

THE
**FEDERAL
RESERVE**



Everyday Economics



Federal Reserve
Bank of Dallas

THE JOURNEY TO A U.S. CENTRAL BANK

1789
CONSTITUTION

We need a national bank to offer credit that can strengthen the government and grow the economy.



Hamilton

vs.



Jefferson

NO. The future of the economy is in the land, not commerce and banks.

I agree with Jefferson. Also, the bank is unconstitutional.



Madison

1811



CLOSED

Congress failed to renew charter.

1791

1ST BANK OF THE UNITED STATES

I agree with Hamilton. I'll sign a bill and create the Bank of the United States.



Washington



WAR OF 1812

I've changed my mind.

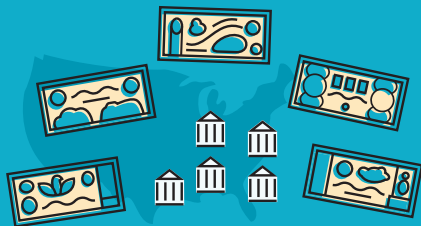


Madison

The war left us broke, and we need credit. Maybe a national bank is a good idea.



1816 2ND BANK OF THE UNITED STATES



Each state bank made its own laws about banking and currency. Without a uniform currency, values could not be guaranteed.

1836



After Jackson's re-election in 1832, the government started moving its money to state banks.

A national bank is bad for the states. I really just don't trust banks.



Jackson

1861

CIVIL WAR

Greenbacks

The U.S. issued greenbacks.

Confederate Notes

The Confederate government issued its own money.

1863-65

New laws during the Civil War allowed the U.S. Treasury to charter national banks that issued a uniform currency.

We want our money!



After the Civil War, bank runs and financial crises led to long periods of economic hardship and recession.

The Federal Reserve

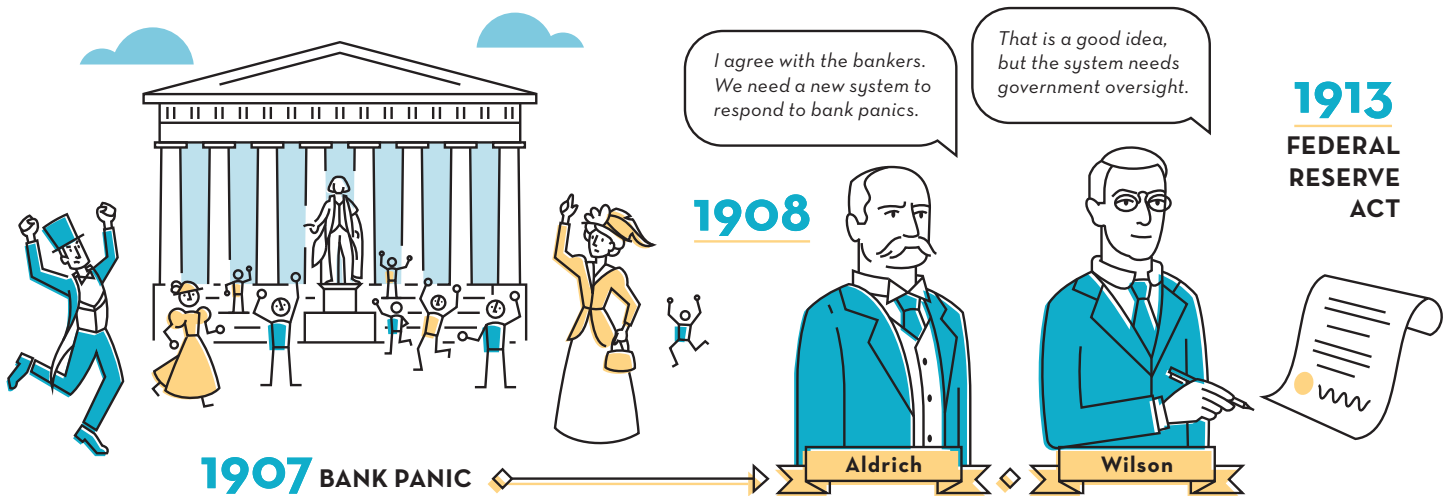
The Federal Reserve is the central bank of the United States, and it is committed to serving the needs of the American people. Every day, the Federal Reserve promotes stable prices and maximum employment. The Federal Reserve makes sure that banks and the rest of the financial system are stable and that consumers are protected in financial transactions. Finally, the Federal Reserve ensures that the payment system, including electronic payments and U.S. currency, is safe and secure. These important responsibilities are carried out by a system of 12 regional Federal Reserve Banks, which are spread out across the country, along with the Board of Governors located in Washington. Congress created the Federal Reserve in 1913 to address a long series of bank panics and economic crises.



The Bank Panic of 1907

In 1907, when you deposited your hard-earned money in a bank, you knew the bank planned to use your deposit to make loans. You trusted that you could withdraw your money when you wanted it. When you heard rumors that your bank was having trouble, you rushed to the bank to withdraw your money. When you arrived, you found a line of frightened customers stretched around the building. If the bank failed, depositors would lose their money.

Today, bank deposits are insured, but in 1907, there was no nationwide insurance. So, when negative news about the economy caused people to worry about the safety of their bank, they often withdrew their deposits. When depositors began to withdraw their money during a bank run, a wider crisis or panic spread across the banking system. The bank panic that gripped the nation in 1907 was not the first. America had experienced similar panics throughout most of the 1800s.

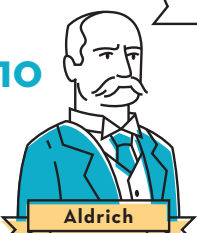


During the Panic of 1907, the U.S. Treasury made loans to New York banks that were threatened by bank runs caused by the panic, but the loans were not enough to save the banks. J.P. Morgan, a banker in New York,

recognized the threat to the whole economy and to his personal fortune, so he stepped in and made loans to banks to save them. The story goes that he called a group of bankers and other businessmen to a meeting, locked the door and refused to let anyone leave until they all committed to make similar loans. The economy recovered, but Congress decided the nation needed a new system to respond to these financial crises.

What Happened at Jekyll Island?

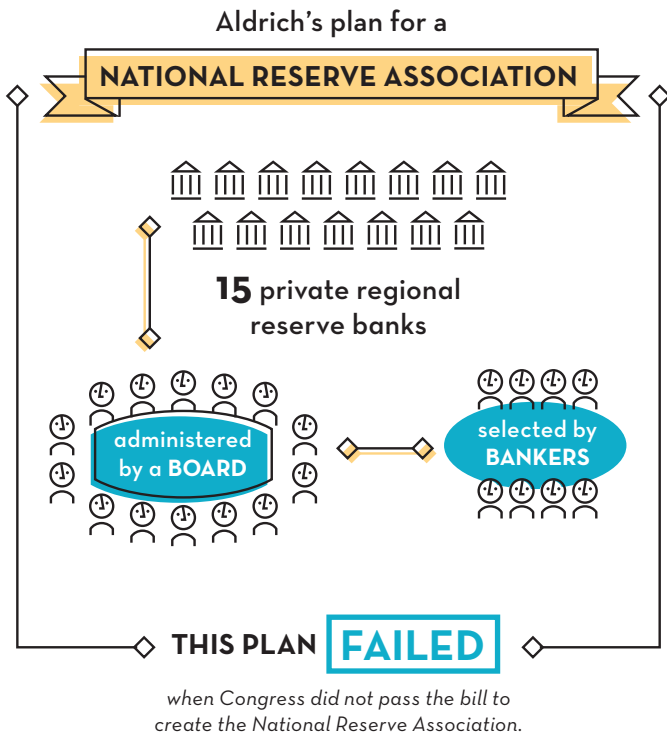
1910



Let's discuss plans for a central bank.

Senator Nelson Aldrich gathered a small group of bankers on Jekyll Island off the coast of Georgia. After the meeting, Aldrich proposed a plan.

Aldrich



Congress passed a law in 1908 that created the National Monetary Commission. Led by Senator Nelson Aldrich, the commission studied banking in the U.S. and central banks in Europe. When the commission's work stalled, some of the members held a secret meeting on Jekyll Island. The commission issued numerous reports over several years and finally recommended a new law that would create a system of 15 private reserve banks spread across the country. The system would be run by bankers with no government oversight. While bankers supported this plan, there was opposition from people who wanted a central bank with public oversight from the government. The bill never passed, and banking reform became an issue in the 1912 election.

When Woodrow Wilson won the election, Senator Robert Owen and Representative Carter Glass crafted a bill creating the U.S. central bank. It did have some features from Aldrich's plan, but the Glass–Owen bill contained important changes. It created regional reserve banks and a government agency that would provide oversight over the new system. The Glass–Owen bill came to be known as the Federal Reserve Act, and President Wilson signed it into law on Dec. 23, 1913.

The Federal Reserve System

The Federal Reserve Act created two parts of today's Federal Reserve System: the Board of Governors and a system of regional Federal Reserve Banks. It was a unique system that had a public and a private side, as well as a balance of centralized oversight and regional operations. The third part of today's Federal Reserve System, the Federal Open Market Committee, was created by Congress in 1935.

1913

THE FEDERAL RESERVE ACT kept the idea of regional reserve banks, but the act created the Board of Governors to oversee the System.



Rather than being selected by bankers, Federal Reserve governors would be nominated by the president and confirmed by the Senate.

THE STRUCTURE OF THE FEDERAL RESERVE



PRESIDENT APPOINTS

BOARD OF GOVERNORS

SENATE CONFIRMS

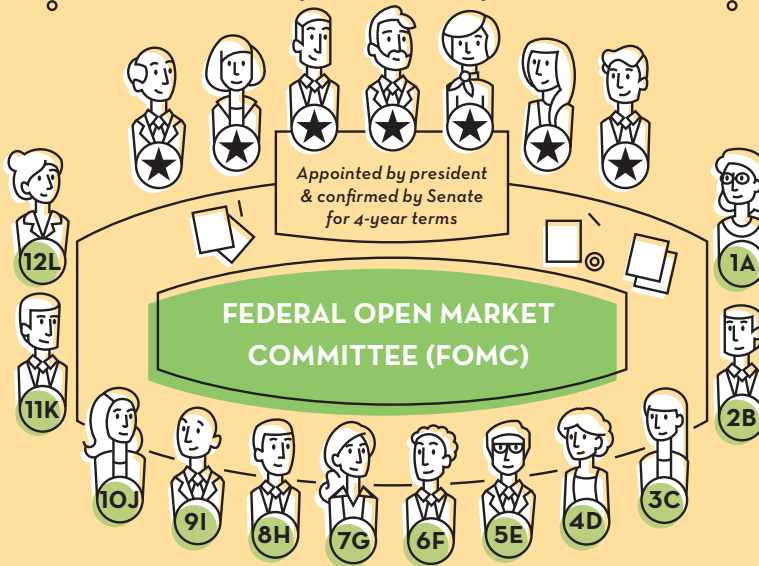
7 board members 14-year terms

WHO MEETS?

12 bank presidents and 7 governors meet 8 times a year as the **FOMC** to discuss the health of the economy. 12 vote on monetary policy and release a statement:



Supervision vice chair
Board chair also serves as FOMC chair
Board vice chair



WHO VOTES?

7 members from Board of Governors + 1 New York Fed president + 4 of 11 rotating Reserve Bank presidents = 12 voting members

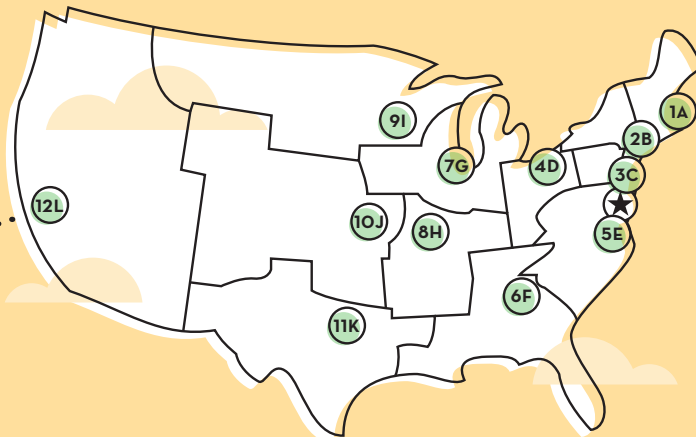
HOW MANY?

12 presidents from 12 banks in 12 districts



labeled by a number and letter

FEDERAL RESERVE BANKS



WHO LEADS?

Each Bank president is appointed by the Bank's board of directors ...



... and approved by the Board of Governors

Board of Governors

1A Boston

2B New York

3C Philadelphia

4D Cleveland

5E Richmond

6F Atlanta

7G Chicago

San Francisco

12L

Dallas

11K

Kansas City

10J

Minneapolis

9I

St. Louis

8H

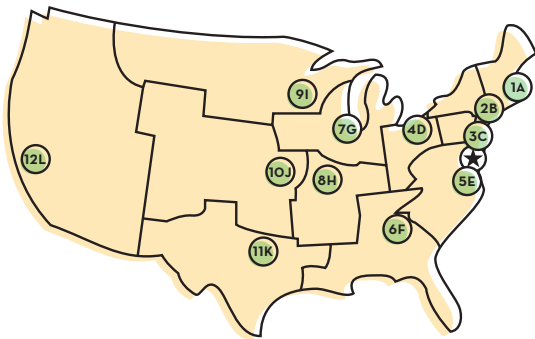
Board of Governors



Located in Washington, D.C., the Board of Governors is a government agency that oversees the Federal Reserve System. The board is made up of seven governors who are appointed by the president with the advice and consent of the Senate. Each governor serves a 14-year term.

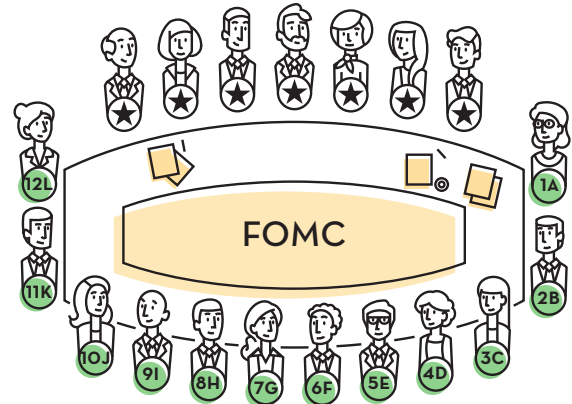
Three of the governors serve as chair, vice chair and vice chair for supervision. The governors who assume these roles are nominated by the president and confirmed by the Senate for a four-year term as leaders.

Federal Reserve Banks



The 12 regional Federal Reserve Banks are located in cities across the United States, and each serves a geographic district. Each Bank is led by a president who is appointed by the Reserve Bank's board of directors and approved by the Board of Governors. Each Federal Reserve district is represented by a number and a letter. From 1A in Boston to 12L in San Francisco, these designations are used on all denominations of U.S. currency. These regional Federal Reserve Banks serve their districts by providing financial services, supervising banks, researching the local economy and connecting to people in the community.

Federal Open Market Committee



The FOMC brings together the 12 Federal Reserve Bank presidents and the seven members of the Board of Governors to make decisions about monetary policy—actions that affect the money and credit available in the economy. This combination brings together leaders with broad information about the American economy as well as regional perspectives on economic conditions.

While all 19 participants play an active role in the deliberations of the FOMC, there are only 12 voting members. The seven governors and the president of the Federal Reserve Bank of New York always vote. The other 11 presidents rotate among four voting positions annually.

Creating the System

The Federal Reserve Act specified that the nation would be divided into Federal Reserve districts with a Federal Reserve Bank in each one. A Reserve Bank Organization Committee was formed to select the Reserve Bank locations and draw district lines “with due regard to the convenience and customary course of business.” The committee heard proposals from many cities that wanted to be a Reserve Bank site and conducted a survey of bankers to determine their preferences for the locations. The committee selected 12 cities that would each be home to a Reserve Bank. Over the years, Banks have also established branches to better serve the needs of their districts.

Is the Fed Constitutional?



1816 2ND BANK OF THE UNITED STATES

was created by Congress.

1817

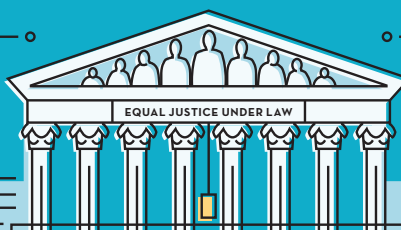
The bank opened 18 branches, including one in Baltimore, Maryland.

1818



State banks in Maryland objected to the competition from the branch and lobbied the Maryland legislature to impose a tax.

The case was brought to court, and the decision was appealed to the **SUPREME COURT**, led by Chief Justice John Marshall.



1819

McCulloch v. Maryland

THE COURT ANSWERED
2 BASIC QUESTIONS

Could Congress charter a bank, even though that power is not explicitly granted in the Constitution?

◆ YES ◆

The court ruled that Congress could charter a bank, because Article 1, Section 8 grants Congress the power to adopt "all Laws which shall be necessary and proper for carrying into Execution the foregoing Powers ..."

Did the state of Maryland (or any state) have the power to tax an institution created by Congress?

◆ NO ◆

The court held that the "power to tax is the power to destroy." Taxing the bank would place the federal government under the rule of an individual state and would violate the Constitution's supremacy clause.

The opinion in this case is still the basis for the constitutionality of the Federal Reserve.

Who Owns the Fed?

A common question about the Federal Reserve concerns ownership. The Board of Governors is a federal agency, but the 12 regional Federal Reserve Banks are not part of the government. Commercial banks can be formed with a national charter or a state charter. Banks with a national charter are required to become members of the Federal Reserve and buy stock in their regional Reserve Bank. Membership is optional for state-chartered banks. Member banks cannot sell or trade this stock, but they do receive a dividend that is

fixed by law. Member banks elect six of the nine members of each Reserve Bank's board of directors, three bankers and three members of the public. The Board of Governors selects the other three directors. It is important to remember that, while commercial banks own these shares of stock, the Reserve Banks are created by Congress and overseen by the Board of Governors. The Federal Reserve Banks exist to serve the American public, and strong rules ensure that member banks do not have undue influence.

Who Pays for the Fed?

The Federal Reserve System does not receive budget appropriations from the federal government. By far the largest source of income is the large portfolio of bonds that earn interest, purchased as part of the work of monetary policy. The types of bonds the System can buy are limited by the Federal Reserve Act. In addition, Reserve Banks charge for certain financial services they provide for financial institutions, and the Federal Reserve charges interest when it makes loans. The interest income from the open market portfolio, as well as service fees and loan interest, pays for all of the operations of the 12 Federal Reserve Banks and their branches, along with the Board of Governors. After expenses are paid, all remaining income is sent to the U.S. Treasury.

What Does the Fed Do?

The U.S. Congress has given the Federal Reserve System a wide range of responsibilities that promote the well-being of the American economy and financial system. These duties have evolved over the years as the economy has grown and changed.

Today, the Federal Reserve has four main functions:



**Conducting
Monetary Policy**



**Maintaining the Stability
of the Financial System**



**Regulating and
Supervising Banks**



**Supporting the
Payments System**

Conducting Monetary Policy



Congress has given the Federal Reserve the job of creating and implementing monetary policy for the United States. Through its monetary policy, the Federal Reserve influences the availability and cost of money and credit to achieve national economic goals.

In 1977, Congress passed a law that instructed the Federal Reserve to implement monetary policy that would “promote effectively the goals of maximum employment, stable prices and moderate long-term interest rates.” The first goal is maximum employment. Monetary policy should encourage economic growth and increased production so the economy creates jobs and employment opportunities. The second goal is price stability. Through monetary policy, the Fed works to avoid excess inflation—when overall prices are rising rapidly. Price stability also means that the economy is not damaged by a period of falling prices, called deflation. The third goal is moderate long-term interest rates. Most economists agree that if the Federal Reserve achieves the first two goals, often called the dual mandate, long-term interest rates will be moderate.

Tools of Monetary Policy

To understand monetary policy, it is important to know a little bit about how a bank works. When a bank receives a new deposit from a customer, it makes a promise to pay that customer back when the customer requests a withdrawal. Some of the deposit is kept in reserve, either in the vault or in the bank’s reserve account at the Federal Reserve. The rest of the deposit can be used to make loans. The ability of a bank to make a loan depends on its reserves.

The tools of monetary policy are designed to increase or decrease the amount of money the whole banking system has in reserve. By affecting the overall level of reserves and banks’ use of those reserves to make loans, the Federal Reserve is able to influence the ability of banks to make loans and extend credit.

As banks are able to offer more or fewer loans, the price of credit—the interest rate—throughout the economy is affected. The interest rate on car loans, business loans, mortgages and other types of loans moves up or down.

As interest rates rise or fall, consumers and businesses make spending decisions that affect prices and employment. These decisions move the economy toward the goals of price stability and maximum employment. There are five tools of monetary policy:

1. Open Market Operations. Over time, the most important tool that the Federal Reserve has used in the day-to-day implementation of monetary policy is open market operations. When it conducts open market operations, the Federal Reserve buys or sells bonds from individual investors or institutions through primary dealers.

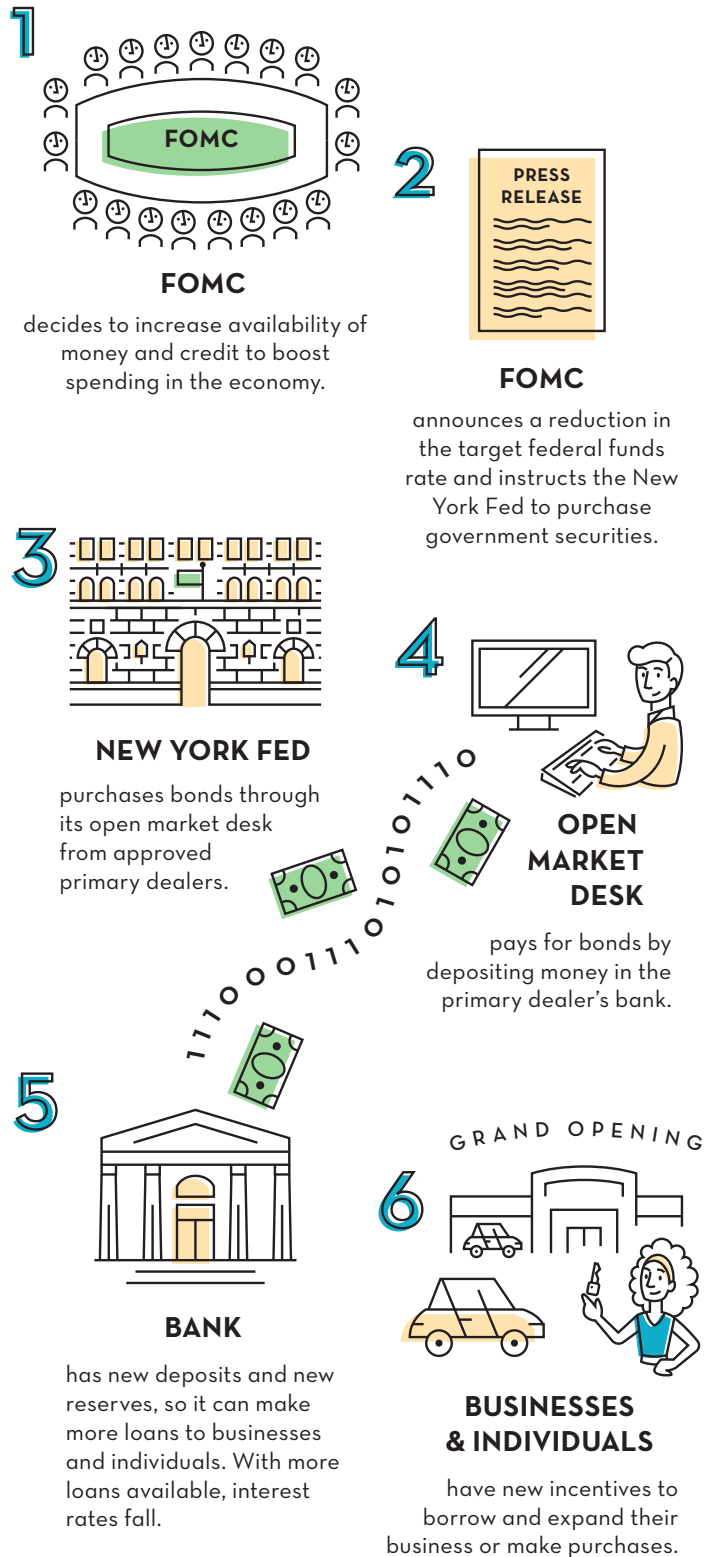
How does this process impact reserve balances at banks? When the Fed buys a bond, it pays for the bond with a deposit to the seller’s bank account. This bank deposit is newly created money. In addition, the new bank deposit creates new reserves for the bank. Those new reserves allow the bank to increase the availability of credit, thereby lowering interest rates.

The process can work in the other direction as well. If the Fed were to sell a bond, the buyer would pay for the bond with money from a bank account. When that payment is made, the bank’s deposits fall, reserves are reduced, the availability of credit shrinks and interest rates rise.

The FOMC guides open market operations through the committee’s announcement (see page 10) and related instructions to the open market desk at the Federal Reserve Bank of New York. The announcement contains a target for the federal funds rate, an interest rate on overnight loans between banks and other financial institutions. When the target federal funds rate is lowered, it means that the FOMC wants to expand money and credit. If the FOMC raises the target federal funds rate, it intends to reduce the available money and credit.

(Tools of Monetary Policy continued on page 10)

How Do Open Market Operations Expand Money and Credit?



Bonds can also be sold to contract money and credit.

EXPLORE THE PROCESS

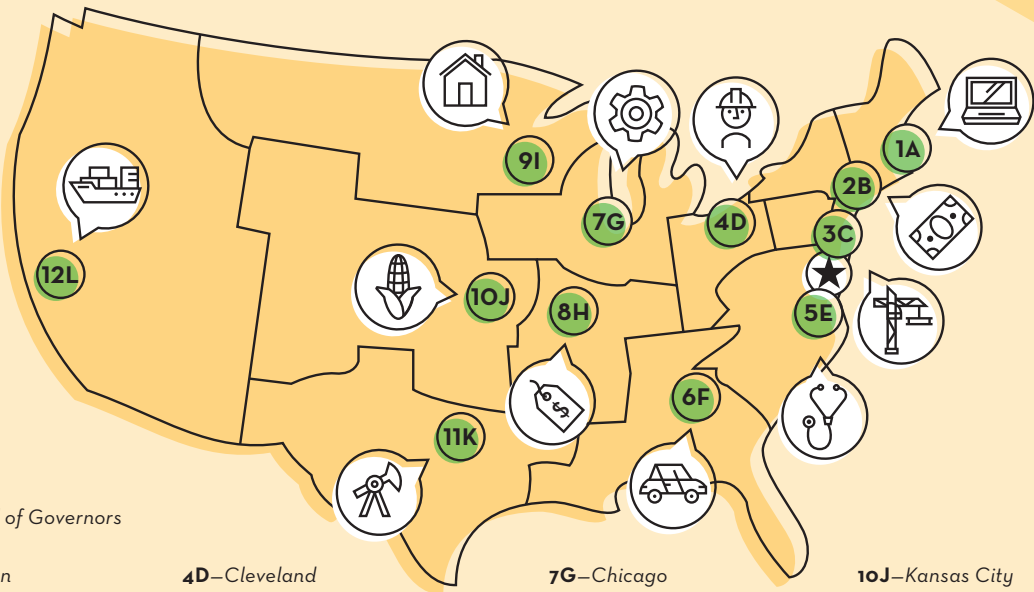
Measuring the Economy

The Federal Reserve measures the economy through **anecdotal** and **statistical information**.

ANECDOTAL INFORMATION



Researchers at each Federal Reserve Bank survey local business leaders, market experts and community leaders about current economic conditions that they have observed in the course of their work.



★ Board of Governors

1A—Boston

2B—New York

3C—Philadelphia

4D—Cleveland

5E—Richmond

6F—Atlanta

7G—Chicago

8H—St. Louis

9I—Minneapolis

10J—Kansas City

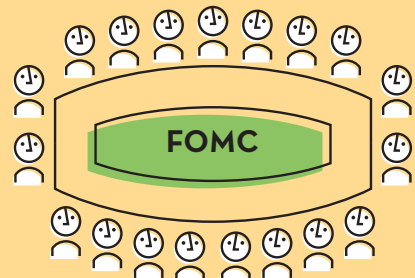
11K—Dallas

12L—San Francisco

Beige Book

The survey results are gathered into a report from each of the 12 Federal Reserve districts and compiled as the Beige Book.

The Beige Book is issued before each of the eight scheduled meetings of the Federal Open Market Committee.



STATISTICAL INFORMATION

3 important statistics the economists at the Federal Reserve use to measure the health of the economy are **GDP**, **inflation rate** and **unemployment rate**. These measures are discussed at FOMC meetings.

GDP

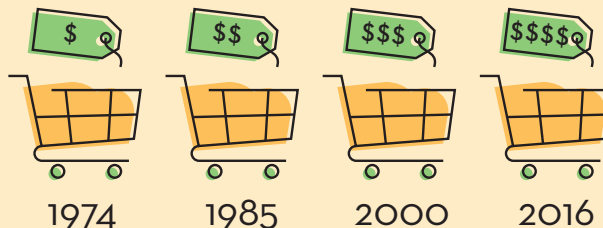


Gross domestic product (GDP) is the total market (or dollar) value of all final goods and services produced in a country during a given period of time. It does not include work in homes, criminal activity or the underground economy (unreported economic activity).



When GDP is adjusted for inflation, it is called real GDP. As real GDP grows over time, the increase is called economic growth and is usually communicated as a percentage change in real GDP.

INFLATION RATE



Inflation is an increase in the overall level of prices. It is not a change in the price of one particular good or service. It is measured using a price index, a comparison of the price of a group of items, called a market basket, over time.



Common measures of inflation are the consumer price index and the personal consumption expenditures price index. The inflation rate is the percentage change in the index over time. Deflation is a decrease in the overall level of prices.

UNEMPLOYMENT RATE

The unemployment rate is the percentage of those people in the labor force who do not have a job and are actively seeking one. The labor force includes people who are 16 years old or older who are not in the military or institutionalized. To be in the labor force, a person has to be working or looking for work.

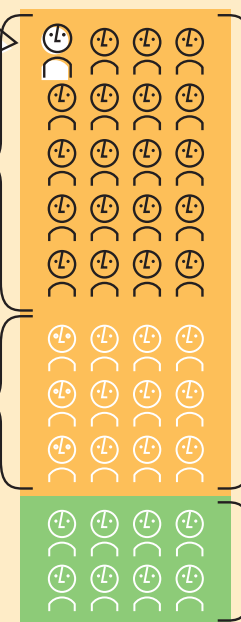


Economists talk about a natural rate of unemployment when they acknowledge that there will always be some workers looking for jobs. Some workers are temporarily unemployed as they move from one job to the next. Other workers might have more difficulty finding a job if they do not live close to areas where jobs are available or do not have the right skills.

I need a job!

Working or looking for work

Not looking for work
(e.g., students, retirees, stay-at-home parents)



Doing the Math

Population: 40
Labor force: 20
Unemployed: 1

Unemployment rate **5%**

16 or older, civilian, non-institutionalized

Under 16, military, institutionalized

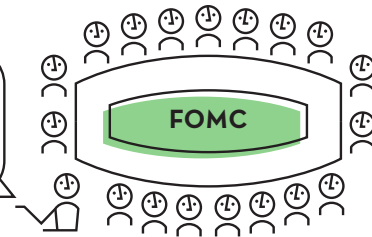
Keeping the Public Informed



On Feb. 4, 1994, the FOMC issued its first statement about its monetary policy decision following a meeting. Today, a press release is issued following each regular FOMC meeting. It usually contains:

- ◆ A summary of the committee's view of economic conditions
- ◆ An assessment of the risks to stable prices and maximum employment observed in the economy
- ◆ A specific target for the federal funds rate, along with any change from the previous target
- ◆ Information about the factors that could cause the committee to make future changes to the target rate
- ◆ A record of the vote of the committee, along with information about any dissenting votes

In addition to the press release, the FOMC posts minutes three weeks after its meetings. Transcripts and other materials are released after five years.



2. Changing the Reserve Requirement. The Board of Governors sets the percentage of deposits that banks must keep in reserve. Lowering the reserve requirement increases a bank's ability to make loans. Because more money would be available to loan, interest rates would fall. While this can be used as a policy tool, it rarely is.

3. Changing the Discount Rate. One of the original tasks of the Federal Reserve was to serve as a lender of last resort for banks. When the Federal Reserve makes a loan to a bank, the loan increases the bank's reserve balances. The interest rate on these loans is usually called the discount rate, but the official name is the primary credit rate. Lowering this rate signals that the Federal Reserve is increasing, or loosening, the supply of money and credit. Raising the rate signals a policy of tightening the supply of money and credit.

4. Interest on Reserve Balances. In 2006, Congress passed a law that allowed the Federal Reserve to pay interest on the deposits by banks in their reserve accounts. If this interest rate is very low, banks might look for opportunities to use their reserves to make loans to consumers or businesses so they can earn a higher interest rate. However, if the interest rate that banks earn begins to rise, banks could be encouraged to leave the deposits in reserves and make fewer loans.

5. Forward Guidance. Federal Reserve officials communicate about monetary policy goals, tools and progress in press releases, speeches and articles to set public expectations for future monetary policy actions. Economists now believe that people incorporate their expectations into their choices. When the Federal Reserve informs the public about the goals of monetary policy, the public can factor the information into long-range planning.

It is important to remember why the Federal Reserve conducts monetary policy. All of these tools allow the Federal Reserve to strengthen the American economy by seeking maximum employment and stable prices.

Maintaining the Stability of the Financial System

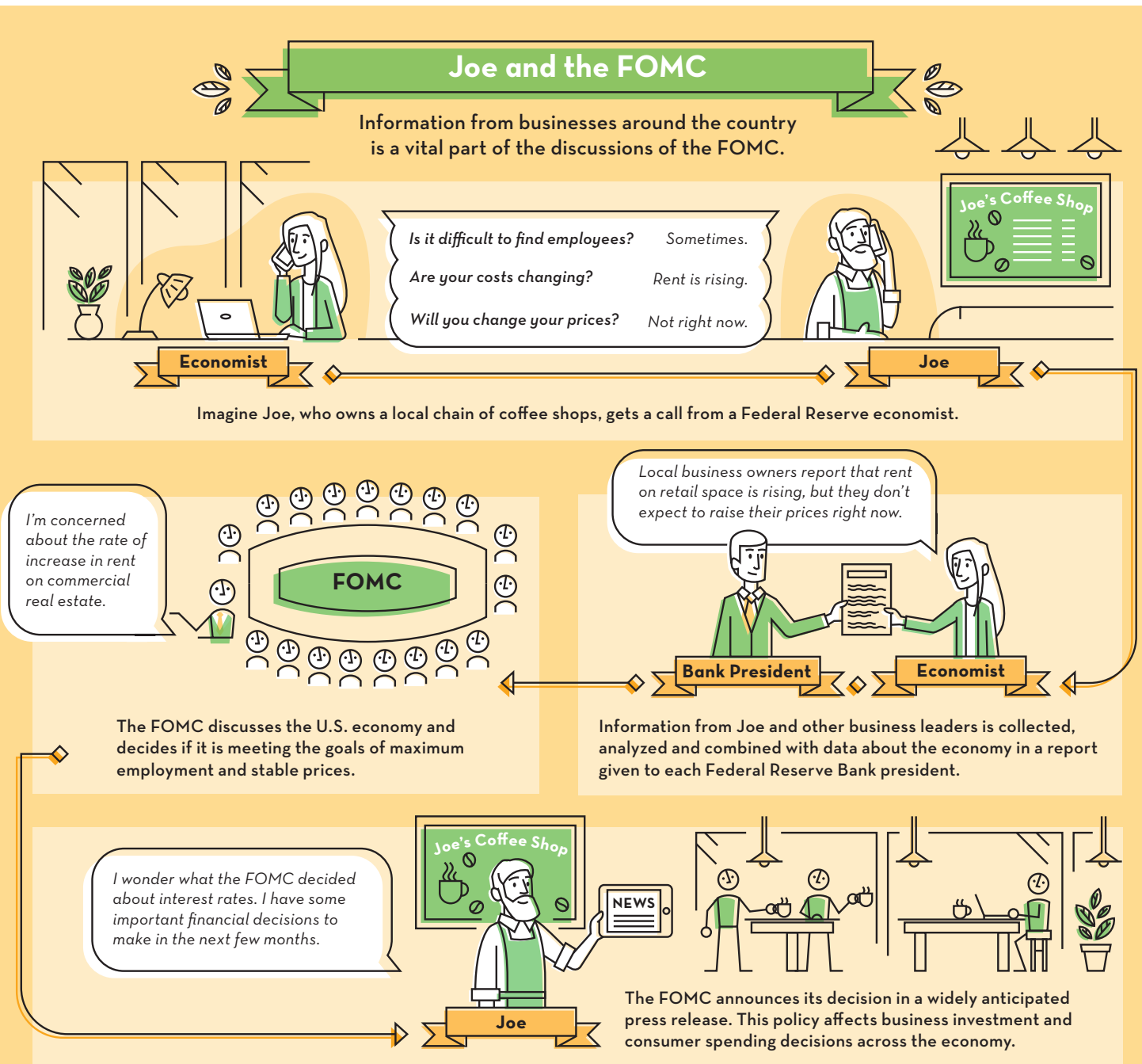


The American financial system is a complex network of financial institutions and financial markets. This network connects savers and investors with borrowers and spenders. Transactions can range from a teenage saver

who deposits money in a local credit union to a multibillion-dollar corporation that is borrowing money by selling bonds to investors.


A stable financial system provides consumers, businesses and governments with a broad range of financial services—banking services, consumer credit, investment accounts and more.

When this system is disrupted, the effects can be felt across the economy. This was the case in 2008, when a financial crisis caused a deep recession in the United



Steps to a Stable Financial System

1



CONGRESS
passes a bill and the U.S. president signs it into law.

2



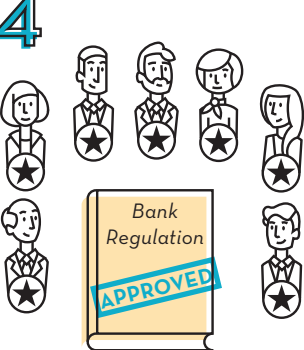
BOARD OF GOVERNORS
drafts a regulation that specifies how the law will be implemented and seeks input from the public.

3



INSTITUTIONS & INDIVIDUALS
respond to the draft regulation with comments and suggestions.

4



BOARD OF GOVERNORS
considers this public input, then finalizes and issues the new regulation.

5



FEDERAL RESERVE BANK EXAMINERS
are trained to assess an institution's compliance with all regulations. Examiners visit financial institutions and study submitted reports to determine compliance with regulations.

States. This brought new attention to the need to look beyond the health of individual banks and other financial institutions. By monitoring the whole financial system and looking at big financial trends—like overall debt—the Federal Reserve works to spot potential weaknesses that could allow a problem in one area to destabilize the entire system. The examination of the whole financial system is called macroprudential regulation.

The Federal Reserve is involved in monitoring the financial system in several ways. The chair of the Board of Governors, along with other government officials, serves on the Financial Stability Oversight Council. The council was created by Congress in 2010 to identify risks and monitor financial system stability. The members of the council represent a wide range of government agencies that are involved in the financial system.

Besides participating in the Financial Stability Oversight Council, the Federal Reserve has implemented new methods of examining banks and other financial institutions. To lower the chance that an institution would fail during difficult economic times, very large institutions participate in simulations, called stress tests. During a stress test, large banks conduct exercises that predict how well the bank could withstand the losses that could happen during a downturn in the economy. Also, banks and certain other institutions have to submit plans about how they would shut down if they experience severe disruptions. The goal of these plans is to make sure that one firm's failure does not lead to problems in other firms.

Regulating and Supervising Banks

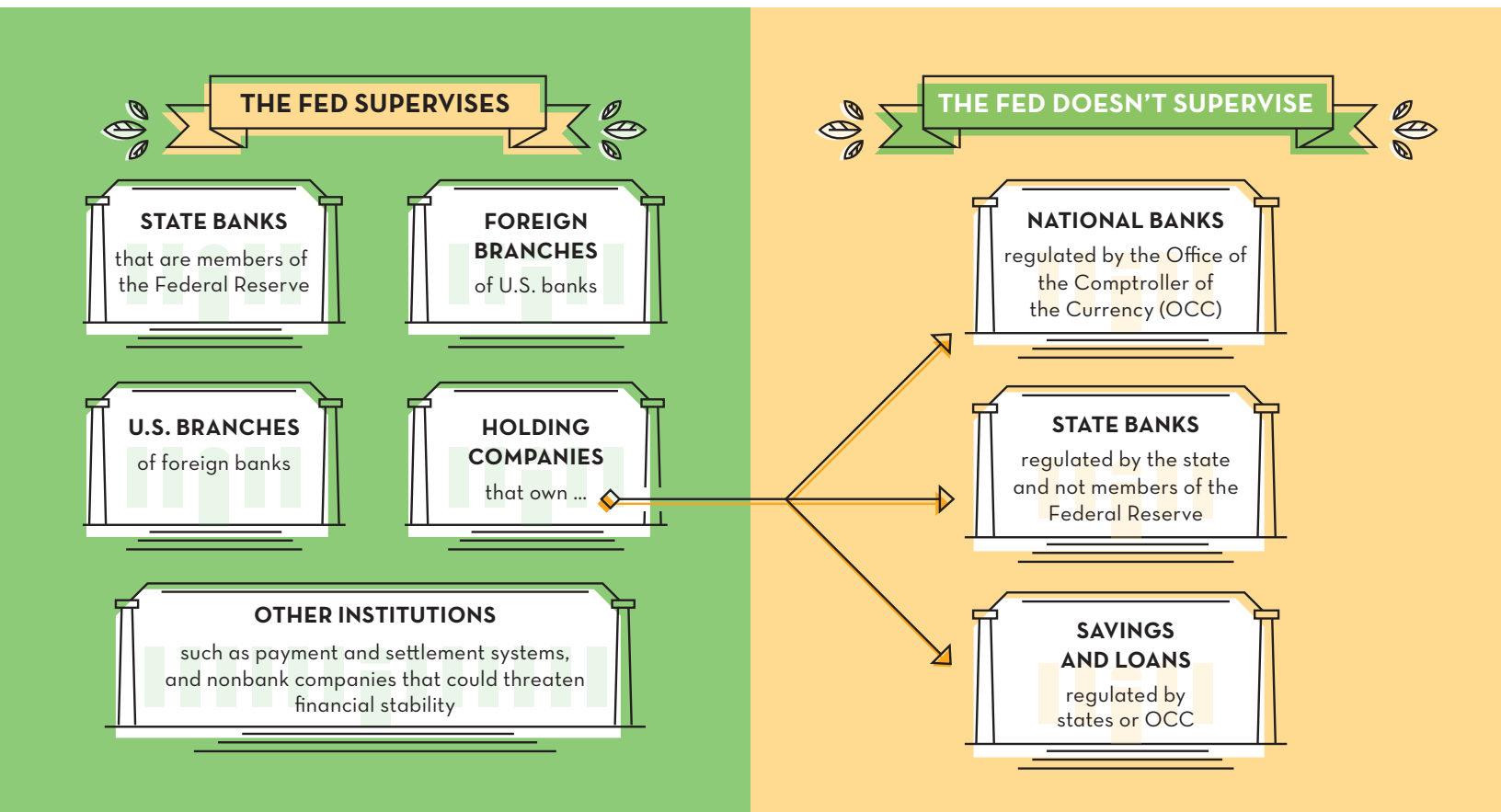


The Federal Reserve, working with other federal and state regulators, regulates and supervises a wide range of individual financial institutions, along with monitoring the broader financial system. Together, regulators promote safety and soundness in the operation of financial institutions, stability and competition in the financial markets, and fair and equitable treatment of consumers in their financial transactions.

Throughout the history of the United States, a wide range of legislation has shaped the way the financial system works and is regulated. After the Second Bank of the United States closed in the 1830s, individual states passed banking legislation that allowed them to charter and regulate state banks. During the Civil War, the U.S. Congress passed the National Bank Act that allowed the U.S. Treasury to charter and regulate national banks through the Office of the Comptroller of the Currency. When the Federal Reserve System was created in 1913, a new federal regulator was created. Then, 20 years later during the Great Depression, the Federal Deposit Insurance Corp. joined the list of regulators.

This list is still changing. In 2010, Congress created the Consumer Financial Protection Bureau. All these institutions still exist and work together to regulate the financial system. They participate in an interagency group, the Federal Financial Institutions Examination Council, to make standards uniform and promote cooperation.

Regulating. Regulations are the rules and guidelines that govern the way banks and other financial institutions are structured and the way they do business. After a bill about the financial system or banking is passed by Congress and signed into law by the president, the Board of Governors drafts regulations and seeks input from



OTHER FEDERAL REGULATORS

FEDERAL DEPOSIT INSURANCE CORP. (FDIC)
 regulates institutions with insured deposits, including state banks, national banks, and savings and loans.

CONSUMER FINANCIAL PROTECTION BUREAU
 enforces consumer protection for institutions with \$10 billion or more in total assets. The Federal Reserve, the OCC and the state banking agencies enforce these rules in smaller banks.



1 Safety and soundness in the operation of financial institutions

2 Stability and competition in the financial markets

3 Fair and equitable treatment of consumers in their financial transactions

businesses and individuals during a period of public comment before regulations are finalized and published.

Supervising. Supervision involves monitoring, inspecting and examining banks and other financial institutions to make sure they are following these regulations. The Board of Governors delegates this responsibility to the 12 Federal Reserve Banks. Specially trained examiners visit financial institutions to conduct their examinations. In addition, they collect information from institutions on a regular basis to assess the risks to safety and soundness.

Additionally, the Federal Reserve has important responsibilities in overseeing the structure of the banking system in the United States. When a company wants to buy a controlling interest in a bank or savings and loan, the Federal Reserve works with the Justice Department to review the merger or acquisition, taking into account how the change will affect competition, customers, financial stability and other factors.

Supporting the Payments System



When you stop at your favorite spot for a snack, how do you pay for it? Maybe you use a debit card.

You could even use cash. The Federal Reserve works to make sure that you can pay in the way you choose and that the transaction is completed safely and efficiently. Over the years, innovation and new technology have changed the way we pay.

Currency and Coin. The next time you pay for something with cash, look at the top of the bill. Officially, it is a Federal Reserve note, issued through the 12 regional Federal Reserve Banks and their branches to commercial banks, savings and loans, and credit unions. In 2017, there was almost \$1.5 trillion circulating around the world.

Genuine U.S. currency has a variety of security features, including watermarks, security strips, microprinting and more. Even the paper is specially made and is only used for Federal Reserve notes. It is a blend of cotton and linen with red and blue fibers woven in the sheet.

Bills that have been in circulation eventually make their way back to a Federal Reserve Bank or branch when a commercial bank makes a deposit. The deposit is carefully examined to identify counterfeits and remove money that is worn, torn, dirty or damaged. The rest of the deposit is repackaged to return to circulation. Suspected counterfeits are turned over to the United States Secret Service, and damaged bills are shredded. In 2017, the Federal Reserve Bank of Dallas, one of the 12 regional Reserve Banks, destroyed 361.8 million notes worth more than \$8.9 billion.

Every year, the Federal Reserve places an order for new currency with the Bureau of Engraving and Printing (part of the U.S. Treasury) in Fort Worth, Texas, and Washington, D.C., to meet the needs of the economy. This currency order is not part of a monetary policy decision. The demand for currency

is determined by consumer decisions to use cash, rather than other forms of payment, for transactions.

Coins are produced by the United States Mint, another part of the U.S. Treasury, in Denver and Philadelphia. The Federal Reserve also distributes coins to the banking system.

Checks. For many years, consumers and businesses have paid for goods and services using checks. A check is a document that instructs a bank to pay someone from a specific bank account. One of the earliest jobs of the Federal Reserve was to clear checks by moving deposits from the bank account of the person who wrote the check to the bank account of the person who received the check. Since both banks have accounts at

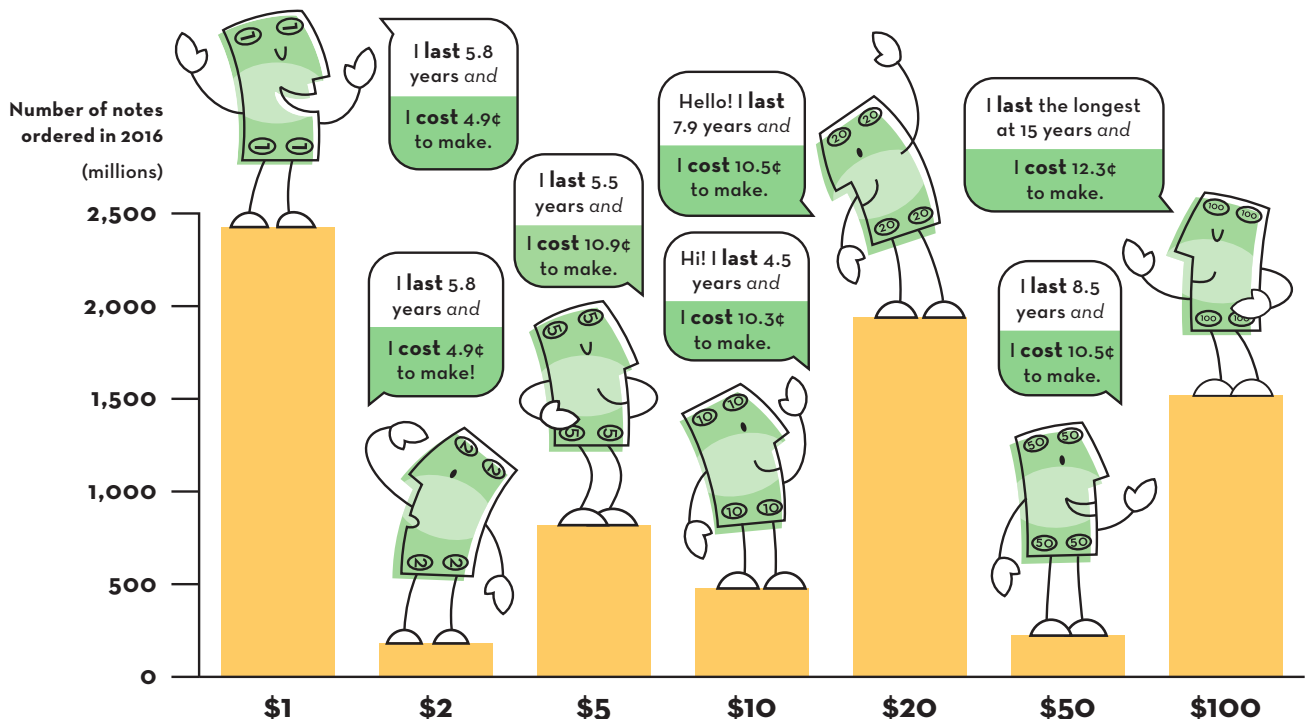
the Federal Reserve, the Fed can simply move the money between the accounts of the two banks.

In the past, paper checks moved around the country to complete this process, but today, banks can send an electronic image of a check. This makes check clearing faster and safer. As other forms of payment have grown, the number of checks written has dramatically decreased.

Automated Clearing House (ACH). The ACH system facilitates many different types of electronic payments. It allows a business to pay employees through direct deposit by sending electronic payroll information to the business' bank. The bank forwards this information to the Federal Reserve, and, just like clearing a check, the Fed can move the money from one bank to an

Printing Money

To replace destroyed notes and meet the growing demand for U.S. currency, the Federal Reserve issues newly printed currency through the banking system. The Bureau of Engraving and Printing prints about 7 billion notes each year to meet worldwide demand for U.S. currency.



other. The U.S. government makes most of its payments, like salaries, Social Security benefits and tax refunds, through the ACH system. These electronic payments are safe and reliable, and they allow employees and benefit recipients to depend on the timeliness of deposits.

Many consumers make payments through the ACH system, as well. When a customer provides a bank routing number and account number to a firm, the customer can authorize recurring payments such as utility bills, insurance premiums and loan payments through this system. ACH can also be used to process one-time transactions, including payments made over the phone or internet.

There are nearly 22 billion ACH transactions every year. The total value of those payments is about \$39 trillion. The Federal Reserve has also made agreements to offer these payments internationally through FedGlobal® ACH.

Fedwire®. Created in 1918, Fedwire® facilitates the transfer of large amounts between banks. Every day, an average of \$3 trillion moves through this system. When banks transfer money using this system, the money is immediately available at the receiving bank. The transactions are final and irrevocable.

The way we pay for everything from a cup of coffee to the construction of a new factory continues to change. Technology and innovation drive changes in payments

across the global economy. Chips, phones, facial recognition and more are becoming part of our everyday transactions. While businesses and financial institutions develop and implement these new systems, the Federal Reserve monitors the global payments system to support its speed, security and efficiency.

Serving as the U.S. Government's Bank

In the same ways that individuals need a bank account to keep deposits and buy goods and services, the U.S. government needs a bank. Since 1913, the Federal Reserve has served as the bank for the U.S. Treasury. This bank account allows the government to deposit tax revenue, pay federal employees and purchase goods and services.

While the Federal Reserve serves as the bank for the U.S. government, it is Congress and the U.S. president that make decisions about taxes and spending. This is called fiscal policy. The amount of taxes and who pays them, the programs the government runs or pays for, even the amount of debt the nation incurs when spending exceeds tax revenue, are decided by elected representatives. Bills on spending and taxes are passed by the House and Senate and signed into law by the U.S. president.



Bank panics, like the one that gripped New York in 1907, are largely forgotten in the 21st century, but Americans still rely on a safe and sound financial system that supports a healthy, growing economy. By crafting monetary policy, maintaining a healthy financial system, regulating and supervising banks, and supporting the payments system, the Federal Reserve promotes jobs and stable prices while also keeping the American public's money safe and available.

GREAT MINDS THINK ABOUT MONETARY POLICY



Walter Bagehot

1826-1877

I was an English banker and editor of *The Economist* who studied the Bank of England's response to a financial panic. I thought it was important for there to be a lender of last resort, an institution that could lend to banks during a bank run. I thought that loans should be easily available if the bank met two conditions—it had to pay interest and had to have something to pledge as collateral for the loan.



Irving Fisher

1867-1947

I pioneered the idea that the quantity of money in an economy has a direct impact on prices. I also advocated using a basket of goods, rather than gold, to measure the value of the dollar. Finally, I was the first to distinguish between real and nominal interest rates.



John Maynard Keynes

1883-1946

I was a British economist and an advocate for the use of monetary policy to stabilize the economy in the 1920s. However, the high levels of unemployment in Britain during the 1930s led me to prioritize government spending over monetary policy as a tool to address recessions.



Milton Friedman & Anna Schwartz

1912-2006 1915-2012

We studied the importance of money in *A Monetary History of the United States, 1867-1960*, published in 1963. By studying the supply of money and the economic outcomes of the Great Depression and other historic periods, we proved the impact of monetary policy.



Robert Lucas Jr.

1937-

I developed the theory of rational expectations, which says that people make economic decisions based on their expectations about the future. This insight changed the way economists analyze the broad economy and study policy implications.



John Taylor

1946-

I developed a formula, known as the Taylor Rule, which sets a recommended short-term interest rate based on the inflation rate and the output of the economy. If governments or central banks used this formula, monetary policies would be guided by rule, not discretion.



THE FEDERAL RESERVE

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