as jewelry, furniture, and boats*

### Sales Tax

As Figure 14.7 shows, sales taxes are a main source of revenue for state governments. As you read in Section 1, a sales tax is a tax on goods and services. The tax—a percentage of the purchase price—is added on at the cash register and paid by the purchaser.

All but a few of the 50 states collect sales taxes. Sales tax rates range from 3 to 8 percent. Some local governments have their own, additional, sales tax.

In every state, some categories of products are exempt from sales tax. Many states do not charge sales tax on basic needs such as food and clothing. Some do not tax prescription medicines.

Even states without a sales tax impose excise taxes that apply to specific products and activities. Some are sin taxes—taxes that are intended to discourage harmful behavior—on products like alcoholic beverages and tobacco. Other taxes apply to hotel and motel rooms, automobiles, rental cars, and insurance policies. Many states also tax gasoline. This state gasoline tax is in addition to the federal tax.

### State Income Taxes

Individual income taxes are another large contributor to many states' budgets. People pay this state income tax in addition to the federal income tax. Figure 14.7 shows that state individual income taxes contribute about 14 percent of state revenue.

Some states tax incomes at a flat percentage rate (that is, as a proportional tax). Some charge a percentage of a person's federal income tax. Others have progressive rates, with a tax structure like the federal income tax. A few states tax only interest and dividends from investments, not wages and salaries.

**FAST FACT**

*In 1999, New Hampshire legislators were faced with a dilemma: how to fund the state's education system, without placing undue hardship on low- and middle-income taxpayers. Their solution: establish an education trust fund. This fund created a uniform statewide education property tax with provisions for tax relief for certain qualified taxpayers. It also dedicated to education revenue from increases in the tobacco tax and from tobacco settlement funds, as well as from various tax increases on businesses.*

### Corporate Income Tax

Most states collect corporate income taxes from companies that do business in the state. Some states levy taxes at a fixed, flat rate on business profits. A few charge progressive rates—that is, higher tax rates for businesses with higher profits.

As you can see from Figure 14.7, corporate income taxes contribute only a small percentage of state tax revenues—about 3 percent. Nevertheless, corporate income taxes can influence a state's economy.

Low corporate taxes, along with a well-educated work force and good public services, can make it easier to attract new businesses to a state. Politicians deciding on state corporate tax rates keep this fact in mind when they determine their state's policies.

### Other State Taxes

Besides the corporate income tax, businesses pay a variety of other state taxes and fees. Do you want to be a hairdresser, a carpenter, or a building contractor? If so, you will have to pay a licensing fee. A licensing fee is a kind of tax that people pay to carry on different kinds of business within a state.

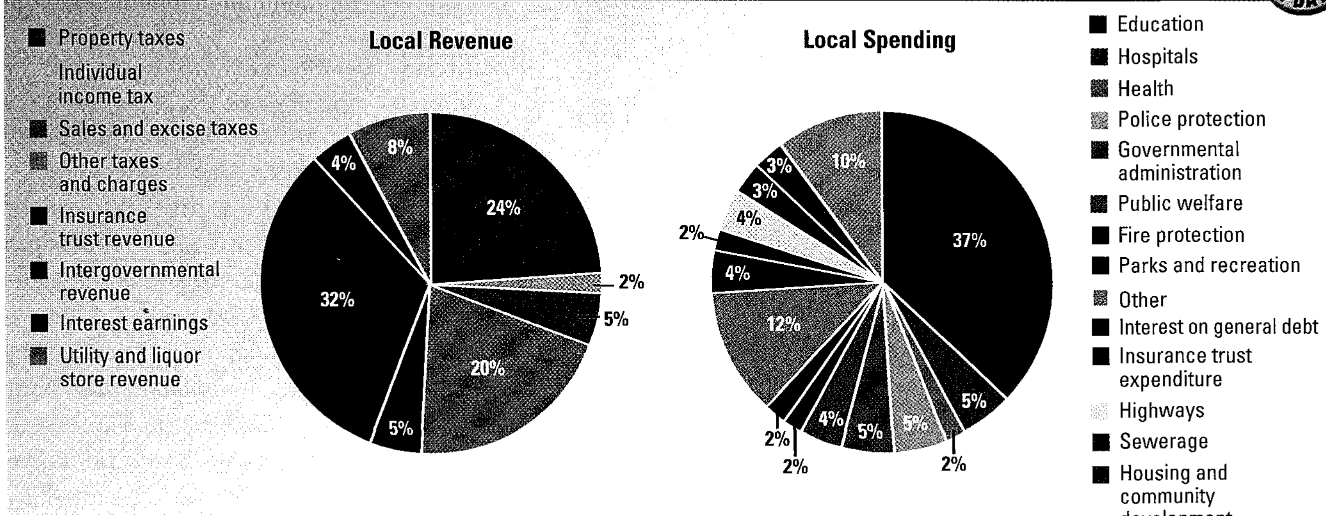
Some states charge a transfer tax when documents such as stock certificates are transferred and recorded. Other states tax the value of the stock shares that corporations issue.

Many states have rich natural resources, such as gold, oil, natural gas, fish, or lumber. Some states place a tax, called a severance tax, on companies that take (or "sever") these resources from the state's land and waters.

As you read in Section 2, the federal government taxes the estate of a person who has died. States, in turn, usually charge an inheritance tax on the value of the property that goes to each heir.

Some states also tax property. That includes **real property**, such as land and buildings, or "real estate." It also includes **personal property**, such as jewelry, furniture, and boats. Some states even tax intangible property, such as bank accounts, stocks, and bonds. Today, however, most property taxes, especially on real estate, are levied by local governments.

**Figure 14.8 Local Revenue and Spending, 1998**




Note: Because of rounding, totals may be less or greater than 100 percent.
Source: *Statistical Abstract of the United States*, 2001

**BUILDING KEY CONCEPTS** Major sources of local revenue include property taxes and state and federal funds ("intergovernmental revenue").
**Government What are the major categories of local government spending? How do they differ from the major categories of state government spending shown on page 376?**

## Local Government Spending and Revenue

Your local government plays a part in many aspects of everyday life, including public grade, middle, and high schools. Local governments hire police and firefighters. They build roads, libraries, hospitals, and jails. They pay teachers. Even though this is the level of government closest to you, it may be the one you know the least about.

### Forms of Local Government

You probably think of "local government" as a town or city. There are other types as well, including townships, counties, and special districts, such as school districts. All units of local government are created by the state government. The state gives them their powers and authority.

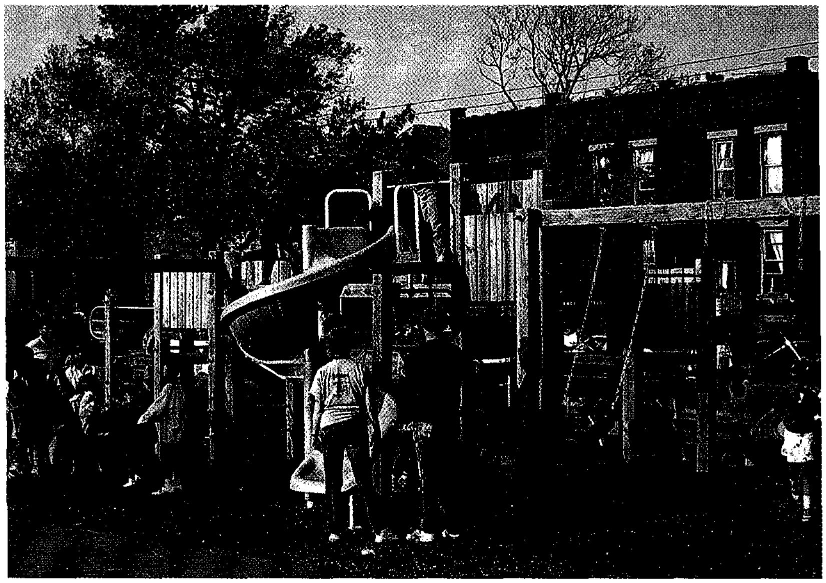
Today, there are more than 87,000 local government units in the United States. Together they collect more than $300 billion in tax revenues.

### The Jobs of Local Government

Local governments carry major responsibilities in these areas:

- Public school systems
- Law enforcement (local police, county sheriff's departments, park police)
- Fire protection
- Public facilities such as libraries, airports, and public hospitals
- Parks and recreational facilities such as beaches, swimming pools, and zoos
- Public health (restaurant inspectors, water treatment plants, sewer systems)
- Public transportation
- Elections (voter registration, preparation of ballots, election supervision, vote counting)
- Record keeping (birth/death certificates, wills, marriage licenses, and the like)
- Social services (food stamps, child care and welfare, and similar programs)

Many of these responsibilities are reflected in the graph showing local spending (above right). In some towns and cities, separate commissions or private



▲ Local taxes pay for city and town recreation areas like this playground.

**tax assessor** *an official who determines the value of a property*

corporations carry out some of these jobs. You can see, though, that local governments touch our lives every day.

### Property Taxes

Property taxes are levied on property owners in local communities to offset the expense of services such as street construction or maintenance. An official called a **tax assessor** determines the value of the property. Property taxes are usually figured as a fixed dollar amount per $1,000 of the assessed value. They are a main source of funding for public schools.

### Other Local Taxes

Local taxes are similar to the types of taxes imposed by the states. Besides property taxes, local governments levy sales, excise, and income taxes. These taxes affect not only residents of a community but also visitors. In fact, many are designed specifically to raise revenue from nonresidents.

Suppose you've gone on a school trip to New York City. The room rate for your hotel is $140 a night. When you see the bill in the morning, however, it's $160.55! Three different taxes have been added—an 8.25 percent sales tax, a 5 percent city tax, and a $2 per room occupancy tax. Many other cities have taxes aimed at tourists and business travelers. They include sales taxes on hotel rooms and rental cars, airport taxes, and taxes on movie or theater tickets.

Some large cities collect income taxes as payroll taxes. In these cities, many workers are commuters who pay property taxes and sales taxes in the suburbs where they live. If the city did not take taxes from their paychecks, these workers would get a "free ride" on the city's services. They would be using police, street cleaning, and other services paid for only by the people who live in the city.

## Section 4 Assessment

### Key Terms and Main Ideas

1. Describe the difference between a state's **operating budget** and its **capital budget.**
2. What is a **balanced budget?**
3. What are the main sources of state revenue? How do they differ from the main sources of local revenue?
4. Describe the difference between **real property** and **personal property.**

### Applying Economic Concepts

5. ***Using the Databank*** Study the bar graph showing Income Taxes per Capita on page 542 of the Databank. **(a)** Which are higher, federal income taxes or state and local income taxes? **(b)** How much are total income taxes per capita?
6. ***You Decide*** Turn to Figure 14.8 and study the main categories of local spending. Write a brief essay stating whether you agree with the spending priorities shown on the graph.

***Take It to the NET***

What taxes do citizens of your state pay? How do these taxes affect you? Find out more about taxation in your state. Then describe three forms of taxation in your state. Use the links provided in the Social Studies area at the following Web site. **www.phschool.com**

# The Bush Tax Cut

On June 7, 2001, President George W. Bush signed the Economic Growth and Tax Relief Reconciliation Act of 2001, called "TRA 2001" for short. This law includes major changes to the tax law that will affect most taxpayers. Although the tax cut was not as large as President Bush had sought, the Act largely fulfilled his campaign promise to reduce taxes in light of the projected federal budgetary surplus. Concerns about the slowing economy also brought more widespread support for the president's plan.


▲ President George W. Bush signs the 2001 tax bill.

**Lower Tax Brackets** The new law reduces the four highest tax brackets from their 2000 levels. It also creates a new lowest tax bracket with a 10% tax rate. The Treasury mailed tax refund checks—mostly for $300—to taxpayers during the summer of 2001 in order to anticipate these tax rate reductions.

**Children and Students** The Bush tax bill gradually increases the tax credit for dependent children under 17 from $500 in 2000 to $1000 in 2010. The new law also makes it easier for parents to afford to send their children to school. The amount that can be saved in an Education IRA grows from $500 to $2000 a year. Students will be able to withdraw money from special tuition-saver programs without having to pay taxes. More students and their parents will be able to deduct tuition expenses and student loan interest from their taxable income.

**Easier Retirement Savings** Taxpayers will also be able to contribute more to their retirement accounts. For example, the allowable contribution to an Individual Retirement Account (IRA) goes up from $2000 a year in 2000 to $3000 in 2002, $4000 in 2005, and $5000 in 2008. Workers over age 50 will be allowed to contribute an extra $500 a year (starting in 2002) and $1000 a year (in 2006).

**Will These Changes Last?** Nearly all the changes in the new tax law are phased in over several years, and then will disappear in 2011 when the law expires. This means that future Congresses and future presidents will have to decide whether to extend these provisions or return to the law as it was in 2000.

## Applying Economic Ideas

1. Why did concerns about the slowing economy generate support for the president's tax cut plan? Why might it have helped the economy for the Treasury to mail out refunds in the summer of 2001 rather than waiting for people to file their taxes in early 2002?

2. What are some potential problems with having a tax cut that evaporates in 2011? Why might Congress have decided to do it this way?

# Chapter 14 Assessment

## Chapter Summary

A summary of major ideas in Chapter 14 appears below. See also the **Guide to the Essentials of Economics,** which provides additional review and test practice of key concepts in Chapter 14.

***Section 1 What Are Taxes? (pp. 359–363)***

The United States Constitution gives the government power to collect taxes to fund government programs. A **tax base** is a value on which a tax is calculated, such as income, property, or profits. Economists describe three different types of tax structures: **proportional, progressive,** and **regressive.** Many taxes in the United States are based on a principle of ability-to-pay. Other taxes are based on a benefits-received principle. Economists use supply and demand analysis to determine the **incidence of a tax,** or who bears the final burden of a tax.

***Section 2 Federal Taxes (pp. 365–369)***

The federal government has six major sources of **revenue,** or income. They are **individual income taxes, corporate income taxes,** social insurance payments (including **Social Security, Medicare,** and unemployment taxes), **excise taxes, estate** and **gift taxes,** and **tariffs,** or taxes on imports. Individual income taxes are paid on a pay-as-you-earn basis through payroll **withholding.** Each year, people with income must file a **tax return** and pay taxes on all **taxable income.**

***Section 3 Federal Spending (pp. 371–374)***

Much of the federal government's spending is **mandatory spending,** that is, it is required by existing law. The remainder of the budget is **discretionary spending.** Major categories of government spending include **entitlements,** such as **Social Security** and **Medicare,** defense, and interest on the national debt.

***Section 4 State and Local Taxes and Spending (pp. 375–380)***

Like the federal government, state and local governments fund their programs by levying taxes. States have two budgets, an **operating budget** and a **capital budget.** Most state and local government revenues fall into the following categories: **income tax, sales tax,** severance tax, inheritance tax, and property tax.

## Key Terms

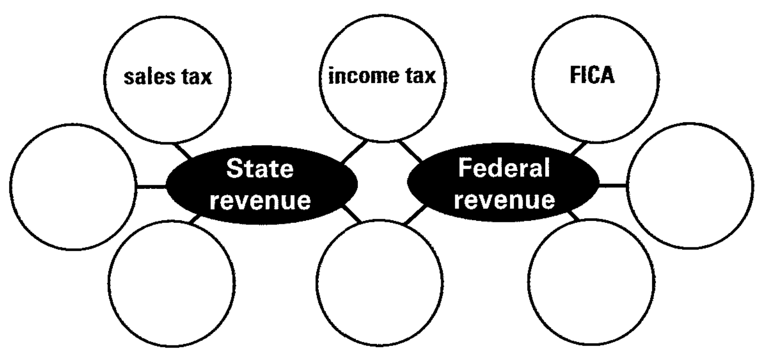
Match the following terms with the definitions listed below. You will not use all of the terms.

| | |
|---|---|
| **taxable income** | **balanced budget** |
| **revenue** | **withholding** |
| **discretionary spending** | **mandatory spending** |
| **progressive tax** | **real property** |

1. Income received by a government from taxes and nontax sources
2. Physical assets such as land and buildings
3. Budget category in which funds are committed to certain programs by law
4. Total income minus exemptions and deductions
5. Tax structure with a rate that increases with the amount or value being taxed
6. Amount taken out of an employee's paycheck as a prepayment on taxes

## Using Graphic Organizers

7. Copy the double web map below on a separate sheet of paper. Complete the double web map by writing examples of sources of federal and state government revenue in the circles. You may add more circles as needed.



## Reviewing Main Ideas

8. Why are some taxes considered to be regressive?
9. How can you determine the incidence of a tax?
10. List and describe four sources of state government revenue.
11. What are entitlement programs? Give three examples of entitlement programs and explain their purposes.

## Critical Thinking

12. **Synthesizing Information** Review the powers of and limits to taxation in the United States. How does the Constitution limit federal and state powers of taxation?
13. **Predicting Consequences** Assume that you are a representative to Congress. What forms of mandatory and discretionary spending do you support? What are possible consequences of showing your support or lack of support for different forms of spending?
14. **Making Comparisons** Create a table in which you identify types of taxes at the local, state, and national levels and describe the economic importance of each.
15. **Expressing Problems Clearly** In your opinion, should a tax be applied at the same rate to all people, or should those who are wealthier be expected to pay at a higher rate? Support your opinion with concrete examples.

## Problem-Solving Activity

16. Review the criteria economists use for determining a good tax. Then create a proposal for a new tax that meets those criteria. Would you be willing to pay the tax you've just proposed?

### Economics Journal

***Essay Writing*** Review your Economics Journal entry for this chapter. Write a summary of the types of taxes you pay on a regular basis, and indicate whether you think the taxes you pay are fair or not.

## Skills for Life

***Distinguishing Fact from Opinion*** Review the steps shown on page 364; then answer the following questions using the selection below.

17. Which statements in the excerpt below are facts?
18. Which statements in the excerpt below are opinions?
19. What phrases indicate that the statements are opinions?
20. Does Representative Johnson present evidence to support his opinions?
21. Has Representative Johnson supported his opinions well? Explain your answer.

**Representative Sam Johnson:**
"Working to Reduce Your Tax Burden"

I believe that our current tax code is economically destructive, impossibly complex, and overly intrusive. It has impeded our ability to create jobs, encourage savings and investment, and realize the American dream.

This is illustrated by the fact that our current tax code has grown from 11,000 words to over 7 million. According to West Publishing, who is an official publisher of the tax code, it takes two volumes and 1,168 pages to publish the code, plus, an additional 6,439 pages of Federal Tax Regulations that apply to income taxes. To make it easier to comply with these regulations, the IRS has created about 480 forms with an additional 280 to explain how to fill out the 480. I think this is ridiculous. That is why this system should not be changed, but replaced. . . .

### *Take It to the NET*

***Chapter 14 Self-Test*** As a final review activity, take the Economics Chapter 14 Self-Test in the Social Studies area at the Web site listed below, and receive immediate feedback on your answers. The test consists of 20 multiple-choice questions designed to test your understanding of the chapter content. **www.phschool.com**

Economics Simulation

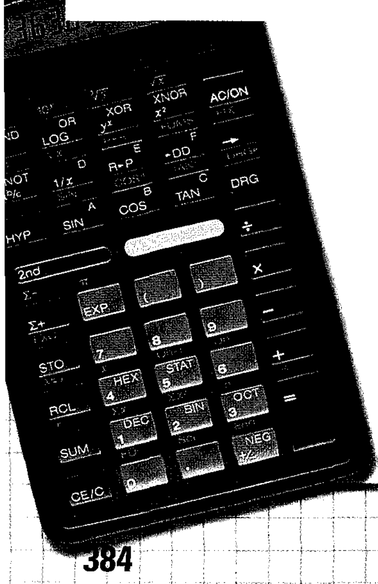
# Voluntary Contributions

One reason that governments tax their citizens is to pay for services that benefit the entire community, including education, public transportation, garbage collection, and fire protection. Ideally, all these public services could be provided by voluntary contributions. People would help pay for these services simply because it is the right thing to do. In reality, many people would take a "free ride" and not contribute. In this simulation, you will have a chance to look at the kind of choices citizens might make and the results of those choices. You'll see how "free riders" affect the general good.

▲ In this town meeting, citizens are discussing how to pay for public education. Can it be paid for through voluntary contributions?

**Materials**

Notebook paper
Play money (or handmade equivalent): one $10, three $5, and five $1 bills for each citizen-group, plus the state treasury of $500 in mixed bills



## Preparing the Simulation

Suppose you live in a state in which the money spent on public education causes a decrease in other costs in the state budget. For every dollar contributed to education, the cost of welfare and criminal justice decrease by a total of three dollars. These budget savings are returned to citizens as tax refunds. Each citizen's refund equals the total budget savings divided by the number of citizens—regardless of the amount each citizen contributes. See the budget table for an example of how these savings would be calculated.

**Step 1:** Select two students from your class who will act as state treasurer and budget director. The rest should form groups of three to five students. Each group works together and makes decisions as one "citizen." One member of each citizen-group should be in charge of the group's money and record keeping.

**Step 2:** Each citizen-group begins the simulation with $30: one $10 bill, three $5 bills, and five $1 bills. The state treasurer has $500 in mixed bills. He or she can also write "IOUs" for citizen tax refunds. Each citizen-group should use a sheet of notebook paper to make a contributions and refunds record, using the table on the next page as a model.

**Step 3:** The state budget director should use a sheet of notebook paper to make a budget worksheet using the table on the next page as a model.

## Conducting the Simulation

This simulation is run in three sessions.

**Session 1:** Each citizen-group decides whether it wants to make a contribution to public education, and if so, how much it wants to give. Each group can choose to contribute between $0 and $10 in each session. Record your contribution on your Contributions and Refunds Record, and give the money in cash to the state treasurer.

The state budget director adds up all the first session's contributions to education. Then he or she figures the state's budget savings using the Budget Worksheet, keeping in mind that every dollar collected for education results in three dollars saved from welfare and criminal justice. The state budget director gives this information to the state treasurer, who then gives each citizen-group its refund in dollars. If no cash is available, the treasurer will issue IOUs.

**Session 2:** Each citizen-group again decides whether to make a contribution to public education. Even if you have received a refund, you can still contribute only $10 each day. Record your contribution on your Contributions and Refunds Record, and give the money to the treasurer.

The state budget director again adds up the total contributions, using the Budget Worksheet. He or she figures the savings, and the treasurer gives each citizen-group its refund.

**Session 3:** Each citizen-group decides again whether to make a contribution to education, using the same process as in earlier sessions. When refunds for this session have been calculated and given, each group adds up all the money it has in cash and IOUs. The total amount of money is the citizen-group's score.

**Budget Table for a 10-Citizen State**

| Total Contributions | State Budget Savings | Tax Refund per Citizen |
|---|---|---|
| $20.00 | $60.00 | $6.00 |
| $50.00 | $150.00 | $15.00 |
| $80.00 | $240.00 | $24.00 |
| $100.00 | $300.00 | $30.00 |

## Contributions and Refunds Record

| | Session 1 | Session 2 | Session 3 |
|---|---|---|---|
| Balance at beginning of session | $ | $ | $ |
| – Contribution | – $ | – $ | – $ |
| + Refund | + $ | + $ | + $ |
| = New balance | = $ | = $ | = $ |

## Budget Worksheet

| | Session 1 | Session 2 | Session 3 |
|---|---|---|---|
| Total contributions<br>x $3.00 =<br>Total budget savings | $<br>X $3.00<br>$ | $<br>X $3.00<br>$ | $<br>X $3.00<br>$ |
| Total budget savings<br>÷ Number of citizen-groups<br>= Tax refund per citizen-group | $<br>÷ ___<br>$ | $<br>÷ ___<br>$ | $<br>÷ ___<br>$ |

## Simulation Analysis

**Discuss these questions as a group.**

1. From the state treasurer's Budget Worksheet, analyze whether all the citizen-groups were equally generous in their contributions. Did any citizens try to get a free or almost-free ride? Did this tactic pay off for them? How did that affect other groups that did make contributions?
2. Each citizen-group began with $30. How does this compare with the amount that each one has now?
3. Which session brought in the largest total amount of contributions to education?
4. **Determining Relevance** What does this experiment demonstrate about the need for governments to use taxes to pay for public services?

# Chapter 15 Fiscal Policy

Spending more money than you earn is usually a bad idea. But what if you face an unexpected need for more cash than you have? How do you decide whether you should borrow money or not spend the money at all?

The federal government deals with this dilemma every year when it prepares its budget. Sometimes borrowing money is the best choice for the economy. Other times, borrowing money causes more problems than it solves. All debts must be repaid, sooner or later.

## Economics Journal

List five items in your city or town—buildings, infrastructure, or services—that are built, run, or funded by government.

## Keep It Current

Items marked with this logo are periodically updated on the Internet. Keep up-to-date with what's in the news. To get current information on fiscal policy go to **www.phschool.com**

Section 1

# Understanding Fiscal Policy

## Preview

### Objectives

After studying this section you will be able to:

1. **Describe** how the government uses fiscal policy as a tool for achieving its economic goals.
2. **Explain** how the government creates the federal budget.
3. **Analyze** the impact of fiscal policy decisions on the economy.
4. **Identify** the limits of fiscal policy.

### Section Focus

The federal government takes in money for the budget through taxation and borrowing. The decisions the government makes about taxing and spending can have a powerful impact on the overall economy.

### Key Terms

**fiscal policy**
**federal budget**
**fiscal year**
**Office of Management and Budget (OMB)**
**Congressional Budget Office (CBO)**
**appropriations bill**
**expansionary policies**
**contractionary policies**

The word *fiscal* comes from the Latin word *fisc*, which means "basket" or "bag." Over time, the word came to be linked with a bag of money. Specifically, it meant the "bag," or pool, of money held by the government. In Chapter 14, you read about how the government collects money, primarily through taxes, and how the government spends its money on a wide variety of programs. In this section you will read about fiscal policy. **Fiscal policy** is the use of government spending and revenue collection to influence the economy.

## Fiscal Policy as a Tool

As you learned in Chapter 14, the federal government takes in and spends huge amounts of money. The federal government spends about $200 million every hour, $4.8 billion every day, and about $2 *trillion* a year. The tremendous flow of cash into and out of the economy has a large impact on aggregate demand and supply in the economy.

Fiscal policies are used to achieve economic growth, full employment, and price stability. Fiscal policy decisions—how much to spend and how much to tax—are among the most important decisions the federal government makes. These decisions are made each year during the creation of the federal budget.

## The Federal Budget

The **federal budget** is a written document indicating the amount of money the government expects to receive for a certain year and authorizing the amount the

**fiscal policy** *the use of government spending and revenue collection to influence the economy*

**federal budget** *a plan for the federal government's revenues and spending for the coming year*

▲ **As part of its budget, the federal government spends billions of dollars each year on national defense, including items such as the F-15 fighter jet.**

**Figure 15.1 Creating the Federal Budget**

Federal agencies send requests for money to the Office of Management and Budget.

↓

The Office of Management and Budget works with the President to create a budget. In January or February, the President sends this budget to Congress.

↓

Congress makes changes to the budget and sends this new budget to the President.

↙ ↘

The President signs the budget into law.

The President vetoes the budget. If Congress cannot get a $\frac{2}{3}$ majority to override the President's veto, Congress and the President must work together to create a new, compromise, budget.

BUILDING KEY CONCEPTS

Congress and the White House work together over the course of the year to put together a federal budget. **Government Who takes the first step in the budget process?**

**fiscal year** *a twelve-month period that can begin on any date*

**Office of Management and Budget (OMB)** *government office that manages the federal budget*

**Congressional Budget Office (CBO)** *government agency that provides economic data to Congress*

government can spend that year. The federal budget is just a plan to pay for the federal government's expenditures. Much like a family's budget, it lists expected income and shows exactly how the money will be spent.

The federal government prepares a new budget for each fiscal year. A **fiscal year** is a twelve-month period that is not necessarily the same as the January-to-December calendar year. The federal government uses a fiscal year that runs from October 1 through September 30.

The federal budget takes about 18 months to prepare. During this time, citizens, Congress, and the President debate the government's spending priorities. There are four basic steps in the federal budget process.

## Spending Proposals

The federal budget must fund many offices and agencies in the federal government, and Congress cannot decide all of their needs. Before the budget can be put together, each federal agency writes a detailed estimate of how much it expects to spend in the coming fiscal year.

These spending proposals are sent to a special unit of the executive branch, the **Office of Management and Budget (OMB).** The OMB is part of the Executive Office of the President. As its name suggests, the OMB is responsible for managing the federal government's budget. Its most important job is to prepare the federal budget.

## In the Executive Branch

The OMB holds several meetings to review the Federal agencies' spending proposals. Representatives from the agencies must explain their spending proposals to the OMB and convince the OMB to give them as much money as they have asked for. Usually, OMB gives each agency less than they say they need.

The OMB then works with the President's staff to combine all of the individual agency budgets into a single budget document. This document gives the President's overall spending plan for the coming fiscal year. The President presents the budget to Congress in January or February.

## In Congress

The President's budget is only a starting point, and the number of changes Congress makes depends on the relationship between the President and Congress. Congress carefully considers, debates, and modifies the President's proposed budget. For help, members of Congress rely on the assistance of the **Congressional Budget Office (CBO).** Created in 1974, the CBO gives Congress independent economic data to help with its decisions.

Much of the work done by Congress—the House of Representatives and the Senate—is done by small committees. Working at the same time in different houses of Congress, committees in the House and Senate analyze the budget and hold hearings at which agency officials and others can speak out about the budget. The

House Budget Committee and Senate Budget Committee combine their work to propose one initial budget resolution, which must be adopted by May 15 of the year. This resolution is not intended to be final, but gives initial estimates for revenue and spending to guide the legislators as they continue working on the budget.

Then, in early September, the Budget Committees for each house of Congress propose a second budget resolution that sets binding spending limits. Congress must pass this resolution by September 15, after which Congress cannot pass any new bills that would spend more money than the budget resolution allows.

Finally, the Appropriations Committees for each house submit bills to authorize specific spending. By this time, the new fiscal year is about to start and Congress faces pressure to get these **appropriations bills** adopted and submitted to the President quickly before the previous year's funding ends on September 30. If Congress cannot finish in time, it must pass short-term emergency spending legislation known as "stop-gap funding" to keep the government running. If Congress and the President cannot even agree on temporary funding, the government "shuts down" and all but the most essential federal offices will close.

### In the White House

Congress sends the appropriations bills to the President, who can sign them into law. If he vetoes any of these bills, Congress must either come up with enough votes to override the veto—usually, this is impossible—or work with the President to write an appropriations bill on which both sides can agree. Once that is completed, the President signs the new budget into law.

## Fiscal Policy and the Economy

Government officials who take part in the budget process debate how much should be spent on specific programs such as defense, education, and scientific research. They also consider how much should be spent in total. The total level of government spending can be changed to help increase or decrease the output of the economy. Similarly, taxes can be raised or lowered to help increase or decrease the output of the economy.

Fiscal policies that try to increase output are known as **expansionary policies.** Fiscal policies intended to decrease output are called **contractionary policies.** By carefully choosing to follow expansionary or contractionary fiscal policies, the federal government tries to make the economy run as smoothly as possible.

**appropriations bill** *a bill that sets money aside for specific spending*

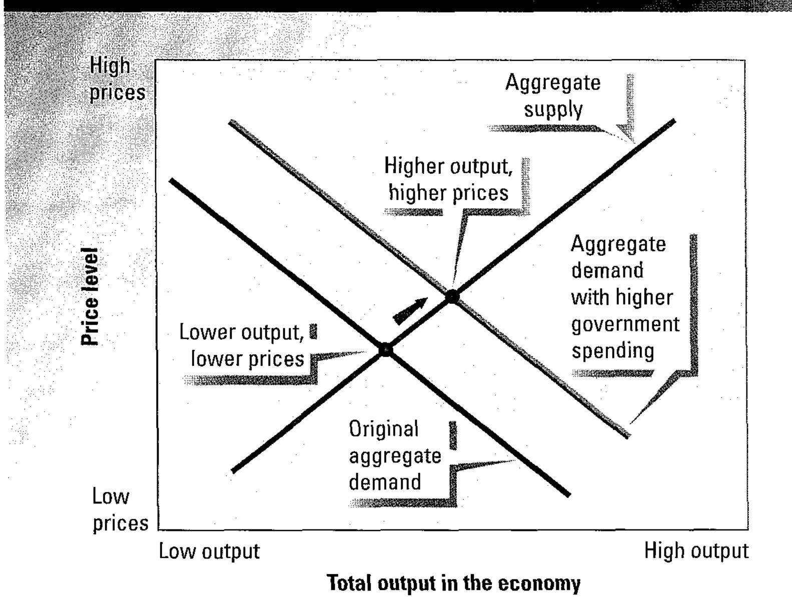
**expansionary policies** *fiscal policies, like higher spending and tax cuts, that encourage economic growth*

**contractionary policies** *fiscal policies, like lower spending and higher taxes, that reduce economic growth*

## Expansionary Fiscal Policies

Governments use expansionary fiscal policies to raise the level of output in the economy. That is, they use expansionary policies to encourage growth, either when the economy is in a recession or to try to prevent a recession. Recall from Chapter 12 that a recession is the part of the business

*Figure 15.2* **Effects of Expansionary Fiscal Policy**




BUILDING KEY CONCEPTS

Expansionary fiscal policy helps the economy by increasing aggregate demand and output.
**Supply and Demand How do increases in government spending affect aggregate supply?**

cycle that occurs when output declines for two quarters, or three-month periods, in a row. Expansionary fiscal policies fall into either or both of two categories: increasing government spending and cutting taxes.

### Increasing Government Spending

If the federal government increases its spending or buys more goods and services, it triggers a chain of events that raises output and creates jobs. Government spending increases aggregate demand, which causes prices to rise. (See Figure 15.2.) According to the law of supply, higher prices encourage suppliers of goods and services to produce more. To do this, firms will hire more workers. In short, an increase in demand will lead to lower unemployment and to an increase in output, as shown in Figure 15.3. The economy will be encouraged to expand.

### Cutting Taxes

Tax cuts work much like higher government spending to encourage the economy to expand. If the federal government cuts taxes, individuals have more money to spend, and businesses keep more of their profits. Consumers will have more money to spend on goods and services, and firms will have more money to spend on land, labor, and capital. These actions will increase demand, prices, and output.

## Contractionary Fiscal Policies

At some stages in the business cycle, the government may choose contractionary fiscal policies. Contractionary fiscal policies try to decrease aggregate demand, and by decreasing demand, reduce the growth of economic output. If contractionary fiscal policies are strong enough, they may slow the growth of output to zero, or even lead to a fall in GDP.

The government sometimes tries to slow down the economy because fast-growing demand can exceed supply. When demand exceeds supply, producers must choose between raising output and raising prices. If producers cannot expand production enough, they will raise their prices, which leads to high inflation. As you read in Chapter 12, inflation is an increase in prices over time. Inflation cuts into consumers' purchasing power and discourages economic growth and stability. Fiscal policies aimed at slowing the growth of total output generally fall into either or both of two categories: decreasing government spending and raising taxes.

### Decreasing Government Spending

If the federal government spends less, or buys fewer goods and services, it triggers a chain of events that may lead to slower GDP growth. A decrease in government spending leads to a decrease in aggregate demand because the government is buying less than before. Decreased demand tends to cause lower prices. According to the law of supply, lower prices encourage suppliers to cut their production and possibly fire workers. Lower production lowers the growth rate of the economy and may even reduce GDP.

**BUILDING KEY CONCEPTS**

The goal of expansionary fiscal policy is to add money to the economy.
**Government How might cutting taxes have similar effects to those shown in the chart?**

***Figure 15.3* Flowchart of Effects of Expansionary Fiscal Policy**

To expand the economy, the government buys more goods and services.

↓

Companies that sell goods to the government earn profits, which they use to pay their workers and investors more and to hire new workers.

↓

Workers and investors have more money and spend more in shops and restaurants.

↓

Shops and restaurants buy more goods and hire more workers to meet their needs.

↓

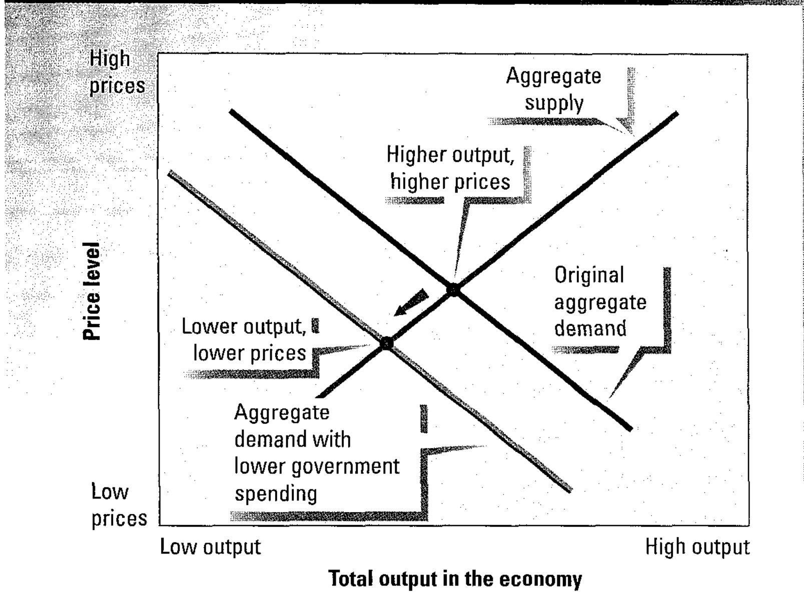
In the short term, government spending leads to more jobs and more output.

This chain of events is the exact opposite of what happens when the government increases spending. The government uses the same tools to try to influence the economy in both cases, but in different ways, and with very different goals.

### Increasing Taxes

When the federal government raises taxes, individuals have less money to spend on goods and services or to save for the future. Firms keep less of their profits and decrease their spending on land, labor, and capital. As a result of these decreases in demand, prices tend to fall. Producers of goods and suppliers of services tend to cut production. This slows the growth of GDP.

**Figure 15.4 Effects of Contractionary Fiscal Policy**




BUILDING KEY CONCEPTS

By cutting spending, the government can slow economic growth.

**Supply and Demand How does lower government spending affect equilibrium?**

## Limits of Fiscal Policy

On paper, fiscal policies look like powerful tools that can keep the economy in perfect balance. In reality, fiscal policies can be clumsy and difficult to put into practice.

### Difficulty of Changing Spending Levels

Increasing or decreasing the amount of federal spending is not an easy task. As you read in Chapter 14, many of the spending categories in the federal budget are entitlements that are fixed by law. Nearly 60 percent of the federal budget is set aside for programs such as Medicaid, Social Security, and veterans' benefits before Congress even begins the budget process. The government cannot change spending for entitlements under current law. As a result, significant changes in federal spending generally must come from the small part of the federal budget that includes discretionary spending. This gives the government less leeway for increasing or lowering spending.

### Predicting the Future

Governments use fiscal policies to prevent big changes in the level of GDP. Despite the statistics, however, it is difficult to know the current state of the economy. As you read in Chapter 12, no one can predict how quickly the business cycle will move from one stage to the next, nor can anyone identify exactly where the economy is at any specific point in the cycle. Economists often disagree about the meaning of statistics, whether they show the economy is in good condition or ready for a recession.

Predicting future economic performance is even more difficult. As a result, lawmakers may put off making changes in fiscal policy until they know more about how the economy is performing. By then, it may be too late to act.

In addition, when lawmakers put fiscal policies in place, they base their decisions partly on the past behaviors of individuals. It is risky to assume that people will, for example, respond the same way to a tax cut in the future as they have in the past.

### Delayed Results

Although changes in fiscal policy affect the economy, changes take time. Once government officials decide when and how to change fiscal policy, they have to put these changes into effect within the federal budget, which itself takes over a year to


**▲ Cutting government spending is difficult because some voters will usually object to cuts that impact their interests.**

develop. Finally, they have to wait for the change in spending or taxing to affect the economy.

By the time the policy takes effect, the economy might be moving in the opposite direction. The government could propose massive public spending on highways in the middle of a recession, only to have the economy recover before construction begins. In these cases, fiscal policy would only add to the new trend, instead of correcting the original problem. If the government continued to spend lots of money on highways in the middle of a recovery, it could lead to high inflation and a labor shortage.

### Political Pressures

The President and members of Congress, who develop the federal budget and the federal government's fiscal policies, are elected officials. If they wish to be reelected, they must make decisions that benefit the people who elect them, not necessarily decisions that are good for the overall economy.

For example, government officials have an incentive to practice expansionary fiscal policies by increasing government spending and lowering taxes. These actions are usually popular with voters, although in Section 3 you will read about why some people disapprove of government spending. Government spending benefits the firms that receive government contracts and the individuals who receive direct payments from the government. Lower taxes leave more disposable income in people's pockets.

On the other hand, contractionary fiscal policies that decrease government spending or raise taxes are often unpopular. Firms and individuals that expect income from the government are not happy when the income is reduced or cut off. No one likes to pay higher taxes, unless the tax revenue is spent on a specific, highly valued good or service.

### Coordinating Fiscal Policy

For fiscal policies to be effective, various branches and levels of government must plan and work together. This is very difficult to do. For example, if the federal government is pursuing contractionary policies, ideally state and local governments should pursue consistent fiscal policies. Yet, state and local governments may be pursuing different goals for fiscal policy than the federal government.

## Global Connections

***Experimenting in Japan*** Japan has used expansionary fiscal policies in recent years to try to end an economic slump. When real estate prices and stock prices decreased sharply in Japan in the early 1990s, investors, businesses, and banks lost much of their wealth. Consumers and businesses spent less, and banks could not afford to lend money for new investment, so the economy suffered. The Japanese government has tried to increase demand by spending money on new roads, government-sponsored loans, and tax cuts. Between 1992 and 1999, the government passed nine major bills spending a total of $1.1 trillion, or nearly $90,000 for every man, woman, and child in Japan. After eight years of slow or negative growth, the Japanese economy appeared to be growing more quickly at the end of the decade. However, the government had to borrow heavily to pay for its programs.

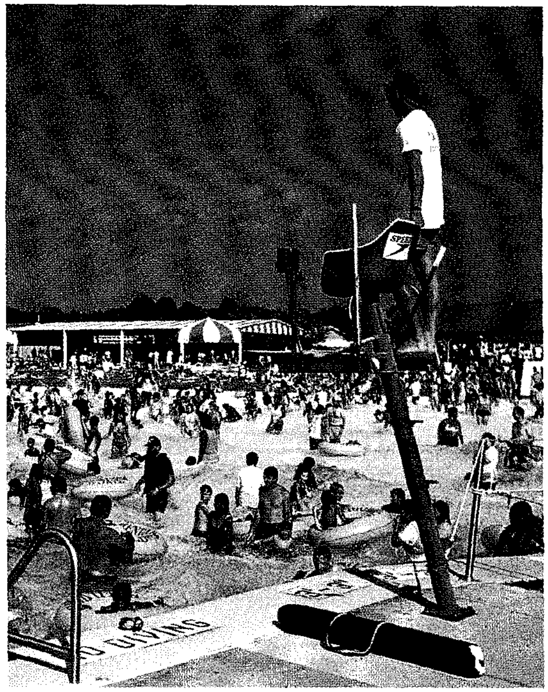
Businesspeople, politicians, and economists often disagree about how well the economy is performing, and what the goals of the fiscal policy should be.

Also, different regions of the economy can experience very different conditions. California and Hawaii may have high unemployment while Nebraska and Massachusetts face rising prices and a labor shortage.

In addition, in order for the federal government's fiscal policy to be effective, it must also be coordinated with the monetary policies of the Federal Reserve. You'll read more about monetary policy in the next chapter.

Even when all of these obstacles are overcome, fiscal policy faces still another limitation. The short-term effects of fiscal policy can be different from the long-term effects. A tax cut or increased government spending will give a temporary boost to economic production and to employment. However, as the economy returns to full employment, high levels of government spending combined with market spending will lead to increased inflation as the economy overheats.

Similarly, an increase in taxes or a decrease in government spending may "cool" the economy and lead to a recession. However, in the long run, reduced government spending will allow other types of spending to increase without risking inflation. If there is more investment spending, this could lead to higher growth in the long run. In this way, slow growth or even recession in the short term can lead to prosperity in the future.



◀ **New community-built pools, like this one in California, have an economic impact on the local level.**

## Section 1 Assessment

### Key Terms and Main Ideas

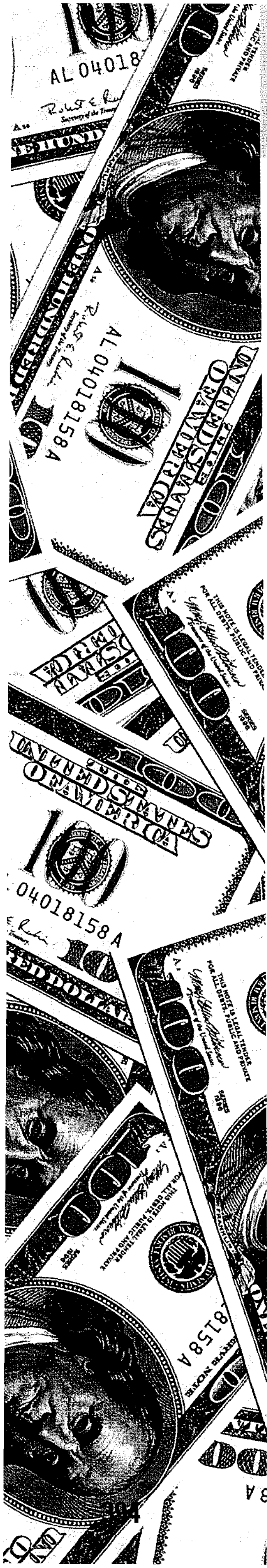
1. Explain **fiscal policy** and how it relates to the **federal budget.**
2. When does the federal government's **fiscal year** begin?
3. What role does the **Office of Management and Budget (OMB)** play in creating the federal budget?
4. What are two types of **expansionary policies?**

### Applying Economic Concepts

5. ***Critical Thinking*** Explain how a tax cut can lead to a higher GDP in the short run.
6. ***Try This*** Which fiscal policy strategy do you think policymakers would use in each of these scenarios? Explain your answers. **(a)** Inflation is rising, and real GDP is up by 4 percent. **(b)** GDP is down, and the unemployment rate has increased to 10 percent.
7. ***Using the Databank*** The Consumer Confidence Index measures how optimistic American consumers are that the economy will do well. The graph on page 539 of the Databank measures consumer confidence in the 1990s. If you had been a policymaker in 1998, would you have recommended expansionary or contractionary fiscal policies? Explain your answer.

***Take It to the NET***

Creating and maintaining the federal budget is an important task. Try to manage the budget yourself, and then describe the experience in a brief paragraph. Use the links provided in the Social Studies area at the following Web site for help in completing this activity.
**www.phschool.com**





# Comparing Circle Graphs

A circle graph enables you to compare parts with a whole. Together, the sections of the circle add up to 100 percent. The circle graphs below show how the federal government spent its money in 1995 and 2000. The different sizes of the circles reflect the increase in spending before taking inflation into account. Use the following steps to analyze the circle graphs below.

1. **Identify the kind of information presented in the graph.** Match the colors in the circle graph to the spending categories listed in the key. (a) What percentage of the budget was spent on defense in 1995? (b) In 2000? (c) What program used the largest percentage of the federal budget in 2000?

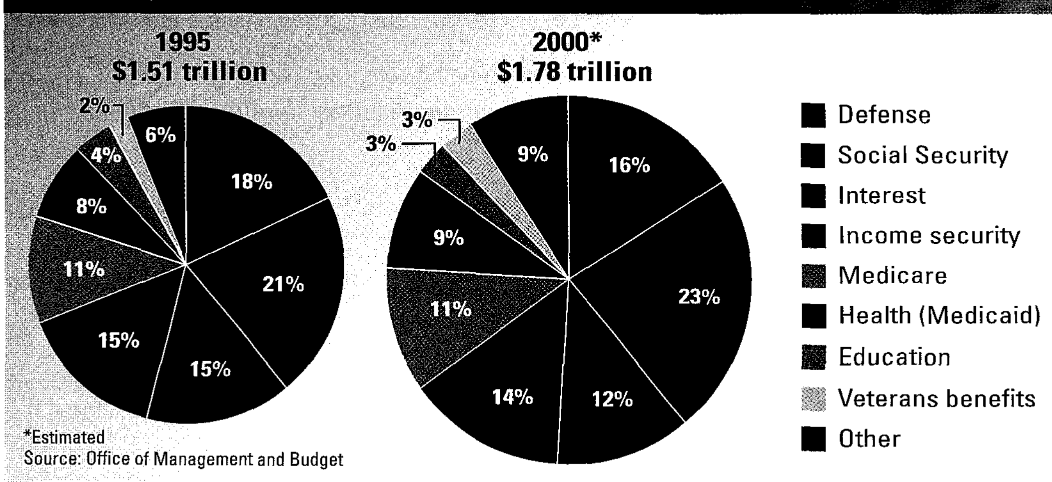
2. **Look for relationships among the data.** (a) Which programs increased their percentages of the budget between 1995 and 2000? (b) Which three programs used the largest percentages of the budget in 1995? (c) In 2000?

3. **Use the graphs to draw conclusions.** Social Security benefits grew by 2 percent between 1995 and 2000. Based on this figure, some people might argue that government is providing more benefits to each recipient. What is another way to interpret this statistic?

## Additional Practice

Locate federal budget data for any year between 1941 and 1945. Draw a circle graph showing all the programs that accounted for at least 3 percent of the budget. How does this budget differ from the 2000 budget?

### Federal Spending, 1995 and 2000




*Estimated
Source: Office of Management and Budget

Section 2

# Fiscal Policy Options

## Preview

### Objectives

**After studying this section you will be able to:**

1. **Compare and contrast** classical economics and Keynesian economics.
2. **Explain** the basic principles of supply-side economics.
3. **Understand** the role that fiscal policy has played in American history.

### Section Focus

Fiscal policy is the use of government spending and taxes to work toward low unemployment, low inflation, and steady economic growth. Keynesian economic theories and supply-side economic theories suggest two very different ways for government to encourage growth.

### Key Terms

**classical economics**
**productive capacity**
**demand-side economics**
**Keynesian economics**
**multiplier effect**
**automatic stabilizer**
**supply-side economics**
**Council of Economic Advisers (CEA)**

For thousands of years, governments have collected taxes and spent money. Until the 1930s, however, most economists believed that a government should keep its role in the economy small. These economists belonged to a school of thought called classical economics.

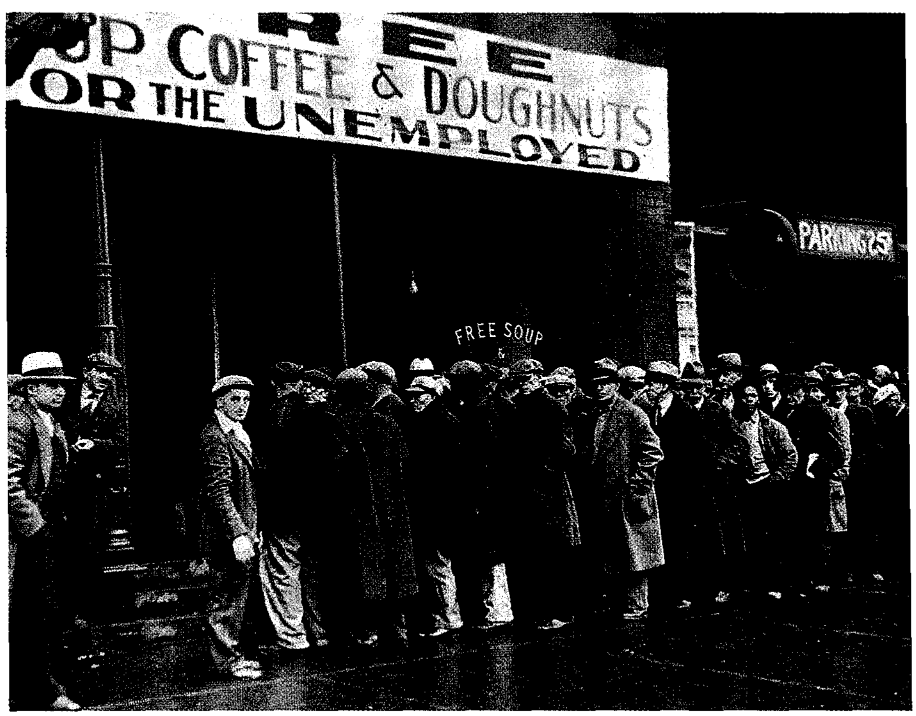
## Classical Economics

Throughout this book, you have read about the workings of a free market economy. In a free market, people act in their own self-interest, causing prices to rise or fall so that supply and demand will always return to equilibrium. This idea that free markets regulate themselves is at the heart of a school of thought known as **classical economics.** Adam Smith, David Ricardo, and Thomas Malthus are all considered classical economists. For more than a century, classical economics dominated economic theory and government policies.

The Great Depression that began in 1929 challenged this thinking. Prices fell over several years, so demand should have increased enough to stimulate production as consumers took advantage of low prices. Instead, demand also fell as people lost their jobs and bank failures wiped out their savings. According to classical economics, the market should have reached equilibrium, with full employment. But it didn't, and millions suffered from unemployment and other hardships. Many people were too poor to buy enough food for their families, while farmers lost their farms because corn was selling for seven cents a bushel, beef for two and a half cents a pound, and apples were five for a penny.

**classical economics** *the idea that free markets can regulate themselves*

**▼ The economic hardships brought about by the Great Depression challenged the ideas of classical economics.**



**productive capacity** *the maximum output that an economy can produce without big increases in inflation*

**demand-side economics** *the idea that government spending and tax cuts help an economy by raising demand*

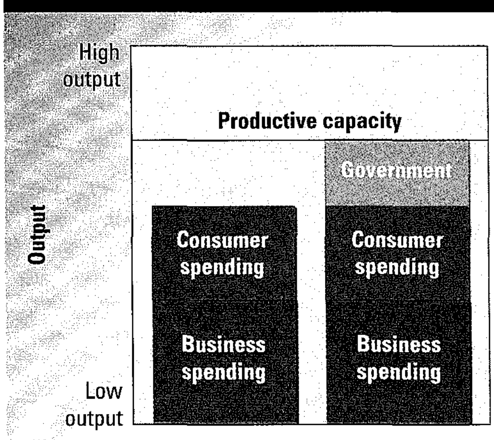
**Keynesian economics** *a form of demand-side economics that encourages government action to increase or decrease demand and output*

The Great Depression highlighted a problem with classical economics: it did not address *how long* it would take for the market to return to equilibrium. Classical economists recognized it could take some time, and looked to the "long run" for equilibrium to reestablish itself. One economist, who was not satisfied with the idea of simply waiting for the economy to recover on its own, commented: "In the long run we are all dead." That man was John Maynard Keynes (pronounced CANES).

## Keynesian Economics

British economist John Maynard Keynes developed a new theory of economics to explain the Depression. Keynes presented his ideas in 1936 in a book called *The General Theory of Employment, Interest, and Money.* He wanted to develop a comprehensive explanation of economic forces. Such an explanation should, he argued, tell economists and politicians how to get out of economic crises like the Great Depression. It should also tell them how to avoid crises in the first place. In sharp contrast to classical economics, Keynes wanted to give government a tool it could use now, in the short run.

**Figure 15.5 Keynesian Economics**




In a recession or depression, businesses and consumers do not demand as much as the economy can produce. Keynes argued that government spending can bring the economy up to its productive capacity.

BUILDING KEY CONCEPTS

Keynes added government spending to the classical model of demand.
**Government What role did Keynes envision for government in the economy?**

### A Broader View

A key to Keynes's ideas was a broader view of a country's economy. Classical economists had always looked at the equilibrium of supply and demand for *individual products.* In contrast, Keynes focused instead on the economy *as a whole.*

Keynes looked at the productive capacity of the entire economy. **Productive capacity,** often called full-employment output, is the maximum output that an economy can sustain over a period of time without increasing inflation. Keynes attempted to answer the difficult question posed by the Great Depression: why does the actual production in an economy sometimes fall far short of its productive capacity?

Keynes argued that the Great Depression was continuing because neither consumers nor businesses had an incentive to spend enough to cause an increase in production. After all, why would a company spend money to increase production when no one had enough money to buy its products? How could unemployed consumers spend money they didn't have? The only way to end the Depression would be if someone, somewhere, started spending.

### A New Role for Government

Keynes thought that the spender should be the government. In the early 1930s, only the government still had the resources to spend enough to affect the whole economy. In effect, the government could make up for the drop in private spending by buying goods and services on its own. This, Keynes argued, would encourage production and increase employment. Then, as people went back to work, they would spend their wages on more goods and services, leading to even higher levels of production. This ever-expanding cycle would carry the economy out of the depression, and the government could then step back and reduce its spending. This is known as **demand-side economics** because it involves changing demand to help the economy.

These ideas form the basis of Keynesian economics. **Keynesian economics** is basically the idea that the economy is composed of three sectors—individuals, business, and government—and that government actions can make up for changes in the other two. Keynesian economics proposes that by using fiscal policy the government can, and should, help the economy.

### Avoiding Recessions and Depressions

Keynes argued that fiscal policy can be used to fight the two fundamental macroeconomic problems. These two opposing problems are periods of recession/depression and periods of inflation.

The federal government, Keynes argued, should keep track of the total level of spending by consumers, businesses, and government in the economy. If total spending begins to fall far below the level required to keep the economy running at full capacity, the government should watch out for the possibility of an upcoming recession or depression.

The government can respond by increasing its own spending until spending by the private sector returns to a higher level. Or, it can cut taxes, so that spending and investment by consumers and businesses increases. As you read in the previous section, raising government spending and cutting taxes are expansionary fiscal policies.

President Franklin D. Roosevelt carried out expansionary fiscal policies after his election in 1932. His New Deal put people to work building dams, planting forests, and constructing schools across the country, all paid for by the government.

Many people argue that instead of creating new jobs, such public works projects only shift employment from the private to the public sector. The taxes required to pay for them reduce demand in the private sector as much as they increase it in the public sector. In addition, work relief jobs are less productive than private sector jobs because their goal is employment, not efficient production.

### Controlling Inflation

Keynes also argued that the government could use a contractionary fiscal policy to prevent inflation or reduce its severity. The government can reduce inflation either by increasing taxes or by reducing its own spending. Both of these actions decrease overall demand.

**▲ During the Depression, the government's Works Progress Administration (WPA) hired artists to paint murals in public places like this California post office.**

### The Multiplier Effect

Fiscal policy, although difficult to control, is an extremely powerful tool. The key to its power is the **multiplier effect.** The multiplier effect in fiscal policy is the idea that every one dollar change in fiscal policy—whether it be an increase in spending or a decrease in taxes—creates a *greater than* one dollar change in the national income. In other words, the effects of changes in fiscal policy are multiplied.

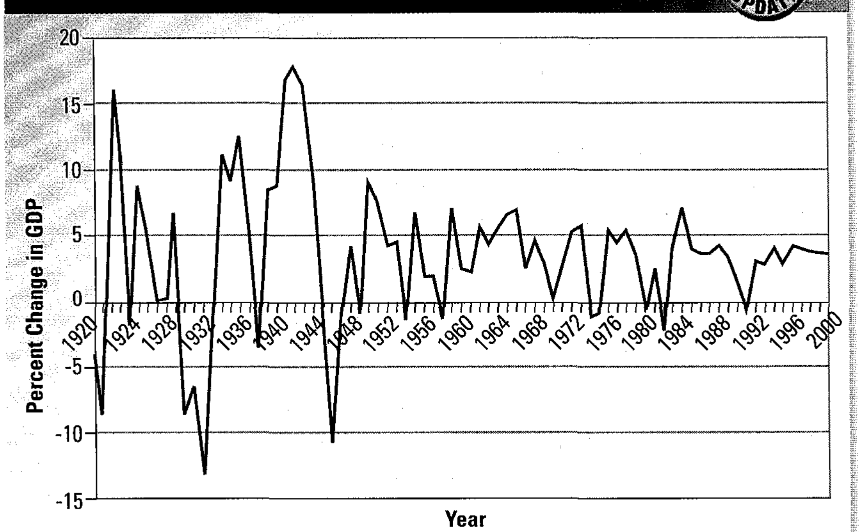
Suppose the federal government finds that business investment is dropping. It fears a recession. To prevent a recession, in the next budget, the government decides to spend an extra $10 billion to stimulate the economy. How will this affect the economy?

With this government spending, demand, income, and GDP will increase by $10 billion. After all, if the government buys an extra $10 billion of goods and services, then

**multiplier effect** *the idea that every one dollar of government spending creates more than one dollar in economic activity* an extra $10 billion of goods and services have been produced. However, the GDP will increase by more than $10 billion. Here's why:

The businesses that sold the $10 billion in goods and services to the government have earned an additional $10 billion. These businesses will spend their additional earnings on wages, raw materials, and investment, sending money to workers, other suppliers, and stockholders. What will the recipients do with this money? They will spend part of it, perhaps 80 percent, or $8 billion. The businesses that benefit from this second round of spending will then pass it back to households, who will again spend 80 percent of it, or $6.4 billion. The next round will add an additional $5.1 billion to the economy, and so on. When all of these rounds of spending are added up, the initial government spending of $10 billion leads to an increase of $50 billion in GDP. The multiplier effect gives fiscal policy initiatives a much bigger kick than the initial amount spent.

**Figure 15.6 Annual Change in GDP, 1920 –2000***




*Based on 1996 dollars
Sources: Bureau of Economic Analysis, *Historical Statistics of United States: Colonial Times to 1970*

The United States experienced strong economic swings before World War II.
**Government How do the years after the war show the effect of automatic stabilizers on the economy?**

## Automatic Stabilizers

Fiscal policy is used to achieve many economic goals. One of the most important things that fiscal policy can achieve is a more stable economy. A stable economy is one in which there are no rapid changes in the economic indicators you read about in Chapter 12. What's more, set up properly, fiscal policy can come close to stabilizing the economy *automatically*.

Figure 15.6 shows how real GDP in the United States changed each year from 1920 to 2000. Prior to World War II, there were much larger changes in GDP from year to year than after World War II. Although GDP still fluctuates, these fluctuations have not been as large as they were before World War II. Economic growth has been much more stable in the United States in the last 50 years.

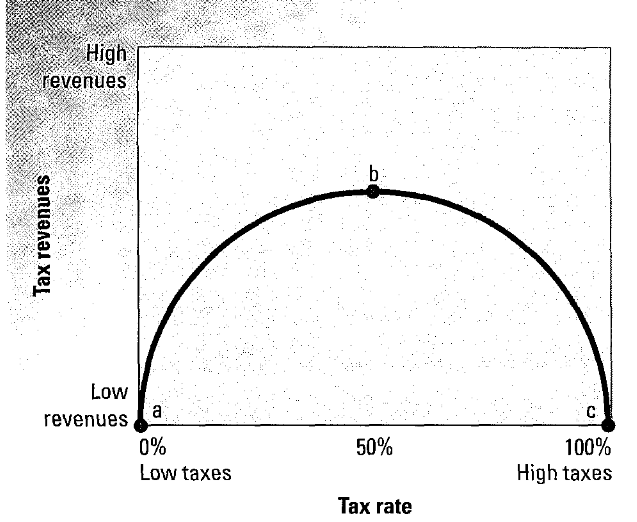
Why did this happen? After the war, federal taxes and spending on transfer payments—two key tools of fiscal policy—increased sharply. Taxes and transfer payments, or transfers of cash from the government to consumers, stabilize economic growth. When national income is high, the government collects more in taxes and pays out less in transfer payments. Both of these actions take money away from consumers, and therefore reduce spending. This decrease in spending balances out the increase in spending that results from rising income in a healthy economy.

The opposite is also true. When income in the country is low, the government collects less in taxes and pays out more in transfer payments. Both actions increase the amount of money held by consumers, and thus increase spending. This increase in spending balances against the decrease in spending that results from falling income.

As the graph shows, taxes and transfer payments do not eliminate changes in the rate of growth of GDP, but they do make these changes smaller. They are known as stabilizers because they work to stabilize economic growth. It is important to note that policymakers do not have to make changes in taxes and transfer payments for them to have their stabilizing effect. Taxes and most transfer payments are tied to the GDP and to personal income, so they change automatically. Thus, taxes and transfer payments are known as **automatic stabilizers.**

Some stabilizers are no longer automatic. The former Aid to Families with Dependent Children, often called "welfare," lost its entitlement status in 1996 and was renamed Temporary Assistance for Needy Families (TANF). Now, the federal government gives the states a set amount of money each year to spend as they wish. However, the stabilizer effect was not completely lost. When the economy boomed in the late 1990s, state spending on TANF fell.

***Figure 15.7*** **Laffer Curve**




BUILDING KEY CONCEPTS

According to the Laffer curve, both a high and a low tax rate can produce the same revenues. **Incentives Why do higher tax rates sometimes cause revenues to fall?**

## Supply-Side Economics

Another school of economic thought, supply-side economics, promotes a different direction for fiscal policy. **Supply-side economics** stresses the influence of taxation on the economy. Supply-siders believe that taxes have strong negative influences on economic output. While Keynesian economics uses government to change aggregate demand, supply-side economics tries to increase economic growth by increasing aggregate supply.

### The Laffer Curve

Supply-side economists often use the Laffer curve, named after the economist Arthur Laffer, to illustrate the effects of taxes. The Laffer curve shows the relationship between the tax rate set by the government and the total tax revenue that the government collects. The total revenue depends on both the tax rate and the health of the economy. The Laffer curve illustrates that high tax rates may not bring in much revenue if these high tax rates cause economic activity to decrease.

Figure 15.7 depicts the Laffer curve. Suppose the government imposes a tax on the wages of workers. If the tax rate is zero, as at point a on the graph, the government will collect no revenue, although the economy will prosper from the lack of taxes. As the government raises the tax rate, it starts to collect some revenue. Follow this change in Figure 15.7 by tracing the curve from no taxes at point a to 50 percent taxation at point b.

To the left of point b on the curve, higher tax rates will discourage some people from working as many hours and prevent companies from investing and increasing production. The net effect of a higher tax rate and a slightly lower tax base is an increase in revenue.

To the right of point b, the decrease in workers' effort is so large that the higher tax rate *decreases* total tax revenue. In other words, high rates of taxation will eventually discourage so many people from working that tax revenues will fall sharply. In the extreme case of a 100 percent tax rate, no one would want to work! In this case, shown at point c on the curve, the government would collect no revenue.

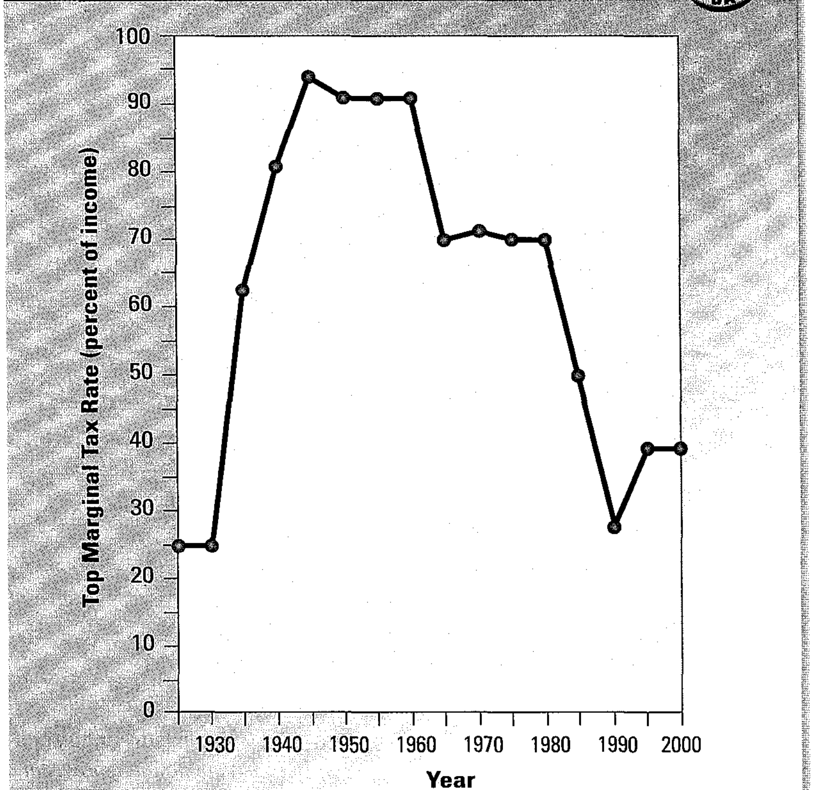
### Taxes and Output

The heart of the supply-side argument is that a tax cut increases total employment so much that the government actually collects more in taxes at the new, lower tax rate. Suppose the initial tax on labor is $3 an hour, and the typical worker works 30

**automatic stabilizer** *a government program that changes automatically depending on GDP and a person's income*

**supply-side economics** *a school of economics that believes tax cuts can help an economy by raising supply*

*Figure 15.8* **Top Marginal Tax Rate, 1925–2000**




Note: The top marginal tax rate is applied to individual income above a certain level, which varied from about $30,000 in the late 1980s to $5,000,000 from 1936 to 1941. The top tax rate of 39.6% in 2000 applied to income above approximately $288,000, close to the historic average.
Source: *National Taxpayers Union*

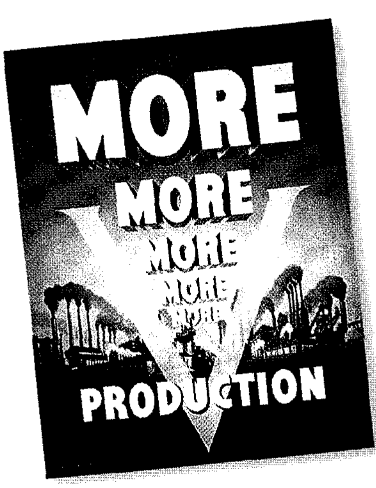
BUILDING KEY CONCEPTS

Tax rates varied widely throughout the last century.
**Government When were top marginal income tax rates at their highest?**

**Council of Economic Advisers (CEA)** *a group of three respected economists that advise the President on economic policy*

hours per week, paying a total of $90 in taxes each week. If the government cuts the tax on labor to $2 an hour, and the worker responds by working 50 hours per week, the worker will pay $100 in taxes a week, an increase of $10. If all workers respond to the tax cut by working this much harder, the tax cut will increase total revenue.

Actual experience has proven that while a tax cut encourages some workers to work more hours, the end result is a relatively small increase in the number of hours worked. In the example above, if the tax cut increased the hours worked from 30 hours to 35 hours, the worker would pay only $70 in taxes ($2 per hour times 35 hours), down from $90 ($3 per hour times 30 hours). In general, taxpayers do not react strongly enough to tax cuts to increase tax revenue.




◀ **Increasing production during World War II finally ended the high unemployment of the 1930s.**

## Fiscal Policy in American History

As you recall, Keynes presented his ideas at the same time that the world economy was still engulfed in the Great Depression. President Herbert Hoover, influenced by classical economics, thought that the economy was basically sound and would return to equilibrium on its own. His popular successor, President Franklin D. Roosevelt, was much more willing to increase government spending to help lift the economy out of depression. After the Democratic party won landslide victories in the 1932 and 1934 federal elections, Roosevelt started several programs to pump money into the economy.

### World War II

Keynes's theory was fully tested in the United States during World War II. As the country geared up for war, government spending increased dramatically. The government spent large sums of money to feed soldiers and equip them with everything from warplanes to rifles to medical supplies. This money was given to the private sector in exchange for goods. Just as Keynesian economics predicted, the additional demand for goods and services moved the country sharply out of the Great Depression and toward full productive capacity. After the war, Congress created the **Council of Economic Advisers (CEA)**, a group of three respected economists that could advise the President on economic policy.

## The Kennedy Administration

Between 1945 and 1960, the U.S. economy was healthy and growing, despite a few minor recessions. The last recession continued into the term of President John F. Kennedy, with unemployment at 6.7 percent.

Kennedy's chief financial policy advisor was Walter Heller, a Keynesian who thought that the economy was below its productive capacity. Heller believed that unemployment would fall to 4 percent if the economy were at full capacity. He convinced Kennedy that tax cuts would stimulate demand and bring the economy closer to full productive capacity.

As Figure 15.8 shows, tax rates were extremely high in the early 1960s. The highest individual income tax rate was about 90 percent, compared to about 40 percent today. The top business rate was 52 percent, compared with 35 percent in recent years. So Kennedy proposed tax cuts, both because he agreed with Heller, and because tax cuts are popular.

A modified version of Kennedy's tax cuts was enacted in 1964, after Kennedy's assassination. At the same time, the Vietnam War raised government spending. Over the next two years, the economy grew rapidly. Consumption and the GDP increased by more than 4 percent a year. While there is no way to prove that the tax cut caused this increase, the result is what Keynesian economics had predicted.

## Supply-Side Policies in the 1980s

Keynesian economics was used on many other occasions in the 1960s and 1970s to try to adjust the national economy. During the late 1970s, however, unemployment and inflation rates soared. Ronald Reagan became President in 1981 and instituted new policies based on supply-side economics. In 1981, Reagan proposed a tax cut that was put in place and reduced taxes by 25 percent over three years. Unlike Keynes, Reagan did not believe that government spending should be used to bring the economy out of a recession. After a brief but harsh recession in 1982, caused partly by the Fed's tightening of the money supply to reduce inflation, the economy recovered and flourished.

For many reasons, however, government spending continued to rise each year while Reagan was in office. During the Reagan and George H.W. Bush presidencies and the first years of Bill Clinton's first term, the federal government spent much more money than it took in. This gap caused increasing concern among economists and policymakers. In the next section, you'll read about these concerns in detail.

**THE WALL STREET JOURNAL. CLASSROOM EDITION**

**In the News** *As the following excerpt from a* Wall Street Journal Classroom Edition *article shows, tax cuts that reward specific types of spending multiplied in the 1990s:*

"... the White House proposed nearly a tax credit a day, each one designed to ease some pocket of concern in the prosperous economy. There is a new tax credit for people providing home care to disabled relatives and one for businesses that help immigrant employees learn English."

## Section 2 Assessment

### Key Terms and Main Ideas

1. What is the central idea of **classical economics?**
2. Why is full-employment output another way to describe **productive capacity?**
3. Compare and contrast **Keynesian economics** and **supply-side economics.**
4. Explain the **multiplier effect.**

### Applying Economic Concepts

5. ***Critical Thinking*** Why can low tax rates encourage investment and increase employment and wages?
6. ***Try This*** Keynes suggested that building pyramids was good for the Egyptian economy. Why would Keynes have suggested this, and can you think of an analogy in our society for the building of the pyramids? Explain your answer.

***Take It to the NET***

Write a brief essay describing the life, times, and ideas of John Maynard Keynes. Use the links provided in the Social Studies area at the following Web site for help in completing this activity. **www.phschool.com**

ECONOMIC

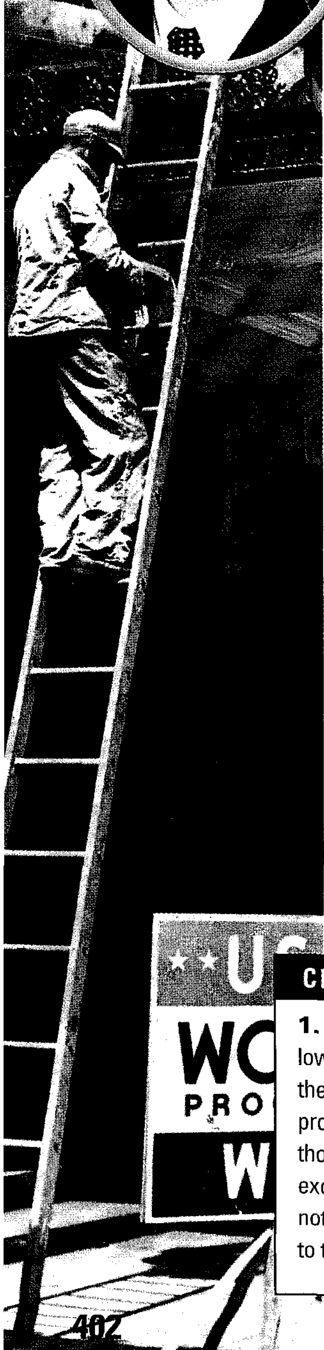
# Profile

Economist

Entrepreneur

## John Maynard Keynes
**(1883–1946)**

*A government official, teacher, and writer, John Maynard Keynes is one of a handful of economists who have substantially affected the course of history. His revolutionary theories on supply, demand, and unemployment led to the first use of government programs to help manage the nation's economy.*



### Early Career and Accomplishments

Keynes graduated from the University of Cambridge with a degree in mathematics in 1905. Rising through government service, he served as Britain's economic advisor at the Versailles Conference, where the peace treaty to end World War I was drafted.

Upset over the harsh treaty, Keynes resigned from government and returned to Cambridge to teach. In 1919, he wrote *The Economic Consequences of the Peace,* which correctly predicted that the treaty's economic penalties on Germany would lead to future problems in Europe.

### Keynes and the Great Depression

At the height of the Great Depression in 1936, Keynes completed his most famous book, *The General Theory of Employment, Interest and Money*. In analyzing the causes and effects of the Depression, he revolutionized thinking about government's role in a nation's economy.

Before Keynes, most economists believed that government should leave the economy alone as it passed through the low points of the business cycle. In this view, the laws of supply and demand—as they applied to employment and wages, consumption and production, and prices—would lead to economic recovery.

### Keynesian Economics

Keynes claimed that in a depression, a natural recovery is impossible because the private sector cannot consume all it can produce. He argued that government should lower interest rates and taxes to encourage investment and increase spending on public projects to stimulate demand for goods and create jobs. Keynes recognized that raising spending while cutting taxes would lead to budget deficits, but he accepted that liability if it boosted employment and led to economic recovery.

Keynes's theories were controversial at the time, and remain so today, even though other economists have greatly revised and expanded upon his ideas. In the United States, politicians have followed his program of government intervention in good economic times as well as bad. This has led some critics to blame Keynesian economics for the huge federal budget deficits that the United States built up from the 1960s to the mid-1990s.

### CHECK FOR UNDERSTANDING

**1. Source Reading** Explain the following Keynes statement: "Formerly there was no expenditure out of the proceeds of borrowing that it was thought proper for the State to incur except for war. . . . Therefore, we have not infrequently had to wait for a war to terminate a major depression."

**2. Critical Thinking** How would government spending programs stimulate employment, consumption, and production in the private sector of the economy?

**3. Learn More** Find out what involvement Keynes had with international economic institutions after World War II, and explain how these institutions now reflect Keynes's economic theories.

Section 3

# Budget Deficits and the National Debt

## Preview

### Objectives

**After studying this section you will be able to:**

1. **Explain** the importance of balancing the budget.
2. **Analyze** how budget deficits add to the national debt.
3. **Summarize** the problems caused by the national debt.
4. **Identify** how a government can reduce budget deficits and the national debt.

### Section Focus

Fiscal policy decisions can lead the federal government to spend more money than it brings in, causing budget deficits and a national debt. Economists, lawmakers, and citizens debate whether the benefits of government spending outweigh the costs of debt.

### Key Terms

**balanced budget**
**budget surplus**
**budget deficit**
**hyperinflation**
**Treasury bill**
**Treasury note**
**Treasury bond**
**national debt**
**crowding-out effect**

As you have learned, the federal government uses fiscal policy—taxing and spending—to make changes in the economy. Fiscal policy is a powerful tool. It can be used to help stimulate demand, increase production, create jobs, increase GDP, avoid recessions, control inflation, and stabilize economic growth. As you'll read in this section, raising government spending can lead to yearly budget deficits that add up to an enormous debt. The costs of this debt must be measured against the benefits of higher government spending.

## Balancing the Budget

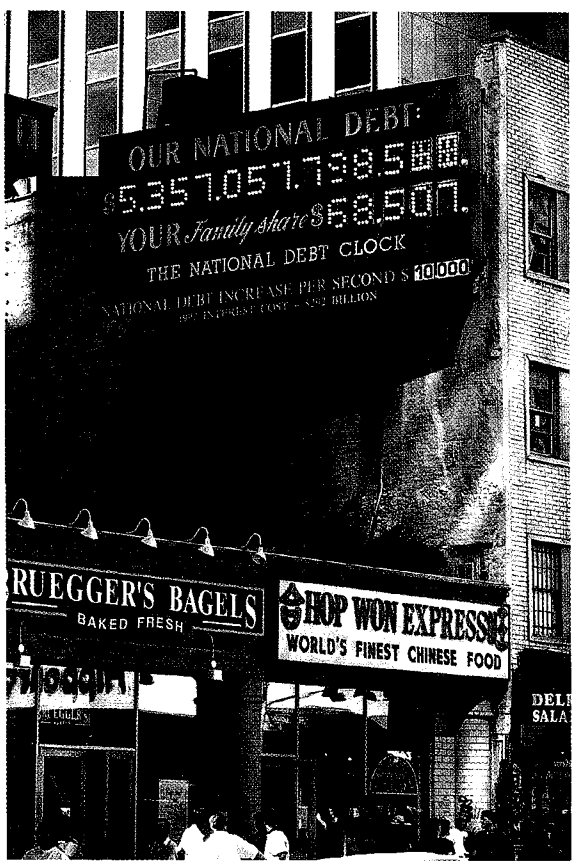
The basic tool of fiscal policy is the federal budget. It is made up of two fundamental parts: revenue (taxes) and expenditures (spending programs). When the federal government's revenues equal its expenditures in any particular year, the federal government has a **balanced budget**. There is the same amount of money going into and coming out of the Treasury.

In reality, the federal budget is almost never balanced. Usually, it is either running a *surplus* or a *deficit*. A **budget surplus** occurs in any year when revenues exceed expenditures. In other words, there is more money going into the Treasury than coming out of it. A **budget deficit** occurs in any year when expenditures exceed revenues. In other words, there is more money coming out of the Treasury than going into it.

**balanced budget** *a budget in which revenues are equal to spending*

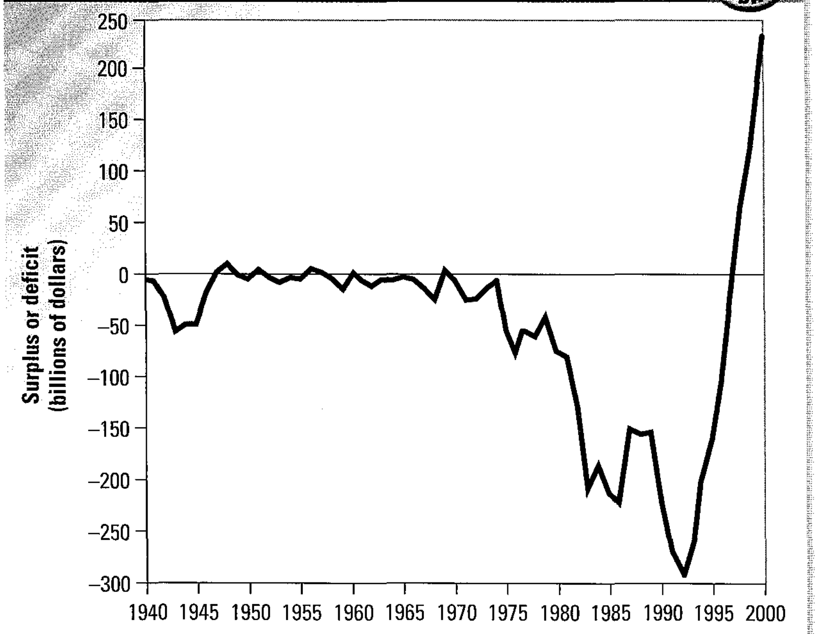
**budget surplus** *a situation in which the government takes in more than it spends*

**budget deficit** *a situation in which the government spends more than it takes in*




◀ **Until recently the national debt, the sum of all the money owed by the federal government, seemed to be spiraling out of control.**

**Figure 15.9 Budget Surpluses and Deficits, 1940–2000**




Source: Office of Management and Budget

Budget deficits swelled in the 1980s and early 1990s. **Government What was the dominant trend in deficits in the late 1990s?**

Assume the federal government starts with a balanced budget. If the government decreases expenditures without changing anything else, it will run a budget surplus. Similarly, if it increases taxes—revenues—without changing anything else, it will run a surplus.

The same sort of analysis describes budget deficits. If the government increases expenditures without changing anything else, it will run a deficit. Similarly, if it decreases taxes without changing anything else, it will run a deficit. The deficit can grow or shrink because of forces beyond the government's control. During a recession, fewer people are working, and tax revenues fall as spending on antipoverty programs rises. Surpluses and deficits can be very large figures. The largest deficit was about $290 billion, in 1992.

## Responding to Budget Deficits

When the government runs a deficit, that means it did not take in enough revenue to cover its expenses for the year. When this happens, the government must find a way to pay for the extra expenditures. There are two basic actions the government can take to do so.

## Creating Money

The government could create new money to pay salaries for its workers and benefits for citizens. Traditionally, governments simply printed the bills they needed. Today, the government can create money electronically by depositing money in people's bank accounts. The effect is the same. This approach works for relatively small deficits, but can cause severe problems when there are large deficits. Why?

When the government creates more money, it increases the amount of money in circulation. This increases the demand for goods and services and can increase output. But once the economy reaches full employment, output cannot increase. The increase in money will mean that there are more dollars, but the same amount of goods and services. Prices in the economy rise so that a greater amount of money will be needed to purchase the same amount of goods and services. In other words, prices go up, and the result is inflation. As you read in Chapter 13, high levels of inflation are a serious economic problem.

Covering very large deficits by printing more money can cause very high inflation, called **hyperinflation**. This happened in Germany and Russia after World War I, Brazil and Argentina in the 1980s, and Ukraine in the 1990s. If the United States experienced hyperinflation, a shirt that cost $30 in June might cost $50 in July, $80 in August, and $400 in December!

## Borrowing Money

As an alternative to creating money to cover a budget deficit, the federal government can borrow money. The government commonly borrows money by selling bonds. As you read in Chapter 11, a bond is a type of loan: a promise to repay money in the future, with interest. Consumers and businesses buy bonds from the government. The government thus has the money

**hyperinflation** *very high inflation* to cover its budget deficit. In return, the purchasers of the bonds earn interest over time.

United States Savings Bonds allow millions of Americans to lend small amounts of money to the federal government for a period as brief as three months or as long as 30 years. In return, they earn interest on the bonds. Other common forms of government borrowing are **Treasury bills, Treasury notes,** and **Treasury bonds.** Treasury bills are short-term bonds that must be repaid within a year or less. Treasury notes cover periods from two to ten years. Treasury bonds may be issued for as long as 30 years.

▲ **In the past, governments often just printed more bills to fund government spending.**

Federal borrowing lets the government undertake more projects than it could otherwise afford. These include projects such as building airports, highways, and national parks. Wise borrowing allows the government to create more public goods and services. Federal borrowing, however, also has serious disadvantages.

## The National Debt

One problem with the government borrowing money is that it creates a national debt. The **national debt** is the total amount of money the federal government owes to bondholders. Every year that there is a budget deficit, and the federal government borrows money to cover it, the national debt will grow.

The national debt is owed to investors who hold Treasury bonds, bills, and notes. If you have a federal savings bond, that bond represents money you have loaned the government. The national debt is owned by investors in the United States and around the world who have put their money and their trust in the federal government. In this way, a modest national debt is good because it offers a safe investment for individuals and businesses.

### The Difference Between Deficit and Debt

Many people are confused about the difference between the deficit and the debt. The deficit is the amount of money the government borrows for one budget, representing one fiscal year. The debt, on the other hand, is a sum of all the government borrowing up to that time, minus the borrowings that have been repaid. The debt is the total of all deficits and surpluses.

### Measuring the National Debt

In dollar terms, the size of the national debt is extremely large. At the end of the twentieth century, it exceeded $5 trillion! Such large numbers can be confusing. A more useful way to evaluate the size of the debt is to look at it as a percentage of GDP.

Historically, debt as a percentage of GDP rises during wartime, when government spending increases faster than taxation, and falls during peacetime. This can be seen in the graph in Figure 15.10.

**Treasury bill** *a government bond that is repaid within three months to a year*

**Treasury note** *a government bond that is repaid within two to ten years*

**Treasury bond** *a government bond that can be issued for as long as 30 years*

**national debt** *all the money the federal government owes to bondholders*

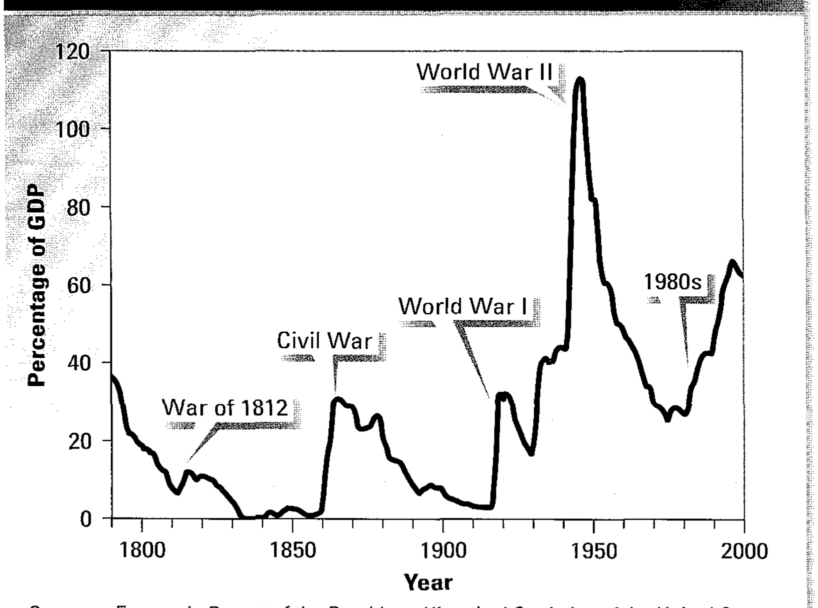
Notice how the pattern changed in the 1980s, when the United States began to run a large debt, even though the country wasn't at war. The debt was in part a result of increases in spending during President Ronald Reagan's terms. As you read in the previous section, the Reagan administration also lowered tax rates to pull the economy out of a recession. The combined effect of higher spending and lower tax rates was several years of increased budget deficits. The government borrowed billions of dollars to cover these deficits, adding to the national debt. Meanwhile, an economic downturn in 1981–1982 reduced GDP. As a result, the ratio of debt to GDP grew very large for peacetime.

## Is the Debt a Problem?

**crowding-out effect** *the loss of funds for private investment due to government borrowing*

The growth of the national debt during the Reagan administration led many to focus on the problems caused by a national debt. In general, two problems can arise from a national debt.

***Figure 15.10*** **National Debt as a Percentage of GDP**




Sources: *Economic Report of the President, Historical Statistics of the United States,* and *Estimated Annual Variations in Gross Domestic Product, 1789–1909* by Thomas Senior Berry

BUILDING KEY CONCEPTS

War puts special strains on government spending, and governments borrow money to pay the high costs. **Government What must governments do when the war ends?**

### Problems of a National Debt

The first problem with a national debt is that it reduces the funds available for businesses to invest. This is because in order to sell its bonds, the government must offer a high interest rate to attract buyers. Individuals and businesses, attracted by the high interest rates and the security of investing in the government, use their savings or profits to buy government bonds.

However, every dollar spent on a government bond is one fewer dollar that can be invested in private business. Less money is available for companies to expand their factories, conduct research, and develop new products, and interest rates rise. Economists call this the **crowding-out effect,** because federal borrowing "crowds out" private borrowing by making it harder for private businesses to borrow. A national debt, then, can hurt investment and slow economic growth over the long run. On the other hand, more investment in the private sector can lead to lower prices, more jobs, and overall higher standards of living.

The second problem with a high national debt is that the government must pay interest to bondholders. The more the government borrows, the more interest it has to pay. Paying the interest on the debt is sometimes called *servicing the debt.* Over time, the interest payments have become very large. At the beginning of the twenty-first century, the federal government spent about $250 billion a year servicing the debt. Moreover, there is an opportunity cost—dollars spent servicing the debt cannot be spent on something else, like defense, health care, or infrastructure.

### Other Views of a National Debt

Not everyone agrees that the national debt is such a large problem. Traditional Keynesian economists believe that fiscal policy is an important tool that can be used to help achieve full productive capacity. To these analysts, the benefits of a productive economy outweigh the costs of interest on national debt.

However, a budget deficit can only be an effective tool if it is temporary. If the

***Figure 15.11* Effects of the Budget Deficit**

The federal government spends more than it takes in, and has to borrow money to cover the deficit. → Investors trust the U.S. government and loan money to the government by buying bonds. → Banks and investors have less money to lend private businesses. Private businesses must pay a higher interest rate to borrow scarce money.

Government borrowing "crowds out" private investment by taking away some funds that could have been invested in private business.
**Incentives Why do lenders put their money in government bonds?**

government runs large budget deficits each year, the costs of the growing debt will eventually outweigh the benefits.

## Deficits, Surpluses, and the National Debt

During the 1980s and into the 1990s, annual budget deficits added substantially to the national debt. Several factors frustrated lawmakers in their attempts to control the deficits. As we have seen, much of the budget consists of entitlement spending that is politically difficult to change. Another large part of the budget consists of interest that must be paid to bondholders. Finally, specific budget cuts are often opposed by groups affected.

### Efforts to Reduce Deficits

Concerns about the budget deficits of the mid-1980s caused Congress to pass the Gramm-Rudman-Hollings Act, which created automatic across-the-board cuts in federal expenditures if the deficit exceeded a certain amount. This saved lawmakers from having to make difficult decisions about individual funding cuts. The Act exempted significant portions of the budget (such as interest payments and many entitlement programs) from the cuts.

When the Supreme Court found that significant portions of the Act were unconstitutional, Congress attempted to correct the flaws. In 1990, however, lawmakers realized that the deficit was going to be much larger than expected. Because Congress had exempted so many programs from automatic cuts, funding for non-exempt programs would be dramatically reduced.

To resolve the crisis, President George H.W. Bush and congressional leaders negotiated a new budget system that replaced Gramm-Rudman-Hollings. The 1990 Budget Enforcement Act created a "pay-as-you-go" system that requires Congress to raise enough revenue to cover increases in direct spending, so that the budget deficit cannot grow larger.

In addition, at various times citizens and politicians have suggested amending the Constitution to require a balanced budget. In 1995, a balanced budget amendment passed in the House and failed by only a single vote in the Senate. Supporters argued that the amendment would force the federal government to be more disciplined about its spending. Opponents objected that a constitutional amendment would not be flexible enough to deal with rapid changes in the economy.

### End-of-Century Surpluses

The late 1990s brought a welcome reversal of fortune. For the first time in thirty years, the President and the Office of Management and Budget (OMB) were able to announce that the government was running a surplus. How did this happen? First, the new budget procedures begun

**FAST FACT**

*Unlike the federal government, most states already require a balanced budget. However, what works well at the state level may not work for the federal government. State requirements range from strict to very weak. At least ten states can carry over budget deficits into the next year or borrow money to cover the deficit. Also, many states have a "rainy day" fund, where surplus money is stored to pay for future deficits. Neither would be allowed under a federal balanced budget amendment.*

under President Bush and extended under President Clinton did help Congress control the growth of government spending. Second, tax increases by President Clinton in 1993 resulted in more federal revenue. Finally, the strong economy and low unemployment during the 1990s meant that more individuals and corporations were earning more money—and thus paying more in taxes.

### The Future of Fiscal Policy

The change from deficits to surpluses in the late 1990s brought with it a vigorous debate about the best way to use the surplus. Many people argued that the extra funds should be used to strengthen Social Security. An increase in the number of retirees and a decrease in the number of working persons is expected to put a serious strain on the Social Security system. A budget surplus could be used to reduce the anticipated shortfall.

When George W. Bush was elected President in 2000, he carried through on his campaign promise for a substantial tax cut that reduced the future surplus. In addition, as the economy slowed in 2001, estimates of the future surplus also began to fall.

Following the September 11, 2001, attacks on the World Trade Center and the Pentagon and the deepening recession, the Office of Management and Budget reported that the surplus would end and that the federal government would run a deficit until 2005. The combination of the recession and President Bush's tax cut will reduce governmental revenues, while the war on terrorism abroad and the added costs of domestic security will increase expenditures. The economic stimulus package proposed after the September 11th terrorist attacks also cuts into the surplus.

The balance of the federal budget is likely to be an issue for some time to come. As people have become more concerned about the budget and the size of the national debt, there is naturally less of a role for fiscal policy. Many economists and politicians now see Keynesian fiscal policy as a way to influence the economy only in the short term. As you will read in the next chapter, there is a second governmental economic tool—monetary policy—that has become increasingly important.

## Section 3 Assessment

### Key Terms and Main Ideas

1. What is a **balanced budget?**
2. How might a **budget deficit** be related to the **national debt?**
3. How does a **Treasury note** differ from a **Treasury bill?**

### Applying Economic Concepts

4. ***Try This*** You're a lawmaker, and you get to decide what to do with this year's budget surplus. Write a brief proposal explaining whether the surplus should be used for new spending, tax cuts, or to buy back bonds and cut interest payments. Include explanations for your proposals.
5. ***Math Practice*** Use the data in Figure 15.9 to determine the approximate size of the largest budget deficits in each of the following decades: **(a)** 1940s **(b)** 1960s **(c)** 1970s **(d)** 1990s.
6. ***Using the Databank*** Study the Federal Debt and Federal Deficit graphs on page 542 of the Databank. Summarize the trends shown in the data for the period from 1980 to 1990 and the period from 1990 to 2000.
7. ***Critical Thinking*** Create a flowchart showing how the creation of money by the government to pay for a budget deficit can lead to inflation.

***Take It to the NET***

At what rate is the national debt growing or shrinking? How much was the national debt on your birthday this year? Write a summary of your findings. Use the links provided in the Social Studies area at the following Web site for help in completing this activity.
**www.phschool.com**

# Will Social Security Survive?

Until the 1930s, paying for retirement was almost entirely up to the individual. During the 1930s, however, the Great Depression left nearly half of all senior citizens unable to support themselves. To help them, the federal government created the Social Security program in 1935.

▲ President Franklin D. Roosevelt signed the Social Security Act into law in 1935.

**Social Security System** Here's how the program works. Workers pay a Social Security tax, which is matched by their employers. After they retire, workers receive Social Security payments for the rest of their lives.

Social Security is a "pay as you go" system. Most of the Social Security taxes paid by today's workers are used to pay benefits to today's retirees. Any surplus is put into trust funds to earn interest. In 2001, there were 3.4 workers paying taxes for every retiree receiving benefits.

**Trouble Ahead** Many economists are concerned about what will happen to Social Security in the future. If the system continues unchanged, experts warn that Social Security payments will exceed revenues in the year 2013. By 2032, the Social Security trust fund will be exhausted.

Why will this system be broke by the 2030s? The reason is the "baby boom," the period between 1945 and 1964 when there was a large increase in the number of babies born. As baby boomers retire, there will only be two workers for every retiree receiving benefits. Also, life expectancies are rising, which means that Americans will collect benefits longer.

**Possible Solutions** In the late 1990s, the President and Congress began to focus their attention on saving Social Security. But how should it be done? Some people believe that the age of retirement should be further increased. Others believe that the government should invest Social Security reserves in the stock market. However, all agree that depriving Americans of Social Security would be disastrous.

**Projected Population, 2000–2050 (in thousands)**

| Year | Americans aged 25-64 | Americans aged 65 and over |
|---|---|---|
| 2000 | 142,883 | 34,709 |
| 2010 | 155,660 | 39,408 |
| 2020 | 161,999 | 53,220 |
| 2030 | 162,252 | 69,379 |
| 2040 | 171,360 | 75,233 |
| 2050 | 182,621 | 78,859 |

Source: U.S. Census Bureau

## Applying Economic Ideas

1. Do you think that paying Social Security taxes should be mandatory? Explain.
2. How do baby boomers present a challenge to the future of Social Security?

# Chapter 15 Assessment

## Chapter Summary

A summary of major ideas in Chapter 15 appears below. See also the **Guide to the Essentials of Economics**, which provides additional review and test practice of key concepts in Chapter 15.

***Section 1 Understanding Fiscal Policy (pp. 387–393)***

The government can try to stabilize the economy through **fiscal policy**, or changing how much it taxes and spends. The tool it uses is the **federal budget**, which lists how much money the government expects to take in and how it will spend that money. **Expansionary policies** include lowering taxes and spending more to increase output. **Contractionary policies** include raising taxes and cutting spending to lower economic growth.

***Section 2 Fiscal Policy Options (pp. 395–401)***

The Great Depression of the 1930s seemed to disprove the idea that free markets always return to equilibrium. John Maynard Keynes argued that government spending can raise demand and help an economy recover. **Keynesian economics** drove American policy from the 1930s to the 1970s. In the 1980s, Ronald Reagan tried to increase output by putting **supply-side economics** into practice. He cut taxes to encourage people and businesses to work harder.

***Section 3 Budget Deficits and the National Debt (pp. 403–408)***

When the government spends more than it takes in, it runs a **budget deficit** and must create new money or borrow money to cover the difference. The government borrows money by issuing bonds. The **national debt** is all of the money the government owes to bondholders. The United States debt grew tremendously during the 1980s and early 1990s, causing problems for private businesses and leading to a public backlash against deficit spending.

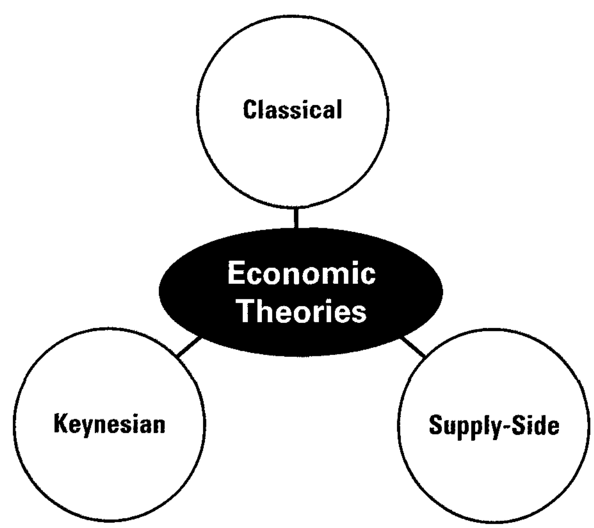
## Key Terms

Choose the italicized word in parentheses that best completes each sentence.

1. *(Contractionary policies/Expansionary policies)* are used to increase overall demand and GDP.
2. The theory that states that the economy regulates itself best is known as *(classical economics/Keynesian economics)*.
3. A *(Treasury note/Treasury bond)* is a long-term bond, issued sometimes for as long as 30 years.
4. *(Budget surpluses/Budget deficits)* occur when the government has money left over after paying all of its expenses for the year.
5. The maximum sustainable economic output of a society is known as its *(productive capacity/automatic stabilizer)*.
6. A government's *(fiscal year/fiscal policy)* is the use of taxing and spending to affect the overall economy.
7. The *(national debt/balanced budget)* is the total amount of money the federal government owes.

## Using Graphic Organizers

8. Copy the web map below on a separate sheet of paper. Complete the diagram by filling in the primary characteristics of classical, Keynesian, and supply-side economics.



## Reviewing Main Ideas

9. Describe three problems that limit fiscal policy.
10. Describe the multiplier effect in your own words.
11. Summarize the ways in which fiscal policy has affected our country since World War II.
12. How is the national debt measured?
13. What is the difference between the national debt and the budget deficit?
14. What options does the government have to respond to an annual budget deficit?

## Critical Thinking

15. **Making Comparisons** What fundamental differences exist between classical economics and Keynesian economics? What events led to the popularization of Keynesian economics?
16. **Drawing Inferences** Make a list of ways in which fiscal policy affects your daily life. Which aspects of fiscal policy have the greatest effect on you?
17. **Recognizing Cause and Effect** How do automatic stabilizers affect our economy? What would our economy be like without them?
18. **Analyzing Information** Use your own words to describe the crowding-out effect. Explain why it can influence economic growth over the long run.
19. **Drawing Conclusions** What would be the benefits and drawbacks of a balanced budget amendment? Would you support such an amendment?

## Problem-Solving Activity

20. Recommend your own proposal for debt reduction. Consider the examples in Section 3 when creating your proposal.

## Economics Journal

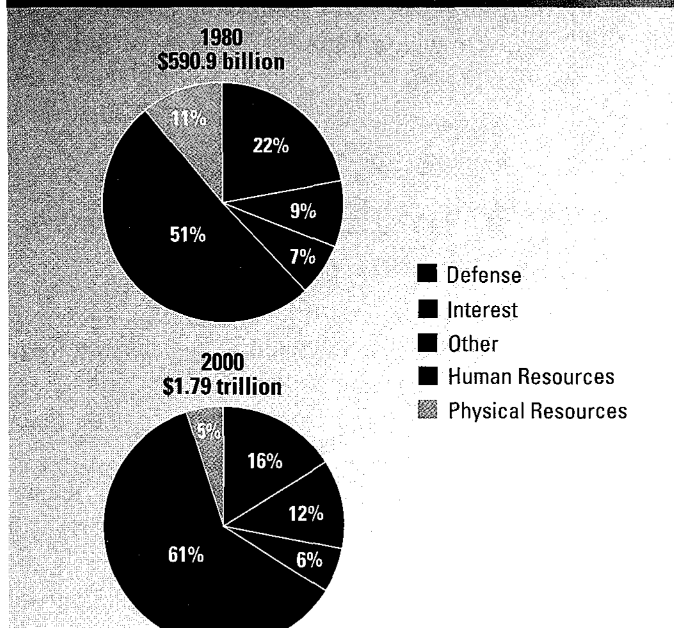
***Essay Writing*** Look at your list of items paid for by the government. Which ones do you think are essential services of government, and which do you think represent unnecessary spending, if any? In what ways has government funding helped your local economy?

## Skills for Life

***Comparing Circle Graphs*** Review the steps shown on page 394; then answer the following questions using the circle graphs below.

21. How did the percentage of federal spending on interest payments change between 1980 and 2000?
22. Which category of federal spending has seen the largest percentage decrease since 1980?
23. How have human resource outlays changed as a percentage of the federal budget?

**Federal Spending, 1980 and 2000**




Source: Office of Management and Budget

### Take It to the NET

***Chapter 15 Self-Test*** As a final review activity, take the Chapter 15 Self-Test in the Social Studies area at the Web site listed below, and receive immediate feedback on your answers. The test consists of 20 multiple-choice questions designed to test your understanding of the chapter content.
**www.phschool.com**

THE WALL STREET JOURNAL.
CLASSROOM EDITION

# DEBATING CURRENT ISSUES: *Tax Credits*

In the days before the 1999 State of the Union address, the Clinton White House proposed nearly a tax credit a day. According to *The Wall Street Journal Classroom Edition* article "Payback Time," by Jacob M. Schlesinger, Staff Reporter of *The Wall Street Journal,* each credit was "designed to ease some pocket of concern in the prosperous economy of the United States."

There was a credit for people caring for disabled relatives at home, a credit for businesses that help immigrant employees learn English, and a credit for small businesses that begin offering health insurance. For a President who promised to live by tight spending rules, tax breaks offered a way to pursue a wide-ranging social agenda. But are tax credits really effective fiscal policy?

## YES *Are Tax Credits Effective Fiscal Policy?*

**MR. CLINTON'S PROPOSED** budget for the fiscal year that began on Oct. 1, 1999, illustrates how sharply the political consensus on taxes has shifted over the past decade.

In 1986, Congress passed and President Reagan signed a landmark tax-reform law that swept away a raft of special breaks and lowered rates across the board. The long and bipartisan list of backers agreed that the economy, and government, would function more efficiently as a result.

But since then, President Clinton and other politicians chipped away at these reforms, using the tax code to encourage what they considered desirable behavior or to favor powerful constituencies.

President Clinton pushed to expand the earned income tax credit for the working poor, and proposed tax breaks for education. Republicans championed lower rates on capital gains to boost investment, an expansion of individual retirement accounts to lift household savings, and tax credits for families with children.

In the late 1990s, with the budget turned to surplus for the first time in decades, Republicans were calling for large, across-the-board tax cuts. While President Clinton opposed these cuts, he figured it would be easier to fight back with more limited cuts of his own rather than simply oppose tax relief. "If we're going to cut taxes, we should do it in targeted ways we can afford that serve the right ends," said Bruce Reed, head of the White House Domestic Policy Council.

**Businesses that taught English to their non-English-speaking employees could earn a tax credit under a Clinton plan in the 1990s.**

Clinton advisers said that, in many cases, social tax incentives made more sense than spending programs. Tax credits are designed to steer private-sector activity, and therefore appear to work more efficiently than spending programs.

Administration officials praised the earned income credit, for instance, saying it draws lower-income people into the labor force because they have to work to get the money. This would be preferable, officials said, to traditional welfare handouts that were often blamed for discouraging poor people from seeking jobs.

Moreover, providing money through tax credits doesn't require creating costly new bureaucracies or new procedures to dole out the funds.

## NO Are Tax Credits Effective Fiscal Policy?

TAX-CODE TINKERING draws fire from across the political spectrum. Many conservatives consider it offensive for government to tie so many behavioral strings to a family's after-tax income. "It's the basic liberal notion of taking our money and giving it back in dribs and drabs only if we spend it on things they think are good," says Kevin Hassett, an economist at the conservative American Enterprise Institute in Washington.

Some liberals complained that the bold-sounding proposals allocated little money to serious problems, and smacked more of campaign sound bites than serious policy. They also maintained that the truly needy often get left out: The poorest third of American families already pay no income tax, and therefore would get scant benefit from this smorgasbord of new tax credits.

Meanwhile, tax experts bemoaned the continued cluttering of an already-complex tax code. Take the $1,500 Hope credit for college students, which was passed by Congress in 1997 and took effect for tax filings due in 1999. To apply for the credit, a person must fill out Form 8863, which is accompanied by two pages of instructions. The Internal Revenue Service figured the form will add an average of 91 minutes to the tax-preparation time of anyone claiming the break.

Though advocates say tax credits provide incentives to alter behavior, some economists counter that they often just give a break to taxpayers who would have done the desired deed anyway. A tax credit enacted in the late 1970s to encourage companies to hire people off welfare was widely attacked as a bust: Many firms hired people based on other qualifications, then checked to see if they could claim the credit for an employee they would have hired anyway.

**Where Credits Are Due**

| Tax Break | Five-Year Cost |
|---|---|
| Long-term care | $5.5 billion |
| Energy and environment | $3.6 billion |
| Urban and rural development | $1 billion |
| Greenspace bonds | $750 million |
| Disabled workers | $700 million |
| Steel industry | $300 million |
| Adult literacy | $100 million |
| Small business health insurance | $44 million |

Source: *The Wall Street Journal*

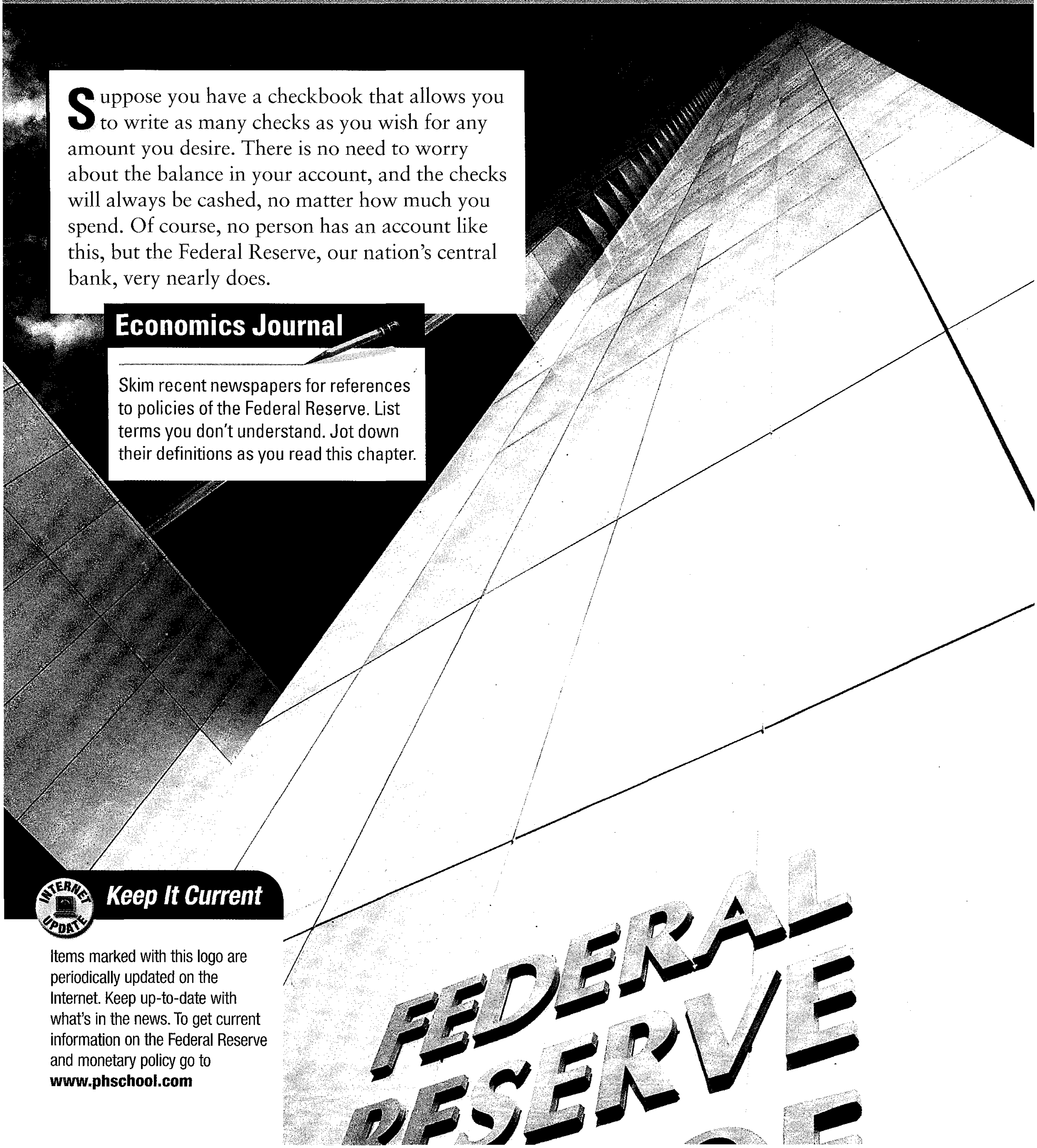
**In 1999, the Clinton Administration proposed a number of new tax credits, including those listed above.**

## DEBATING THE ISSUE

1. Why did Clinton administration officials claim the earned income tax credit encouraged lower-income people to get a job?
2. Why do some liberals criticize tax credits?
3. **Critical Thinking** How do tax credits provide a way to "pursue a wide-ranging social agenda" at a time of tight spending rules?
4. **Reading Graphs** Use the chart to calculate the amount that tax credits for energy and the environment will cost in one year.

**Take It to the Net** Visit **www.phschool.com** for additional resources relating to this debate.

# Chapter 16 The Federal Reserve and Monetary Policy




Suppose you have a checkbook that allows you to write as many checks as you wish for any amount you desire. There is no need to worry about the balance in your account, and the checks will always be cashed, no matter how much you spend. Of course, no person has an account like this, but the Federal Reserve, our nation's central bank, very nearly does.

## Economics Journal

Skim recent newspapers for references to policies of the Federal Reserve. List terms you don't understand. Jot down their definitions as you read this chapter.

## Keep It Current

INTERNET UPDATE

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# The Federal Reserve System

Section 1

Preview

## Objectives

**After studying this section you will be able to:**

1. **Understand** banking history in the United States.
2. **Explain** why the Federal Reserve Act of 1913 led to further reform.
3. **Explain** the structure of the Federal Reserve System.

## Section Focus

To stabilize the nation's banking system, Congress created the Federal Reserve System in 1913. The Federal Reserve is owned by individual member banks. It is overseen by a small but powerful Board of Governors. As a private institution serving a public function, the Federal Reserve is a central bank relatively free from government control.

## Key Terms

**Board of Governors**
**monetary policy**
**Federal Reserve Districts**
**Federal Advisory Council (FAC)**
**Federal Open Market Committee (FOMC)**

The American banking system is a compromise between supporters and opponents of a central bank. As a symbol of this compromise, the Federal Reserve System is the privately owned, publicly controlled central bank of the United States.

## Banking History

As you read in Chapter 10, the issue of a central bank has been debated hotly since 1790, when Federalists lined up in favor of a central bank. The first bank of the United States issued a single currency. It also reviewed banking practices and helped the federal government carry out its duties and powers. Partly because of the continued debate over state versus federal powers, however, the first bank lasted only until 1811. At that time, Congress refused to extend its charter.

Congress established the Second Bank of the United States in 1816 to restore order in the monetary system. However, many people feared that a central bank placed too much power in the hands of the federal government. Political opposition toppled the Second Bank in 1836 when its charter expired.

A period of confusion followed. States chartered some banks, while the federal government chartered and regulated others. Reserve requirements—the amount of reserves that banks are required to keep on hand—were difficult to enforce, and the nation experienced a series of serious bank runs. The Panic of 1907 finally convinced Congress to act.

The nation's banking system needed to address two issues. First, consumers and businesses needed access to increased sources of funds to encourage business expansion. Second, banks needed a source of emergency cash to prevent depositor panics that resulted in bank runs.

▲ **The Federal Reserve System is headed by the Federal Reserve Board of Governors. The first Federal Reserve Board of Governors, here, was seated in 1914.**

## Federal Reserve Act of 1913

Congress created the National Monetary Commission (NMC) in 1908 to propose solutions to the nation's banking problems. Based on the NMC's recommendations, Congress passed the Federal Reserve Act in 1913. The resulting Federal Reserve System, now often referred to simply as "the Fed," was composed of a group of twelve independent regional banks. This central group of banks could lend to other banks in times of need.

## Continued Need for Reform

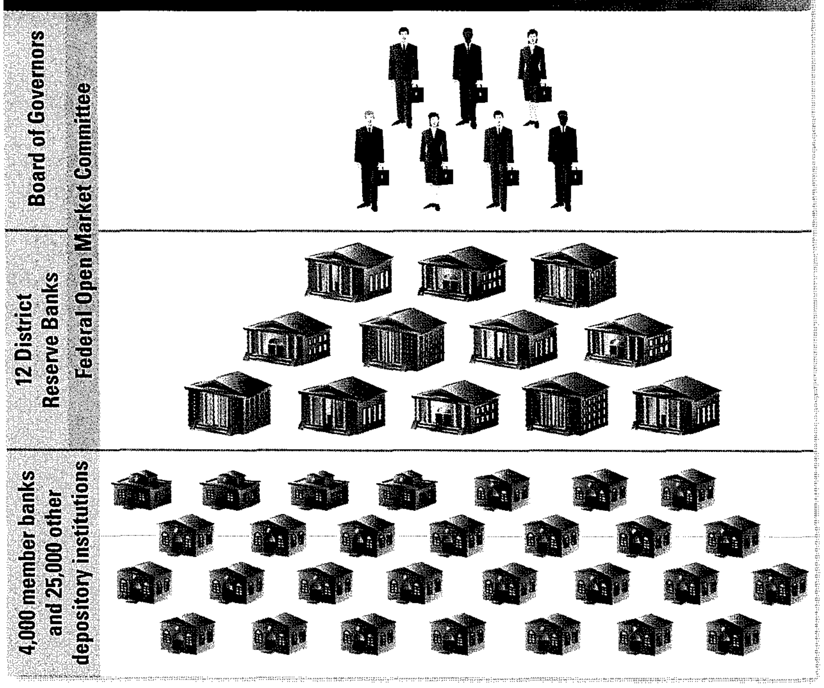
Although the Federal Reserve System helped to restore confidence in the banking system beginning in 1914, it has also learned through trial and error the best ways to fulfill its responsibilities. During the Great Depression, the financial crises of 1930–1933 were exactly the kinds of problems that the NMC had hoped to avoid by creating the Federal Reserve System. The system did not work well, however, because the twelve regional banks each acted independently. Their separate actions often canceled one another out. The Governor of the Federal Reserve Bank of New York (a bank with a close relationship to Wall Street and the investment community) believed that to counteract the growing recession, the government needed to pump money into investment and help Americans get back to work. Many of the other regional governors disagreed about what kinds of action to take. They were more concerned about maintaining gold reserves and with administrative issues than with helping the economy to recover from the widespread recession. By the time Congress forced the Fed to take strong action in 1932, it was too little, too late. The financial crisis had deepened to the point that recovery became long and difficult.

**Board of Governors** *the seven-member board that oversees the Federal Reserve System*

## A Stronger Fed

In 1935, Congress adjusted the Federal Reserve's structure so that the system could respond more effectively to future crises. These reforms created the Federal Reserve System as we know it today. The new Fed enjoys more centralized power so that the regional banks can act consistently with one another while still representing their own districts' banking concerns.

*Figure 16.1* **Structure of the Federal Reserve System**




BUILDING KEY CONCEPTS

About 40 percent of all United States banks belong to the Federal Reserve. These members hold about 75 percent of all bank deposits in the United States. **Government How does the structure of the Fed reflect a compromise between centralized power and regional powers?**

# Structure of the Federal Reserve

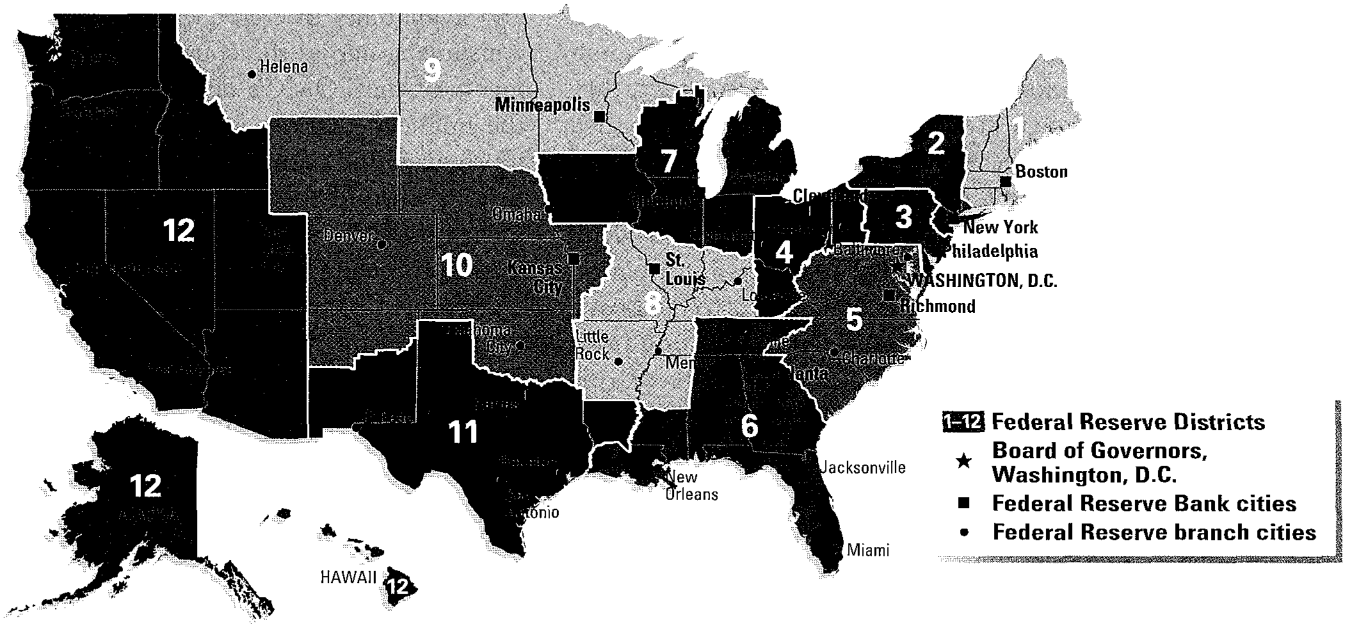
Member banks themselves own the Federal Reserve System. Like so many American institutions, the structure of the Federal Reserve System represents compromises between centralized power and regional powers. (See Figure 16.1.)

## The Board of Governors

The Federal Reserve System is overseen by the **Board of Governors** of the Federal Reserve. The Board of Governors is headquartered in Washington, D.C. Its seven members are appointed for staggered fourteen-year terms by the President of the United States with the advice and consent of the Senate. The terms are staggered to prevent any one President from appointing a full Board of Governors and to protect board members from day-to-day political pressures. Members cannot be reappointed after serving a full term. Geographical restrictions on these appointments ensure that no one district is over-represented.

The President also appoints, from among these seven members, the chair of the Board of Governors. The Senate confirms the

## *Figure 16.2* Federal Reserve Districts




Most Federal Reserve Districts contain a variety of agricultural, manufacturing, and service industries as well as rural and urban areas.

**Government How does the makeup of the Federal Reserve Districts help ensure that no single region is dominant?**

appointment. Chairs serve four-year terms, which can be renewed. The chair acts as the main spokesperson for monetary policy for the country. **Monetary policy** refers to the actions the Fed takes to influence the level of real GDP and the rate of inflation in the economy.

Recent chairs of the Fed have been economists from business, academia, or government. Alan Greenspan, whose previous career was in building economic forecasting models, has been the most notable chair of the Fed in recent years. He took office in 1987, serving both Republican and Democratic administrations. (See page 424 for a profile of Greenspan.)

### Twelve District Reserve Banks

The Federal Reserve Act divided the United States into twelve **Federal Reserve Districts,** as shown on Figure 16.2. One Federal Reserve Bank is located in each of the twelve districts.

Each Federal Reserve Bank monitors and reports on economic and banking conditions in its district. Each Federal Reserve District is made up of more than one state. The Federal Reserve Act aimed to establish a system in which no one region could exploit the central bank's power at another's expense.

Congress also regulated the makeup of each Bank's board of nine directors to make sure that many groups' interests would be represented. Member banks elect three bankers and three leaders in industry, commerce, or other businesses to their district boards. The remaining three directorships, appointed by the Board of Governors of the Federal Reserve, represent broad public interests. The district president is then elected from among these nine directors.

### Member Banks

All nationally chartered banks are required to join the Federal Reserve System. The remaining members are state-chartered banks that join voluntarily. Since 1980, all banks have equal access to Fed services like

**monetary policy** *the actions the Federal Reserve takes to influence the level of real GDP and the rate of inflation in the economy*

**Federal Reserve Districts** *the twelve banking districts created by the Federal Reserve Act*

**FAST FACT**

*In 1913, when the Fed was established, economic and financial power was concentrated in the East and Midwest. Notice that no Federal Reserve Bank exists in Los Angeles, now one of the largest cities in the country.*

**Federal Advisory Council (FAC)** *the research arm of the Federal Reserve*

**Federal Open Market Committee (FOMC)** *Federal Reserve committee that makes key decisions about interest rates and the growth of the United States money supply*

check clearing and reserve loans, whether or not they are Fed members.

Each of the approximately 4,000 Fed member banks contributes a small amount of money to join the system. In return, they receive stock in the system. This stock earns them dividends from the Fed at a rate of up to 6 percent.

A research arm of the Fed, the **Federal Advisory Council (FAC)**, collects information about each district and reports to the Board of Governors about economic conditions within their districts. It consists of one member from each Federal Reserve District—twelve members in all. The FAC's main function is to provide feedback and advice to the Board of Governors concerning the overall financial health of each district. The FAC meets with the Board of Governors four times a year.

The fact that the banks themselves, rather than a government agency, own the Federal Reserve gives the system a high degree of political independence. This independence helps the Fed to make decisions that best suit the interests of the country as a whole.

### The Federal Open Market Committee

The **Federal Open Market Committee (FOMC)** makes key decisions about interest rates and the growth of the United States money supply. The committee meets about eight times a year in private to discuss the cost and availability of credit, for business and consumers, across the country. Announcements of the FOMC's decisions can affect the financial markets, the rates for home mortgages, and many other economic institutions around the world. You will read more about the effects of monetary policy later in this chapter.

Members of the Federal Open Market Committee are drawn from the Board of Governors and the twelve district banks. All seven members of the Board of Governors sit on the FOMC. Five of the twelve district bank presidents also sit on the committee. The president of the New York Federal Reserve Bank is a permanent member. The four other district presidents serve one-year terms on a rotating basis. The Board of Governors holds a majority of the seats on the FOMC, giving them effective control over the committee's actions.

After meeting with the FOMC, the chair of the Board of Governors announces the committee's decisions to the public. The Federal Reserve Banks and financial markets spring into action as they react to Fed decisions. In the next section, you will read about how the Fed's decisions are carried out and what functions the Federal Reserve serves.

## Section 1 Assessment

### Key Terms and Main Ideas

1. Who serves on the **Board of Governors** of the Federal Reserve?
2. What is **monetary policy?**
3. Describe the makeup of the **Federal Reserve Districts.**
4. What does the **Federal Advisory Council (FAC)** do?
5. What is the role of the **Federal Open Market Committee (FOMC)?**

### Applying Economic Concepts

6. ***Critical Thinking*** How does the banking system of the United States reflect a free enterprise economy?
7. ***Try This*** Locate your Federal Reserve District on the map on page 417. What states make up your district? What mixture of agricultural, manufacturing, and service industries does your district contain? Is it made up of both rural and urban areas?

***Take It to the NET***

The Federal Reserve provides businesses and individuals a basic economic report and forecast for each of the twelve Federal Reserve Districts. This economic report card is known as the "Beige Book." Locate the Federal Reserve Bank nearest you and briefly summarize the Beige Book report for your region. Use the links provided in the Social Studies area at the following Web site for help in completing this activity. **www.phschool.com**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## Recognizing Bias in Writing

Bias is the particular opinion or point of view held by a writer on a specific topic. An author's bias is not always obvious at first glance. As a critical reader, you must take steps to identify whether or not a piece of writing contains bias. Any piece of writing relating to economic topics may reflect the author's point of view on a particular public policy or institution. Read the selection on the Federal Reserve Board below, and then answer the questions that follow to help you identify any bias that is reflected in the writing.

1. **Identify the source.** Begin your critical reading of a piece by identifying who the author is, who the audience is, and any obvious signs of bias.
(a) Who is the author of the excerpt below? (b) Is this a personal letter, diary entry, or public document?
(c) Do you detect any obvious bias?

This morning lawmakers will summon Fed Chairman Alan Greenspan over to the Hill for his mandatory semi-annual gabfest. Accountability is a useful requirement for all political figures, even mighty central bankers who stand watch over multitrillion dollar markets, so we have no trouble with the notion that Congress has the power to require Mr. Greenspan's presence and his report. We do have trouble with Humphrey-Hawkins, the law that prescribes the Chairman's testimony. Its terms assume that the Fed's job is essentially to choose between two dark scenarios. The first is growth, accompanied by inflation. The second is no growth, accompanied by no inflation. . . . We'd like to suggest that the parties involved take a deep breath here while we repeat ourselves: There are plenty of signs out there that the economy is growing without inflation.

*"Phillips Think" [Editorial-Review & Outlook],* The Wall Street Journal, *February 26, 1997*

2. **Look for evidence of bias.** Next, search the excerpt for words or phrases that may reflect the author's bias. (a) What words does the author use to describe Mr. Greenspan and his actions? (b) Which phrases describe the author's attitude toward the Federal Reserve Board? (c) How does the author describe Humphrey-Hawkins?

3. **Draw conclusions.** Take any signs of bias into account when drawing conclusions about the topic. What point is the author trying to make in this article?

### Additional Practice

Locate an editorial from a newspaper on a topic relating to economics, and identify any bias in the writing.

Section 2

# Federal Reserve Functions

Preview

## Objectives

**After studying this section you will be able to:**

1. **Describe** how the Federal Reserve serves the federal government.
2. **Describe** how the Federal Reserve serves banks.
3. **Describe** how the Federal Reserve regulates the banking system.
4. **Understand** the Federal Reserve's role in regulating the nation's money supply.

## Section Focus

The Federal Reserve functions as the government's banker and as a banker's bank. It regulates the nation's banking system. It also monitors and regulates the nation's money supply.

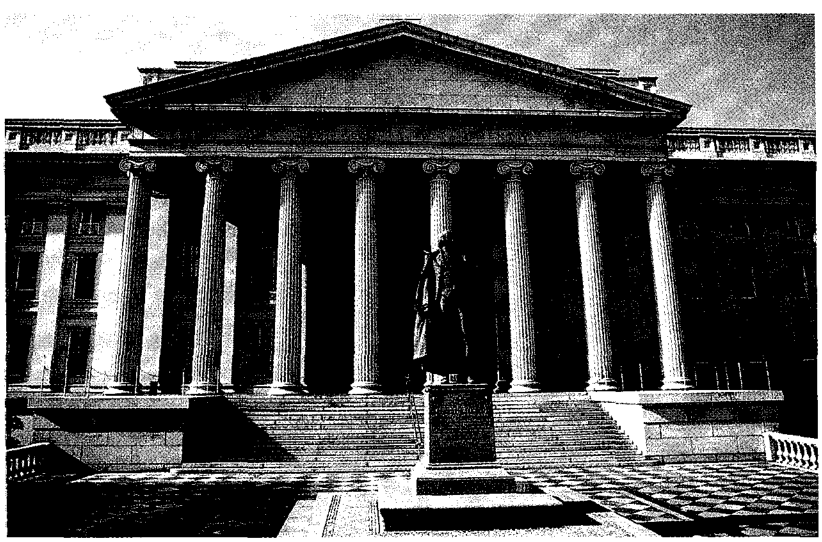
## Key Terms

**check clearing**
**bank holding company**
**federal funds rate**
**discount rate**
**net worth**

As the central bank of the United States, the twelve district banks that make up the core of the Federal Reserve System carry out several important functions. The Federal Reserve System does the following:

- provides banking and fiscal services to the federal government
- provides banking services to member and nonmember banks
- regulates the banking industry
- tracks and manages the national money supply to meet current demand and to stabilize the economy

**▼ The Department of the Treasury does its banking at the Federal Reserve.**



## Serving Government

The United States government has an operating budget of about $1.7 trillion. It raises about $1 trillion annually in taxes. It makes about $900 billion in transfer payments through programs such as Medicare and Social Security. For its banking needs, the federal government turns to the Federal Reserve.

### Federal Government's Banker

The Federal Reserve serves as banker for the United States government. It maintains a checking account for the Treasury Department. It processes payments such as social security checks, IRS refunds, and other government payments. For example, if you receive a check from the federal government and cash it at your local bank, the Federal Reserve deducts the amount from the Treasury's account.

### Government Securities Auctions

The Federal Reserve also serves as a financial agent for the Treasury Department and other government agencies. The Fed sells, transfers, and redeems government bonds, bills, and notes, or securities. It also makes interest payments on these securities.

The Treasury Department periodically auctions off government bills, bonds, and notes to finance the government's activities. The funds raised from these auctions are automatically deposited into the Federal Reserve Bank of New York.

### Issuing Currency

Under the Federal Reserve System, only the federal government can issue currency. The Department of the Treasury issues coins minted at the United States Mint. The district Federal Reserve Banks issue paper currency (Federal Reserve Notes), which is printed at the Bureau of Engraving and Printing. As bills become worn or torn, the Federal Reserve takes them out of circulation and replaces them with fresh ones.

## Serving Banks

The Federal Reserve also provides services to banks throughout the nation. Its most visible function is in its check-clearing services. In addition, it safeguards bank reserves and lends reserves to banks that need to borrow to maintain legally required reserves.

### Check Clearing

Figure 16.3 shows how checks "clear" within the Fed system. **Check clearing** is the process by which banks record whose account gives up money and whose account receives money when a customer writes a check. The Fed can clear millions of checks at any one time using high-speed equipment. Most checks clear within two days—a remarkable achievement when you consider that the Fed deals with about 20 billion checks per year.

### Supervising Lending Practices

To ensure stability in the banking system, the Federal Reserve monitors bank reserves throughout the system. Each of the twelve Federal Reserve Banks sends out bank examiners to check up on lending and other financial activities of member banks.

They also study proposed bank mergers and bank holding company charters to ensure competition in the banking and financial industries. A **bank holding company** is a company that owns more than one bank. The Board of Governors approves or disapproves mergers and charters based on the findings and recommendations of the Reserve Banks.

The Federal Reserve also protects consumers by enforcing truth-in-lending laws, which require sellers to provide full and accurate information about loan terms. Under a provision called Regulation Z, millions of consumers receive information about retail credit terms, auto loans, and home mortgages every year.

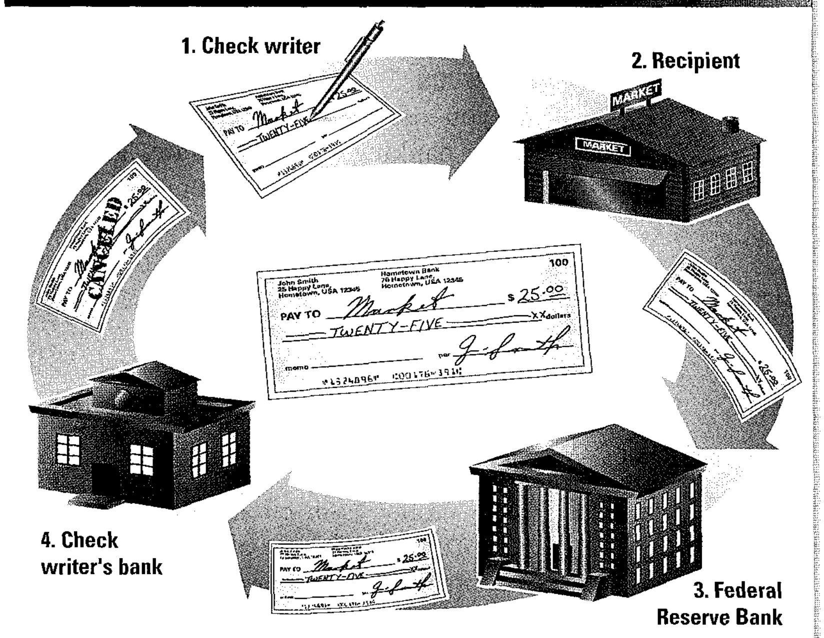
### Lender of Last Resort

Under normal circumstances, banks lend each other money on a day-to-day basis, using money from their reserve balances.

**check clearing** *the process by which banks record whose account gives up money and whose account receives money when a customer writes a check*

**bank holding company** *a company that owns more than one bank*

***Figure 16.3* The Path of a Check**




BUILDING KEY CONCEPTS

After you write a check, the recipient presents it at his or her bank. The check is then sent to a Federal Reserve Bank. The reserve bank collects the necessary funds from your bank and transfers them to the recipient's bank. Your processed check is returned to you by your bank or is available for you to view on the Internet. **Economic Institutions In what other ways does the Fed serve banks?**

**federal funds rate** *interest rate banks charge each other for loans*

**discount rate** *rate the Federal Reserve charges for loans to commercial banks*

**net worth** *total assets minus total liabilities*

These funds are called federal funds. The interest rate that banks charge each other for these loans is the **federal funds rate.**

Banks can also borrow from the Federal Reserve. They do so routinely and especially in financial emergencies such as severe recessions. The Federal Reserve acts as a lender of last resort, making emergency loans to commercial banks so that they can maintain required reserves. The rate the Federal Reserve charges for these loans is called the **discount rate.** You will read more about the role of the discount rate in the economy of the United States in Section 3.

## Regulating the Banking System

Banks, savings and loan companies, credit unions, and bank holding companies are supervised by various state and federal authorities. The Fed coordinates all regulatory activities.

### Reserves

As you read in Chapter 10, the United States banking system operates as a fractional reserve banking system. Banks hold in reserve only a fraction of their funds—just enough to meet customers' daily needs. Banks then lend their remaining reserves, charging interest to earn returns.

Each financial institution that holds deposits for customers must report daily to the Fed about its reserves and activities. The Fed uses these reserves to control how much money is in circulation at any one time. You'll read more about the Fed's role in controlling the money supply in the next section.

### Bank Examinations

The Federal Reserve and other regulatory agencies also examine banks periodically to make sure that each institution is obeying laws and regulations. Examiners may make unexpected bank visits to make sure that banks are following sound lending practices.

Bank examiners can force banks to sell risky investments or to declare loans that will not be repaid as losses. If examiners find that a bank has taken excessive risks, they may classify that institution as a problem bank and force it to undergo more frequent examinations. Examiners would take the same action for banks that have low net worth. **Net worth** equals total assets minus total liabilities. In addition, any bank that goes to the Fed for emergency loans too often will be subject to financial review and close government supervision.

## Regulating the Money Supply

The Federal Reserve is best known for its role in regulating the nation's money supply. You will recall from Chapter 10 that economists and the Fed watch several indicators of the money supply. M1 is simply a measure of the funds that are easily accessible or in circulation. M2 includes the funds counted in M1 as well as money market accounts and savings instruments. Economists also measure M3. M3 goes even further to include large time deposits and some government securities. The Fed's job is to consider these various measures of the money supply and compare those figures with the likely demand for money.

### Factors That Affect Demand for Money

People hold money for a variety of reasons. The amount of money that firms or individuals hold depends generally on four factors:

1. cash needed on hand
2. interest rates
3. price levels in the economy
4. general level of income

People and firms need to have a certain amount of cash on hand to make economic transactions—to buy groceries, supplies, clothing, and so forth. The more of your wealth you hold as money, the easier it will be to make economic transactions.

Of course, we can't earn interest on money that we hold as cash. As interest rates rise, it becomes more expensive for individuals to hold money as cash rather than placing it in assets that pay returns, such as bonds, stocks, or savings accounts. So as interest rates rise, people and firms will generally keep their wealth in assets that pay returns. In other words, they demand less money in the form of cash. (See Figure 16.4.)

The general price level in the economy affects the demand for money, too. As price levels rise, so does the demand for cash. If your usual cost for an outing with your friends is $25 and prices rise 10 percent, you will now need $27.50 for a night out.

The final factor that influences money demand is the general level of income. On a personal level, if you take an after-school job that pays you $75 per week, you will likely carry around more cash than you did before. On a national level, as GDP or real income rises, families and firms keep more of their wealth or income in cash.

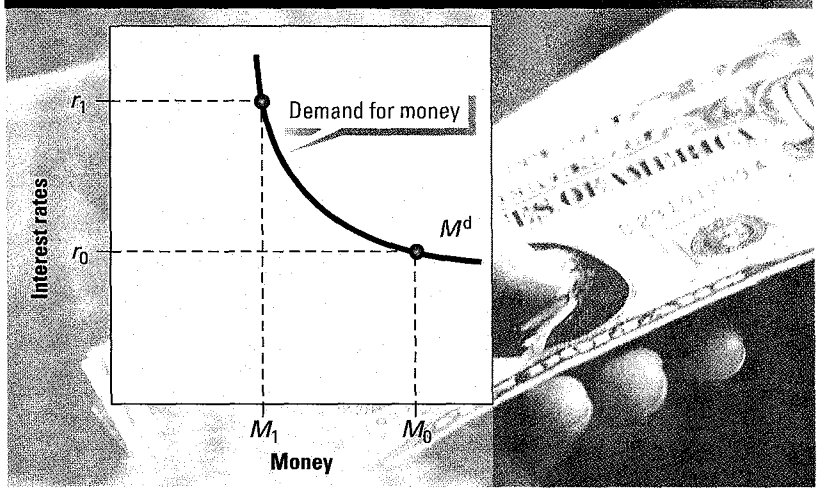
### Stabilizing the Economy

The laws of supply and demand affect money, just as they affect everything else in the economy. Too much money in the economy leads to a general rise in prices, or inflation. A glut of dollars lessens their value. In inflationary times, it will take more money to purchase the same goods and services. It is the Fed's job to keep the money supply stable.

In an ideal world, in which real GDP grew smoothly and the economy stayed at full employment, the Fed would increase the money supply just to match the growth in the demand for money. If the Fed could accomplish this, the country would experience very low inflation rates and, ideally, the economy would remain at full employment. As you read in Chapter 15, however, it is hard to predict economic effects.

The Fed uses its tools to stabilize the economy as best it can. In the next section, you will read about the tools that the Fed can use to help the economy function at full employment without contributing to inflation.

***Figure 16.4*** **Demand for Money**




BUILDING KEY CONCEPTS

As interest rates increase from $r_0$ to $r_1$, the quantity of money demanded falls from $M_0$ to $M_1$. **Incentives Explain demand for money in terms of incentives.**

## Section 2 Assessment

### Key Terms and Main Ideas

1. What is **check clearing?**
2. What is a **bank holding company?**
3. What is the difference between the **federal funds rate** and the **discount rate?**
4. How is **net worth** calculated?

### Applying Economic Concepts

5. ***Try This*** Create a graphic organizer showing how the Federal Reserve serves the federal government and banks.
6. ***Critical Thinking*** What are the advantages of having the Federal Reserve oversee the regulation of the banking system?

***Take It to the NET***

One of the functions of the Federal Reserve is to put currency into circulation. What recent changes have been made in the currency of the United States? Use the links provided in the Social Studies area at the following Web site for help in completing this activity.
**www.phschool.com**

Economist

Entrepreneur

ECONOMIC

*Profile*

# Alan Greenspan (b. 1926)

*The Federal Reserve Board (the Fed) helps to control the nation's money supply. The economist and former professional pop musician at its head may be the most powerful person in America when it comes to the nation's economy. Alan Greenspan's careful handling of the Federal Reserve won him credit for the remarkable economic boom of the 1990s and a place in the administrations of four presidents.*

## The Chairman of the Fed

Alan Greenspan's first term as chairman of the Federal Reserve Board began in a dramatic fashion. Soon after he took office in August 1987, the stock market crashed. Investors feared that lenders would adopt a tight-money policy, as banks had done after the last great market crash in 1929. Instead, Greenspan responded with actions that boosted the nation's money supply. The stock market quickly recovered, and the nation avoided the economic meltdown that could have followed.

## Hard Times

Having grown up during the Great Depression, Greenspan knows hard economic times. As a young child he showed a gift for numbers and amazed his parents' friends with his ability to do math problems in his head. After high school, however, he decided to develop his musical talents, and enrolled at New York's Juilliard School of Music. During the 1940s, he toured with a swing band.

Soon tiring of life on the road, Alan Greenspan returned to New York City and earned bachelor's and master's degrees in economics at New York University. Moving to Columbia University to pursue a Ph.D., he had to quit school when he ran short of money. In 1954, he and a friend started an economic consulting firm.

## The Transition to Public Life

Alan Greenspan first went to Washington, D.C., in 1974 to chair the President's Council of Economic Advisors. In 1977, he returned to New York to complete his Ph.D., but 10 years later, President Ronald Reagan recalled him to Washington to head the Federal Reserve. At the time, many people were critical of the Fed's heavy-handed role in shaping monetary policy. The previous chairman had thrown the economy into recession in the early 1980s when he raised interest rates in an effort to halt high inflation.

Although Greenspan strongly opposes inflation, he is sensitive to the loss of jobs that accompanies any major attempt to slow the growth of the money supply. Under Greenspan, interest rate adjustments were frequent but generally small in scale. He preferred to use monetary policy to make minor adjustments in the economy's course rather than to drive it in a new direction. As a result, Greenspan's terms as Fed chairman witnessed the longest period of economic growth in the nation's history.

### CHECK FOR UNDERSTANDING

**1. Source Reading** Describe Greenspan's approach to using the powers of the Federal Reserve to influence the nation's economy.

**2. Critical Thinking** Explain how a sharp increase in interest rates by the Fed could slow inflation but also lead to higher unemployment and a recession.

**3. Learn More** Visit the Federal Reserve's Web site and summarize the most recent Fed activities that are reported there.

Section 3

# Monetary Policy Tools

## Preview

### Objectives

**After studying this section you will be able to:**

1. **Describe** the process of money creation.
2. **Explain** how the Federal Reserve uses reserve requirements, the discount rate, and open market operations to implement U.S. monetary policy.
3. **Understand** why some monetary policy tools are favored over others.

### Section Focus

Banks create money in their day-to-day operations. The Federal Reserve uses the tools of monetary policy to control the amount of money in circulation.

### Key Terms

**money creation**
**required reserve ratio (RRR)**
**money multiplier formula**
**excess reserves**
**prime rate**
**open market operations**

In early 2001, when it appeared that economic growth was slowing, the Fed began reducing interest rates. The September 11 terrorist attacks further increased the need for such changes in economic policy. By late 2001, the Fed had cut interest rates 11 times, to a 40-year low of 2%. By reducing the cost of borrowing, the Fed hoped to encourage consumers to spend more money and stimulate economic growth. In this section you will see why the Fed uses these tactics to influence economic growth.

## Money Creation

The Department of the Treasury is responsible for manufacturing money. The Federal Reserve is responsible for putting dollars into circulation. How does this money get into the economy? The process is called **money creation,** and it is carried out by the Fed and by banks all around the country. Recall from Chapter 15 the multiplier effect of government spending. The multiplier effect in fiscal policy holds that every one dollar change in fiscal policy creates a change greater than one dollar in the economy. The process of money creation works in much the same way.

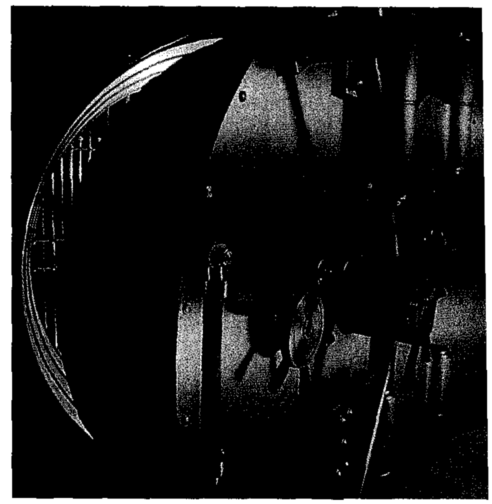
### How Banks Create Money

Money creation does not mean the printing of money. Banks create money not by printing it, but by simply going about their business.

For example, suppose you take out a loan of $1,000. You decide to deposit the money in a checking account. Once you have deposited the money, you now have a balance of $1,000. Since demand deposit account balances, such as your checking account, are included in M1, the money supply has now increased by $1,000. The process of money creation begins here.

Banks make money by charging interest on loans. Your bank will lend part of the $1,000 that you deposited. The amount that the bank is allowed to lend is determined by the **required reserve ratio (RRR)**—the fraction of the deposit that must be kept on reserve. This is calculated as the ratio of reserves to deposits. The RRR is the fraction of deposits that banks are required to keep in reserve. The required reserve ratio, which is established by the Federal Reserve, ensures that banks will have enough funds to supply customers' withdrawal needs.

Suppose in our example that the RRR is 0.1, or 10 percent. This means that of your $1,000 demand deposit balance, the bank is allowed to lend $900.



▲ **The daily activities of banks and their customers create money printed by machines such as this one.**

**money creation** *the process by which money enters into circulation*

**required reserve ratio (RRR)** *ratio of reserves to deposits required of banks by the Federal Reserve*

> **THE WALL STREET JOURNAL.**
> **CLASSROOM EDITION**
>
> ***In the News*** *As this excerpt from a* Wall Street Journal Classroom Edition *article shows, economists try to anticipate the fiscal and monetary policy decisions of the government and the Fed.*
>
> "William Dudley of Goldman, Sachs & Co. . . . believes U.S. consumers are the key to a stronger economy. . . . His biggest concern is that the economy could grow too fast, especially if capital-gains taxes are cut. Such a cut, he says, could put so much money in the hands of consumers that the economy could overheat and inflation could pick up. This would prompt the Fed to raise interest rates aggressively."

**money multiplier formula** *amount of new money that will be created with each demand deposit, calculated as 1 ÷ RRR*

Let's say the bank lends that $900 to Elaine, and she deposits it in her checking account. Elaine now has $900 she didn't have before. Elaine's $900 is now included in M1. You still have your $1,000 demand deposit account balance, on which you can write a check at any time. Thus, your initial deposit to the bank, and the subsequent loan, have caused the money supply to increase by $1,000 + $900 for a total of $1,900.

Now suppose that Elaine uses the $900 to buy Joshua's old car. Joshua deposits the $900 from Elaine into his checking account. His bank keeps 10 percent of the deposit, or $90, as required reserves. It will lend the other $810 to its customers. So, Joshua has a demand deposit balance of $900, which is included in the money supply, and the new borrower gets $810, which is also added to the money supply. This means that the money supply has now increased by $1,000 + $900 + $810 = $2,710—all because of your initial $1,000 deposit. (See Figure 16.5.)

### The Money Multiplier

This process will continue until the loan amount, and hence the amount of new money that can be created, becomes very small. The amount of new money that will be created, in the end, is given by the **money multiplier formula,** which is calculated as 1 ÷ RRR. The money multiplier tells us how much the money supply will increase after an initial cash deposit to the banking system. To apply the formula, we multiply the initial deposit by the money multiplier:

$$\text{Increase in money supply} = \text{initial cash deposit} \times \frac{1}{\text{RRR}}$$

In our example the RRR is 0.1, so the money multiplier is 1 ÷ 0.1 = 10. This means that the initial deposit of $1,000 will ultimately lead to a $10,000 increase in the money supply.

As of 1999 in the United States, banks were required to hold 3 percent reserves against demand deposit assets up to $49 million and 10 percent on all demand deposit assets exceeding $49 million.

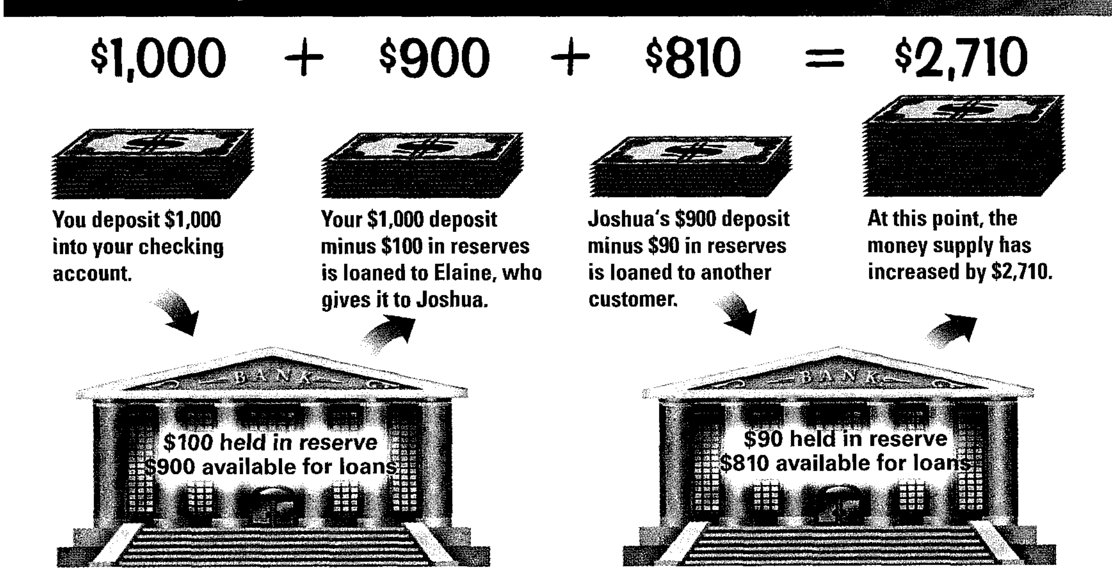
In the real world, however, people hold some cash outside of the banking system, meaning that some funds leak out of the money multiplier process. Also, banks

**BUILDING KEY CONCEPTS**

In this example of money creation, the money supply increases by $2,710 after four rounds.

**Money Suppose Joshua deposited only $500 of Elaine's payment into his account. How much would the money supply increase then?**

*Figure 16.5* **Money Creation**



sometimes hold **excess reserves**, which are reserves greater than the required amounts. These excess reserves ensure that banks will always be able to meet their customers' demands and the Fed's reserve requirements. The actual money multiplier effect in the United States is estimated to be between 2 and 3.

The Federal Reserve has three tools for adjusting the amount of money in the economy. These tools are reserve requirements, the discount rate, and open market operations.

## Reserve Requirements

The simplest way for the Fed to adjust the amount of reserves in the banking system is to change the required reserve ratio. It is not, however, the tool most used by the Fed.

### Reducing Reserve Requirements

A reduction of the RRR would free up reserves for banks, allowing them to make more loans. It would also increase the money multiplier. Both effects would lead to a substantial increase in the money supply.

### Increasing Reserve Requirements

The process also works in reverse. Even a slight increase in the RRR would force banks to hold more money in reserves. This would cause the money supply to contract, or shrink.

Although changing reserve requirements can be an effective means of changing the money supply, the Fed does not use this tool often because it is disruptive to the banking system. Even a small increase in the RRR would force banks to call in significant numbers of loans, that is, to require the borrower to pay the entire outstanding balance of the loan. This may be difficult for the borrower. For this reason, the Fed rarely changes reserve requirements.

## Discount Rate

As you read in Section 2, the discount rate is the interest rate that the Federal Reserve charges on loans to financial institutions. Banks borrow from the Fed to maintain reserves at the required level. Changes in the discount rate affect the cost of borrowing from the Fed. In turn, changes in the discount rate can affect the prime rate. The **prime rate** is the rate of interest banks charge on short-term loans to their best customers—usually large companies with good credit ratings. Changes in the discount rate are reflected in the prime rate.

### Reducing the Discount Rate

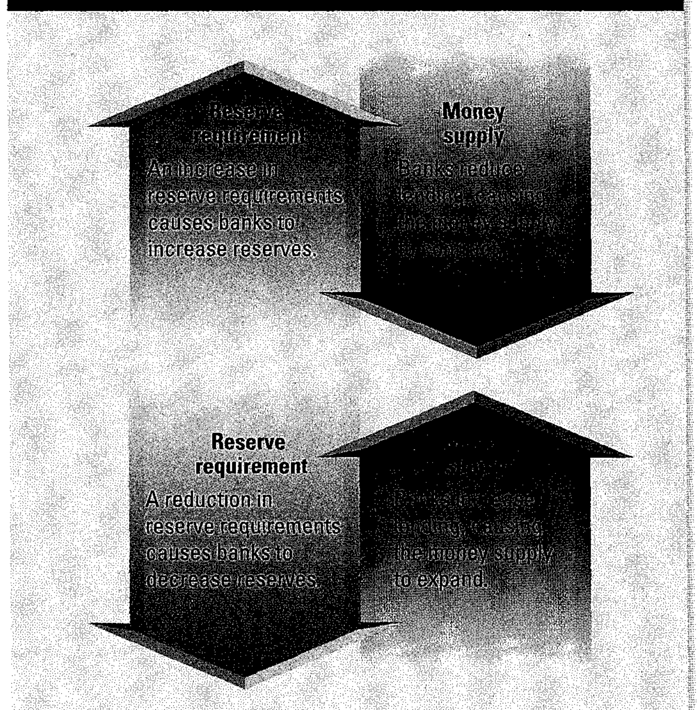
If the Fed wants to encourage banks to lend more of their reserves, it may reduce the discount rate. With a lower discount rate, banks can reduce their excess reserves by lending them out. They won't have to worry about their reserves falling too low. They can add to their reserves by borrowing from the Fed at a low rate.

These new loans will increase the money supply, just as a decrease in RRR would. The money multiplier will apply to these

**excess reserves** *reserves greater than the required amounts*

**prime rate** *rate of interest banks charge on short-term loans to their best customers*

***Figure 16.6*** **Reserve Requirements**




BUILDING KEY CONCEPTS

When the Fed increases reserve requirements, the money supply decreases. **Monetary and Fiscal Policy What is the effect of reducing reserve requirements? Why?**

**open market operations** *the buying and selling of government securities to alter the supply of money*

new loans, ensuring that each dollar of reserves that is lent will create an even larger increase in the money supply.

### Increasing the Discount Rate

If, on the other hand, the Federal Reserve wants to reduce the money supply, it will increase the discount rate. This will make banks less willing to borrow from the Fed. As a result, they will hold more excess reserves to keep from falling below their required levels. Banks increase their excess reserves by reducing loans. A reduction in loans, in turn, will reduce the amount of currency circulating in the economy, causing a reduction of the money supply.

If banks do not wish to borrow from the Federal Reserve, they may borrow from one another in the federal funds market. Of course, if banks find the federal funds rate too high, they may still borrow from the Fed. In practice, however, the Fed maintains the discount rate close to the federal funds rate in order to prevent large swings in borrowed reserves.

## Open Market Operations

The most important monetary policy tool is **open market operations.** Open market operations are the buying and selling of government securities to alter the supply of money. Open market operations are by far the most-used monetary policy tool.

### Bond Purchases

When the Federal Open Market Committee (FOMC) chooses to increase the money supply, it orders the trading desk at the Federal Reserve Bank of New York to purchase a certain quantity of government securities on the open market.

***Figure 16.7* Discount Rate**

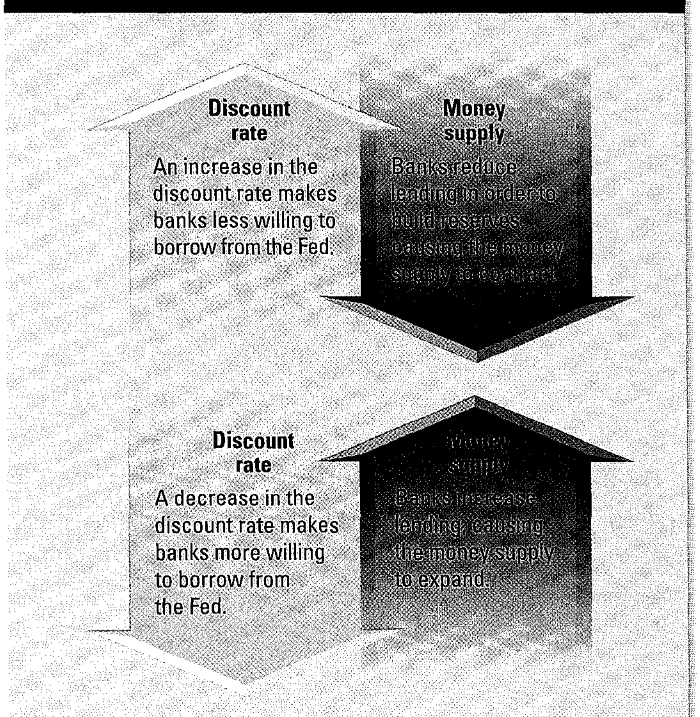
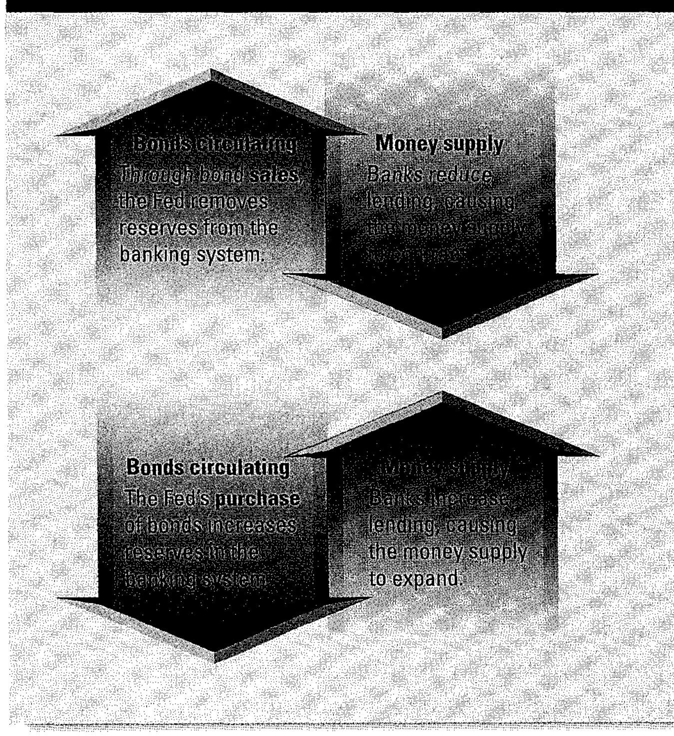



***Figure 16.8* Open Market Operations**




BUILDING KEY CONCEPTS

Because an increase in the discount rate makes borrowing more costly, the money supply contracts. Banks are more willing to borrow and lend money when the discount rate is low (left). Open market operations (right), however, are the most-used monetary policy tool.

**Fiscal and Monetary Policy How do open market operations differ from the monetary policy tools shown in Figures 16.6 and 16.7?**

The Federal Reserve Bank buys these securities with a check drawn on Federal Reserve funds. The bond seller then deposits the money from the bond sales in its bank. In this way, funds enter the banking system, setting in motion the money creation process described earlier.

### Bond Sales

If the FOMC chooses to decrease the money supply, it must make an open market bond sale. In this case, the Fed sells government securities back to bond dealers, receiving from them checks drawn on their own banks. After the Fed processes these checks, the money is out of circulation. This operation reduces reserves in the banking system. Banks will reduce their outstanding loans in order to keep reserves at the required levels. The money multiplier process then works in reverse, resulting in a decline in the money supply that is greater than the value of the initial securities purchase.

## Using Monetary Policy Tools

Open market operations are the most used of the Federal Reserve's monetary policy tools. They can be conducted smoothly and on an ongoing basis to meet the Fed's goals. The Fed changes the discount rate less frequently. It usually follows a policy of keeping the discount rate in line with other interest rates in the economy in order to prevent excess borrowing by member banks from the Fed. (See the graph "Key Interest Rates" on page 542 in the Economic Atlas and Databank.)

Today, the Fed does not change reserve requirements to conduct monetary policy. Changing reserve requirements would force banks to make drastic changes in their plans. Open market operations or changes in the discount rate do not disrupt financial institutions.

The Federal Reserve uses these monetary policy tools to adjust the money supply. Why the Fed would want to change the money supply, and the effects of monetary policy, are the subjects of the next section.

## Global Connections

***Global Monetary Policy*** As Europe moved toward a single currency, the European System of Central Banks (ESCB) was created to handle the European Community's monetary policy. Its job is similar to that of the Federal Reserve. The ESCB conducts monetary policy for the European Community nations, conducts foreign exchange operations, and provides banks with services such as check cashing. The ESCB's monetary policy tools include open market operations as well as reserve requirements. **How do the monetary policy tools of the ESCB resemble those of the Federal Reserve?**

## Section 3 Assessment

### Key Terms and Main Ideas

1. What is **money creation?**
2. What is the **required reserve ratio (RRR)?**
3. State the **money multiplier formula.**
4. Why do banks sometimes hold **excess reserves?**
5. If the discount rate rose, would you expect the **prime rate** to rise or fall?
6. What are **open market operations?**

### Applying Economic Concepts

7. ***Math Practice*** Suppose the RRR is 0.15. Use the money multiplier formula to determine by how much a $2,000 checking account deposit will increase the money supply.
8. ***Critical Thinking*** Will the money supply actually increase by the amount you calculated in Question 7? Why or why not?

***Take It to the NET***

The discount rate can affect the amount of money in circulation by affecting how much money banks lend to their customers. Examine the current trend in discount rate policy. Has the Fed tried to increase or decrease the money supply lately? Use the links provided in the Social Studies area at the following Web site for help in completing this activity.
**www.phschool.com**

Section 4

# Monetary Policy and Macroeconomic Stabilization

## Preview

### Objectives

**After studying this section you will be able to:**

1. **Understand** how monetary policy works.
2. **Explain** the problems of timing and policy lags in implementing monetary policy.
3. **Explain** how predictions about the length of a business cycle affect monetary policy.
4. **Describe** two distinct approaches to monetary policy.

### Section Focus

The Federal Reserve uses monetary policy to try to tame business cycles. The unpredictable length of business cycles, however, makes it difficult to determine when it is wise to intervene in the economy.

### Key Terms

**monetarism**
**easy money policy**
**tight money policy**
**inside lag**
**outside lag**

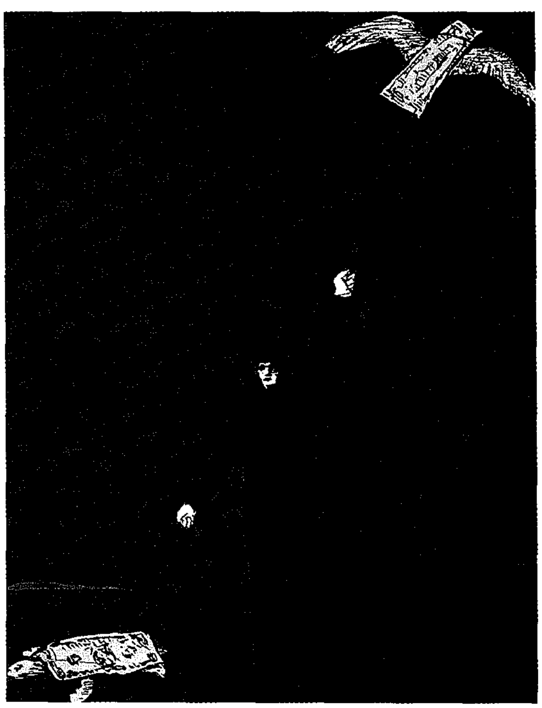
---

**monetarism** *the belief that the money supply is the most important factor in macroeconomic performance*

Adherents of **monetarism** believe that the money supply is the most important factor in macroeconomic performance. How, then, does monetary policy influence macroeconomic performance?

## How Monetary Policy Works

Monetary policy alters the supply of money. The supply of money, in turn, affects interest rates. As you read earlier, interest rates affect the level of investment and spending in the economy.



▶ **Keeping the economy stable requires a delicate balancing act.**

### The Money Supply and Interest Rates

It is easy to see the cost of money if you are borrowing it. The cost—the price that you as borrower pay—is the interest rate. Even if you have your own money, however, the interest rate still affects you. The interest rate is also the cost of having money, because you are giving up interest by not saving or investing. Thus, the interest rate is always the cost of money.

The market for money is like any other market. If the supply is higher, the price—the interest rate—is lower. If the supply is lower, the price—the interest rate—is higher. In other words, when the money supply is low, interest rates are high. When the money supply is high, interest rates are low.

### Interest Rates and Spending

Recall from Chapter 12 that interest rates are important factors of spending in the economy. Lower interest rates encourage greater investment spending by business firms. This is because a firm's cost of borrowing—or of using its own funds—decreases as the interest rate decreases.

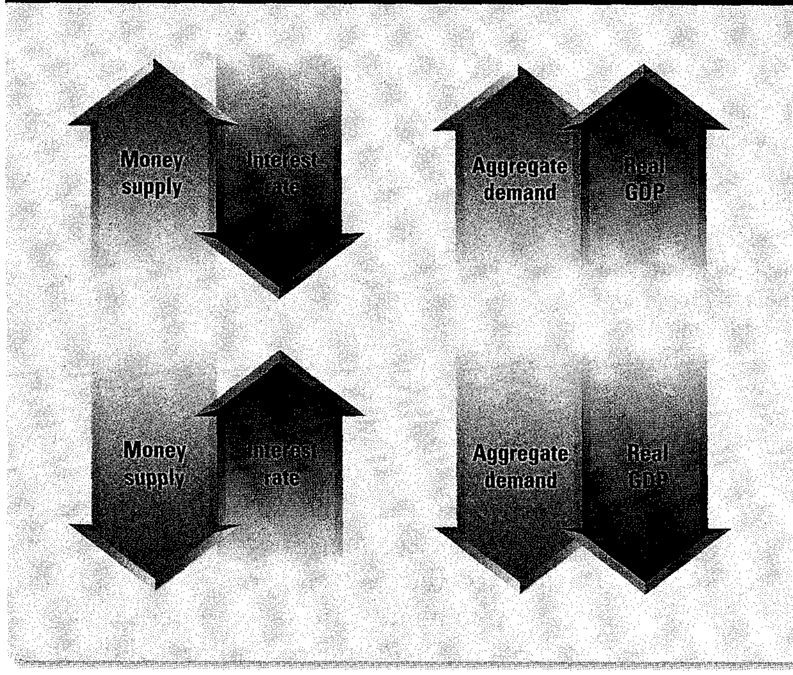
Firms find that lower interest rates give them more opportunities for profitable investment. If a firm has to pay 15 percent interest on its loans, it may find few profitable opportunities. If interest rates fall to 8 percent, however, the firm may find that some opportunities are now profitable.

If the macroeconomy is experiencing a contraction—declining income—the Fed may want to stimulate, or expand, it. It will follow an **easy money policy.** That is, it will increase the money supply. An increased money supply will lower interest rates, thus encouraging investment spending. Such a policy may, however, encourage overborrowing and overinvestment, followed by layoffs and cutbacks.

If the economy is experiencing a rapid expansion that may cause high inflation, the Fed may introduce a **tight money policy.** That is, it will reduce the money supply. The Fed reduces the money supply to push interest rates upward. By raising interest rates, the Fed causes investment spending to decline. This brings real GDP down, too.

Even though it can only alter the money supply, the Fed has a great impact on the economy. The money supply determines the interest rate, and the interest rate determines the level of aggregate demand. Recall from Chapter 12 that aggregate demand represents the relationship between price levels and quantity demanded in the overall economy. The level of aggregate demand helps determine the level of real GDP. (See Figure 16.9.)

*Figure 16.9* **Effects of Monetary Policy**




BUILDING KEY CONCEPTS

If the economy is experiencing a contraction, an easy money policy may stimulate growth. If the economy is experiencing rapid expansion that may cause high inflation, a tight money policy may help reduce the price increases. **Gross Domestic Product Explain the relationship between aggregate demand and GDP.**

## The Problem of Timing

Monetary policy, like fiscal policy, must be carefully timed if it is to help the macroeconomy. If policies are enacted at the wrong time, they could actually intensify the business cycle, rather than smooth it out. To see why, consider Figure 16.10.

### Good Timing

Figure 16.10A shows the business cycle with a properly timed stabilization policy. The green curve, which shows greater fluctuations, is the business cycle as explained in Chapter 12. The goal of stabilization policy is to smooth out those fluctuations—in other words, to make the peaks a little bit lower and the troughs not quite as deep. This will minimize inflation in the peaks and the effects of recessions in the troughs. Properly timed stabilization policy smooths out the business cycle, as shown in the red curve in Figure 16.10A.

### Bad Timing

If stabilization policy is not timed properly, however, it can actually make the business cycle worse, not better. For example, suppose that policymakers are slow to recognize the contraction shown as the green line in Figure 16.10B. Perhaps because their data are inaccurate or slow to arrive, government economists simply do not realize that a contraction is occurring until the economy is deeply into it. Some period of time may pass before they recognize the contraction.

Likewise, it takes time to enact expansionary policies and have those policies

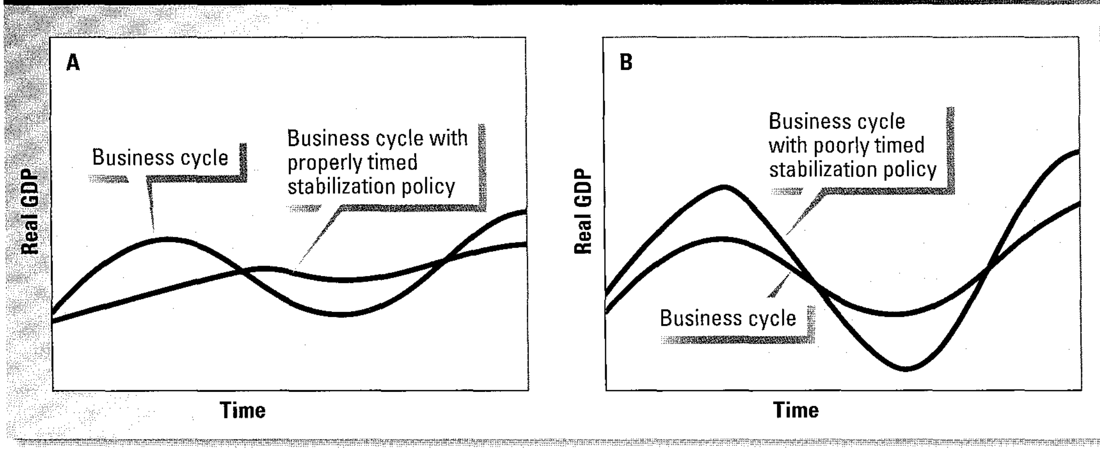
**easy money policy** *monetary policy that increases the money supply*

**tight money policy** *monetary policy that reduces the money supply*

The timing of monetary policy measures can intensify the business cycle.

**Monetary and Fiscal Policy What are the effects of proper and improper timing?**

*Figure 16.10* **Business Cycles and Stabilization Policy**




take effect. By the time all of this takes place, the economy may already be coming out of the recession on its own. If the expansionary effects of a loose money policy affect the economy while it is already expanding, the result could be an even larger expansion that causes high inflation, as shown by the red line in Figure 16.10B.

## Policy Lags

As you can see, there are a couple of problems in the timing of macroeconomic policy. These are called policy lags.

### Inside Lags

The **inside lags** are delays in implementing policy. These lags occur for two reasons. First, it takes time to identify and recognize a problem. While economists have developed sophisticated computer models for predicting economic trends, they still cannot know for sure that the economy is headed into a new phase of the business cycle until it is already there. Statistics may conflict with one another. Hence, it can take several months or even a year to recognize a serious economic problem.

A good example of this problem occurred during a recession in the United States in 1990. Today, we date the beginning of the recession at July 1990. However, Alan Greenspan, the chair of the Board of Governors of the Federal Reserve, testified before Congress in October 1990 that the economy had not yet slipped into recession. Looking back, however, we now know that a recession had begun months earlier. Even Greenspan, an economic expert with the staff of the Fed and other resources at his disposal, was slow to recognize that a recession had begun.

A second reason for inside lags is that once a problem has been recognized, it can take additional time to enact appropriate policy. This problem is more severe for fiscal policy than for monetary policy. Fiscal policy, which includes changes in government spending and taxation, requires actions by Congress and the President. Since Congress must debate such new plans and then get the approval of the President, it may take quite a while before a new policy is enacted.

The enactment of monetary policy, on the other hand, is streamlined. The Federal Open Market Committee meets eight times each year to discuss monetary policy—more often if necessary. Once it has decided that changes are called for, the FOMC can make open market policy or discount rate changes almost immediately.

### Outside lags

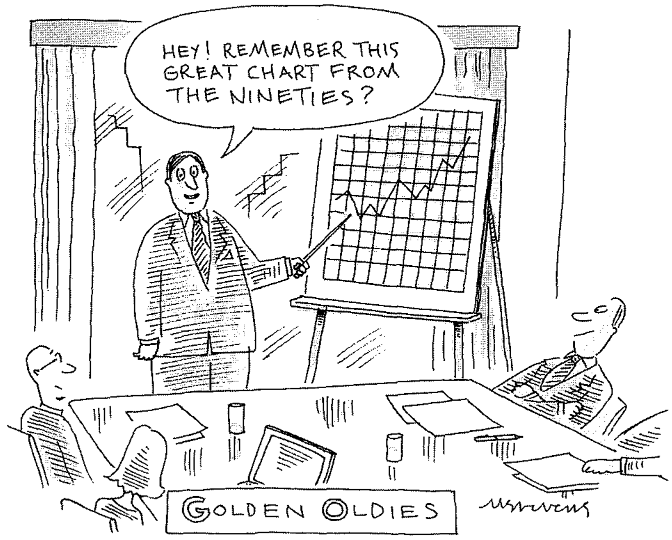
Once a new policy is determined, it takes time to become effective. This time period, known as the **outside lag,** also differs for monetary and fiscal policy. For fiscal policy, the outside lag lasts as long as is required

**inside lag** *delay in implementing monetary policy*

**outside lag** *the time it takes for monetary policy to have an effect* for new government spending or tax policies to take effect and begin to affect real GDP and the inflation rate. This time period can be relatively short, as with a tax rebate that returns government revenues to households eager for spending money. One statistical model concluded that an increase in government spending would increase GDP after just six months.

Outside lags can be much longer for monetary policy, since they primarily affect business investment plans. Firms may require months or even years to make large investment plans, especially those involving new physical capital, such as a new factory. Thus, a change in interest rates may not have its full effect on investment spending for several years. This conclusion is supported by several studies that suggest that the outside lag for monetary policy is probably rather long. More than two years may pass before the maximum impact of monetary policy is felt.

Given the longer inside lag for fiscal policy and the longer outside lag for monetary policy, it is not obvious which policy has the shorter total lag. In practice, partisan politics and budgetary pressures often prevent the President and Congress from agreeing on fiscal policy. Because of the political difficulties of implementing fiscal policy, we rely to a greater extent on the Fed to use monetary policy to soften the business cycle.




**▲ Unprecedented economic growth in the 1990s led some economists to predict an end to the peaks and troughs of past business cycles. Indications of recession in the early 2000s, however, showed the cycle beginning again.**

## Predicting the Business Cycle

The Federal Reserve must not only react to current trends. It must also anticipate changes in the economy. How should policymakers decide when to intervene in the economy?

### Monetary Policy and Inflation

You have already read that expansionary policy, if enacted at the wrong time, may push an economy into high inflation, thus reducing any beneficial impact. This is the chief danger of using an easy money policy to get the economy out of a recession.

An inflationary economy can be tamed by a tight money policy, but the timing is again crucial. If the policy takes effect as the economy is already cooling off on its own, the tight money could turn a mild contraction into a full-blown recession.

The decision of whether to use monetary policy, then, must be based partly on our expectations of the business cycle. Some recessions are short-run phenomena that will, in the long run, disappear. Some inflationary peaks may also be expected to last for the short run and end in the long run. Given the timing problems of monetary policy, in some cases it may be wiser to allow the business cycle to correct itself rather than run the risk of an ill-timed policy change.

If a recession is expected to turn into an expansion in a short time, the best course of action may be to take a laissez-faire approach to the economy and let the economy correct itself. On the other hand, if we expect a recession to last several years, then all but the most conservative onlookers

**THE WALL STREET JOURNAL.**
**CLASSROOM EDITION**

***In the News*** *As this excerpt from a* Wall Street Journal Classroom Edition *article shows, recognizing shifts in the business cycle is notoriously difficult.*

"'Nobody has a good record of predicting when a recession comes,' says Milton Friedman, the Nobel laureate economist. 'If you look at the historical record, the first quarters of most recessions have been regarded by most commentators at the time as a continuation of prosperity.'"

*Figure 16.11* **Fiscal and Monetary Policy Tools**

| | Fiscal policy tools | Monetary policy tools |
|---|---|---|
| **Expansionary tools** | 1. increasing government spending<br>2. cutting taxes | 1. open market operations: bond purchases<br>2. decreasing the discount rate<br>3. decreasing reserve requirements |
| **Contractionary tools** | 1. decreasing government spending<br>2. raising taxes | 1. open market operations: bond sales<br>2. increasing the discount rate<br>3. increasing reserve requirements |

BUILDING KEY CONCEPTS

Both the federal government and the Federal Reserve can influence the nation's economy.

**Fiscal and Monetary Policy How are fiscal and monetary policy similar? How do they differ?**

would recommend an active policy. So the question is this: How long will a recessionary or inflationary period last?

### How Quickly Does the Economy Self-Correct?

Economists disagree on the answer to this question. Their estimates for the U.S. economy range from two to six years. Since the economy may take quite a long time to recover on its own from an inflationary peak or a recessionary trough, there is time for policymakers to guide the economy back to stable levels of output and prices.

## Approaches to Monetary Policy

In practice, the lags discussed here make monetary and fiscal policy difficult to apply. Interventionist policy, a policy encouraging action, is likely to make the business cycle worse if the economy self-adjusts quickly. Laissez-faire economists who believe that the economy will self-adjust quickly will recommend against enacting new policies. Economists who believe that economies emerge slowly from recessions, however, will usually recommend enacting fiscal and monetary policies to move the process along.

The rate of adjustment may also vary over time, making policy decisions even more difficult. This debate over which approach to take with monetary policy will probably never be settled to the satisfaction of all economists.

## Section 4 Assessment

### Key Terms and Main Ideas

1. Why would the Federal Reserve enact an **easy money policy?**
2. Why would the Federal Reserve enact a **tight money policy?**
3. What are **inside lags,** and why do they occur?
4. Why does monetary policy have such long **outside lags?**
5. What is **monetarism?**

### Applying Economic Concepts

6. ***Critical Thinking*** Why do business cycles make monetary policy difficult to time?
7. ***Try This*** With a partner, stage a debate on monetary policy. One of you will take an interventionist approach, encouraging action, the other a laissez-faire approach, discouraging action. Use information from your textbook to help craft your argument.
8. ***Using the Databank*** Examine the graphs on Economic Indicators in the Economic Atlas and Databank on pages 538–539. How would you describe the economic performance of the United States at the end of the twentieth century?

***Take It to the NET***

Summarize the most recent actions taken by the Federal Open Market Committee in a brief oral presentation. Why did the FOMC take those actions? How does the FOMC expect its actions to affect the economy? Use the links provided in the Social Studies area at the following Web site for help in completing this activity. **www.phschool.com**

Real-life Case Study

# Banking, Monetary Policy, and the Great Depression

In 1929, the collapse of the stock market touched off a period of economic devastation known as the Great Depression. Millions of Americans found themselves unemployed and lost their homes, farms, and life savings.

**Bank Failures** In late October 1929, dropping stock prices caused many panicked investors to sell their stocks, which resulted in the collapse of the stock market on October 29, 1929. Banks had invested heavily in the stock market and lost huge sums. Fearful that banks would run out of money, people rushed to their banks demanding their money. To pay back these deposits, banks had to recall loans from borrowers, but they could not do so fast enough to pay all the depositors demanding their money. Thousands of banks failed.


▲ Countless investors lost everything in the Crash of 1929.

**Emergency Action** In 1933, President Franklin D. Roosevelt took emergency action and declared a bank "holiday." All banks closed temporarily to stop the banking panic. Congress then passed the Banking Act of 1933, which created the Federal Deposit Insurance Corporation (FDIC) to insure deposits. This meant that even if a bank failed, deposits would be guaranteed by the federal government.

Meanwhile, banks became extremely cautious. They made fewer loans and kept enough cash on hand in case depositors all came at once to withdraw their funds. Banks began to hold substantial reserves, far in excess of those required by the Federal Reserve.

**Federal Reserve Response** These excess reserves concerned the Federal Reserve, which feared that banks might distribute that money, possibly causing inflation. In 1937, the Fed raised reserve requirements for the banks, thus lowering the money supply to prevent inflation. Banks responded by cutting back their loans even further to have enough cash for depositors.

This Federal Reserve policy had an unintended negative result. Banks reduced lending, which led to a recession. Since that time the Fed has learned not to make sharp increases in reserve requirements.

## Applying Economic Ideas

1. Why did the Federal Reserve raise reserve requirements in 1937?
2. Were banks justified in holding excess reserves in the 1930s? Why or why not?

# Chapter 16 Assessment

## Chapter Summary

A summary of major ideas in Chapter 16 appears below. See also the **Guide to the Essentials of Economics**, which provides additional review and test practice of key concepts in Chapter 16.

***Section 1 The Federal Reserve System (pp. 415–418)***

To stabilize the nation's banking system, Congress created the Federal Reserve System. The Federal Reserve is made up of twelve **Federal Reserve Districts** and is overseen by a small but powerful **Board of Governors.** As a private institution serving a public function, the Federal Reserve is a central bank relatively free from government control.

***Section 2 Federal Reserve Functions (pp. 420–423)***

The Federal Reserve serves the banking needs of the government and of individual banks. It regulates the nation's banking system. It also monitors and regulates the nation's money supply.

***Section 3 Monetary Policy Tools (pp. 425–429)***

**Money creation** occurs through the day-to-day operations of banks. The Federal Reserve uses three tools of monetary policy to control the amount of money in circulation. The three tools are changing the required reserve ratio, changing the discount rate, and buying or selling bonds on the open market.

***Section 4 Monetary Policy and Macroeconomic Stabilization (pp. 430–434)***

The Federal Reserve enacts monetary policy to lessen the effects of business cycles. The unpredictable length of business cycles, however, makes it difficult to determine when it is wise to intervene in the economy. **Inside lags** and **outside lags** make it difficult to conduct monetary and fiscal policy.

## Key Terms

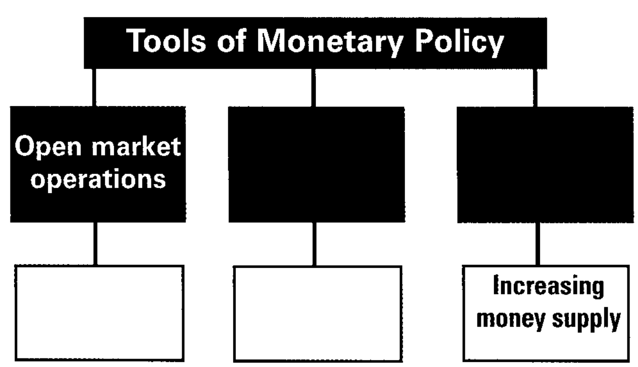
Match the following definitions with the terms listed below. You will not use all of the terms.

| | |
|---|---|
| **inside lag** | **tight money policy** |
| **discount rate** | **money creation** |
| **Board of Governors** | **outside lag** |
| **federal funds rate** | **easy money policy** |
| **excess reserves** | **prime rate** |
| **Federal Reserve District** | **check clearing** |

1. Rate the Federal Reserve charges for loans to commercial banks
2. Process by which money enters into circulation
3. The seven-member board that oversees the Federal Reserve System
4. Monetary policy that reduces the money supply
5. Reserves greater than the required amounts
6. The process by which banks record whose account gives up money and whose account receives money when a customer writes a check
7. The time it takes for monetary policy to have an effect

## Using Graphic Organizers

8. On a separate sheet of paper, copy the tree map below. Complete the tree map with the tools of monetary policy and their expected effects on the economy.



## Reviewing Main Ideas

9. What was the reasoning behind the creation of the Federal Reserve?
10. List and describe three services the Federal Reserve offers banks.
11. Describe the money multiplier formula in your own words.
12. How do inside lags and outside lags affect monetary policy?
13. What is the difference between easy money policies and tight money polices?

## Critical Thinking

14. **Analyzing Information** Review the services the Federal Reserve offers banks and the regulations it places on banks. Which service or regulation do you think is most important to the American banking system?
15. **Analyzing Information** Why are open market operations the most commonly used actions taken by the Fed? What advantages do open market operations have over other monetary policy tools?
16. **Recognizing Cause and Effect** If the Federal Reserve Board were to implement an easy money policy, what actions would it take? What would be the expected results of this policy? What conditions could lead the Fed to take such actions?

## Problem-Solving Activity

17. Suppose the economy is experiencing a high rate of inflation. As chair of the Federal Reserve Board, what actions would you take to put the economy back on track?

### Economics Journal

***Organizing Information*** Review your list of terms and definitions. Use your list and other information from the chapter to create a graphic organizer summarizing the role of the Fed in the United States economy.

## Skills for Life

***Recognizing Bias in Writing*** Review the steps shown on page 419; then complete the following activity based on the passage on inflation below.

18. Who is the author of the excerpt below?
19. Is this a personal letter, diary entry, or public document?
20. What words does the author use to describe the actions of Alan Greenspan?
21. Do you detect any obvious bias?
22. What economic attitudes may have influenced the author's opinion?

"In the late 1960s, after 20 years in which the gross domestic product had grown 4% a year, inflation had remained below 2%, and the Dow Jones Industrial Average had increased fivefold, the U.S. economy began a long slide into an economic abyss. Inflation and interest rates shot up, stock prices stagnated, and by the late 1970s, few thought the U.S. economy could ever recover.

Today, many believe this same fate is once again awaiting the U.S. economy. According to the pessimists, the U.S. stock market is in a bubble that is about to burst, and inflation is about to explode. The recent dip in the stock market—prompted by more gloomy warnings from Alan Greenspan—appeared to give credence to these worrywarts. But they are wrong."

Brian S. Wesbury, chief economist at Griffin, Kubik, Stephens & Thompson, "Have No Fear, Inflation Isn't Here" [Commentary], *The Wall Street Journal Interactive Edition,* October 21, 1999

### *Take It to the NET*

***Chapter 16 Self-Test*** As a final review activity, take the Chapter 16 Self-Test in the Social Studies area at the Web site listed below, and receive immediate feedback on your answers. The test consists of 20 multiple-choice questions designed to test your understanding of the chapter content.

**www.phschool.com**

UNIT 7

# The Global Economy