Chapter II:
What Is The Federal Reserve?

Photo courtesy of World Truth Today

"The Board of Governors of the Federal Reserve System and the Federal Open Market Committee shall maintain long run growth of the monetary and credit aggregates commensurate with the economy's long run potential to increase production, so as to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates." – The Federal Reserve Act of 1913

History and Formation

Created by Student Interns, The Echo Foundation

"Importance of Fed Independence — Did You Know?" by Richmond Fed is a short YouTube video summarizing the separation of Congress and the Fed.
Ctrl+click: Importance of Fed Independence

The Federal Reserve, also known as The Fed, is the central banking system of the United States. It is independent of the United States government, and is designed to ensure that politics do not control its actions. Congress created it in December of 1913 to provide a more stable, yet flexible financial system, achieved by using monetary policy to constantly pursue maximum employment and stable prices. The Federal Reserve Act was put in place by President Woodrow Wilson to accomplish these two goals. Prior to the creation of the Fed, the U.S. economy had been full of credit scarcity, and bank failures. Following the creation of the Federal Reserve Act, the Fed has generally maintained a more stable financial system.

The predecessor of the Federal Reserve Act was the National Banking Act, created in 1863, during the Civil War. This act provided government backing for the circulation of notes put forth by nationally chartered banks. An amendment to the act attempted to create a nationally uniform currency by establishing an additional tax on state bank notes. However, state banks continued to flourish due to popularity achieved during the Free Banking Era that last lasted from 1837-1862.

A bank run on the Fourth National Bank No. 20 Nassau Street, New York City, from *Frank Leslie's Illustrated Newspaper*, 4 October 1873

Despite the reforms made by Congress as part of the National Banking Act, a banking panic in 1893 occurred that led to the worst depression in U.S. history. Eventually, this depression was resolved by the intervention of J.P. Morgan, a powerful and influential banker. Another financial crisis arose near the beginning of the twentieth century. The Panic of 1907 was trigged by a plan to limit the popularity of trust companies. It was only resolved when the Federal Government provided $30 million in aid to help alleviate the situation.

The Aldrich-Vreeland Act of 1908 was then created to provide emergency issued currency during the crisis. Additionally, the National Monetary Commission was created to search for a long term fix for the nation's economic instability. In December of 1912, President Woodrow Wilson signed the Federal Reserve Act, creating the Federal Reserve as we know it today.

In 1978, the Humphrey Hawkins Act was created to address growing inflation and rising unemployment. The Act created new temporary government jobs which eased

"**Inflation** is when you pay fifteen dollars for the ten-dollar haircut you used to get for five dollars when you had hair."

— Sam Ewing

unemployment, developed new monetary policies to curb inflation, and increase liquidity and private sector employment.

The Federal Reserve's monetary policy has two primary objectives, to pursue stable prices and maximum employment. Stable prices are key to a nation's economic growth and prevent the price of goods being distorted by inflation. Additionally, stable prices allow for maximum capital formation and savings, because when the risk of savings erosion is minimized, businesses are willing to invest more.

(Sources: Federal Reserve, Federal Reserve of San Francisco, Investopedia)

"Origins and Mission of the Federal Reserve"

Federal Reserve and the Financial Crisis lecture series at George Washington University. March 20, 2012.**Cntl+click**: http://www.federalreserve.gov/newsevents/lectures/origins-and-mission.htm

"The Federal Reserve after World War II"

Federal Reserve and the Financial Crisis lecture series at George Washington University. March 22, 2012. **Ctrl+click:** http://www.federalreserve.gov/newsevents/lectures/the-Federal-Reserve-after-World-War-II.htm

Responsibilities

From The Federal Reserve

The Federal Reserve has 4 primary responsibilities:

1. Conduct the nation's monetary policy by influencing money and credit conditions in the economy in pursuit of full employment and stable prices

2. Supervise and regulate banks and other important financial institutions to ensure the safety and soundness of the nation's banking and financial system and to protect the credit rights of consumers.

3. Maintain the stability of the financial system and containing systemic risk that may arise in financial markets.

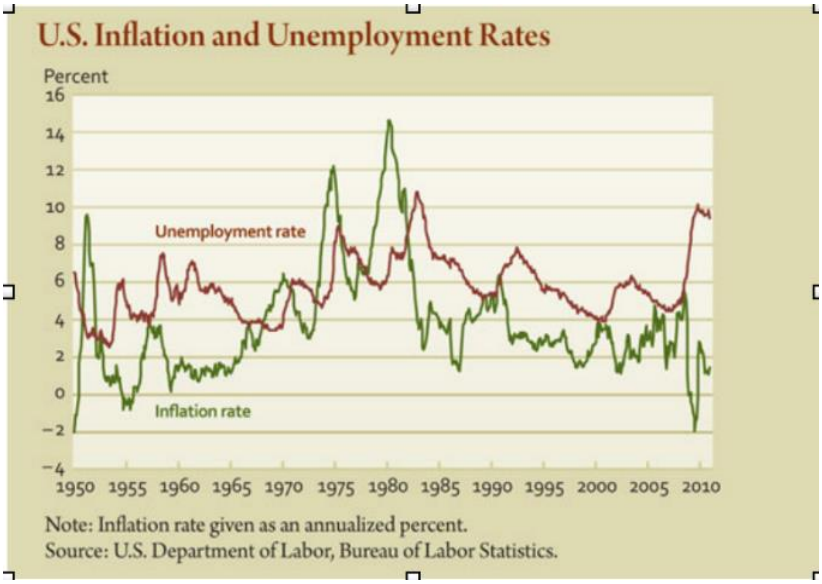
4. Provide certain financial services to the U.S. government, U.S. financial institutions, and foreign official institutions, and playing a major role in operating and overseeing the nation's payment systems. These services include:

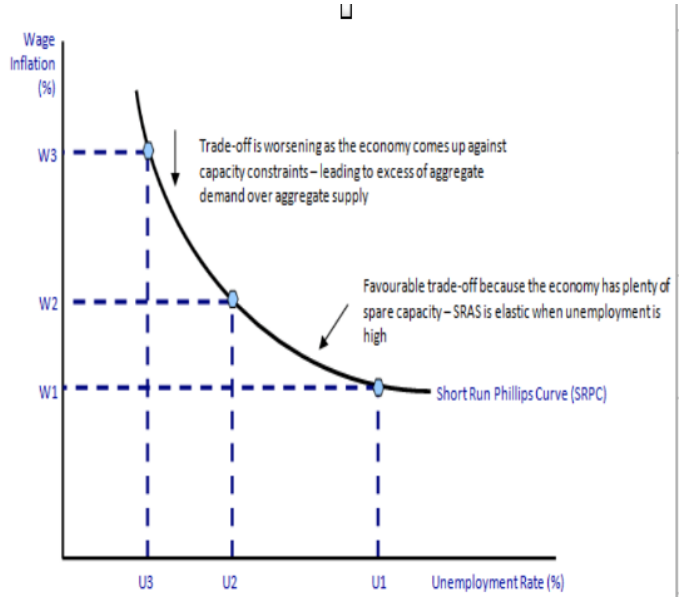
    - Provide electronic payment services in the form of both automated clearing house (ACH) and wire transfer (Fedwire)
    - Check collection.
    - Maintain cash and coin processing operations to ensure a healthy money supply.
    - Maintain accounts for U.S. Treasury
    - Process government checks, postal money orders and U.S. savings bonds.
    - Collect federal tax deposits.
    - Issue, service, and redeem saving bonds

Maximum employment is primarily affected by non-monetary factors that affect the dynamics of the current job market. As a result, the Federal Open Market Committee (FOMC) does not specify a fixed goal for maximum employment; rather, the FOMC's policy decisions must be informed by its members' assessments of the maximum level of employment, ultimately leading to a consensus on what policies the Fed must pursue with regards to employment.

(Source: Dollars and Sense.org) The trade-off between inflation and unemployment was first reported by A. W. Phillips in 1958—and so has been called the Phillips curve. The simple theory behind this trade-off is that as unemployment falls, workers are empowered to push for higher wages. Firms try to pass these higher wage costs on to consumers, resulting in higher prices and an inflationary buildup in the economy. The trade-off suggested by the Phillips curve implies that policy makers can target low inflation rates or low unemployment, but not both. During the 1960s, monetarists emphasized price stability (low inflation), while Keynesians more often emphasized job creation.

As shown in the graph above, throughout history, there has been an inverse correlation between inflation and unemployment rates. Usually, when inflation is high, unemployment is low.





Organization and Structure of the Fed

Created by Student Interns, The Echo Foundation

The Federal Reserve is comprised of two major components, a central authority in Washington D.C known as the Board of Governors as well as a network of 12 Reserve Banks located throughout the country. Within the Board of Governors sits the Federal Open Market Committee, comprised of the 12 presidents from each Reserve Bank. The Federal Open Market Committee is responsible for setting monetary policy.

Photo Credit: The Bernanke Federal Reserve Board (January 31, 2014)

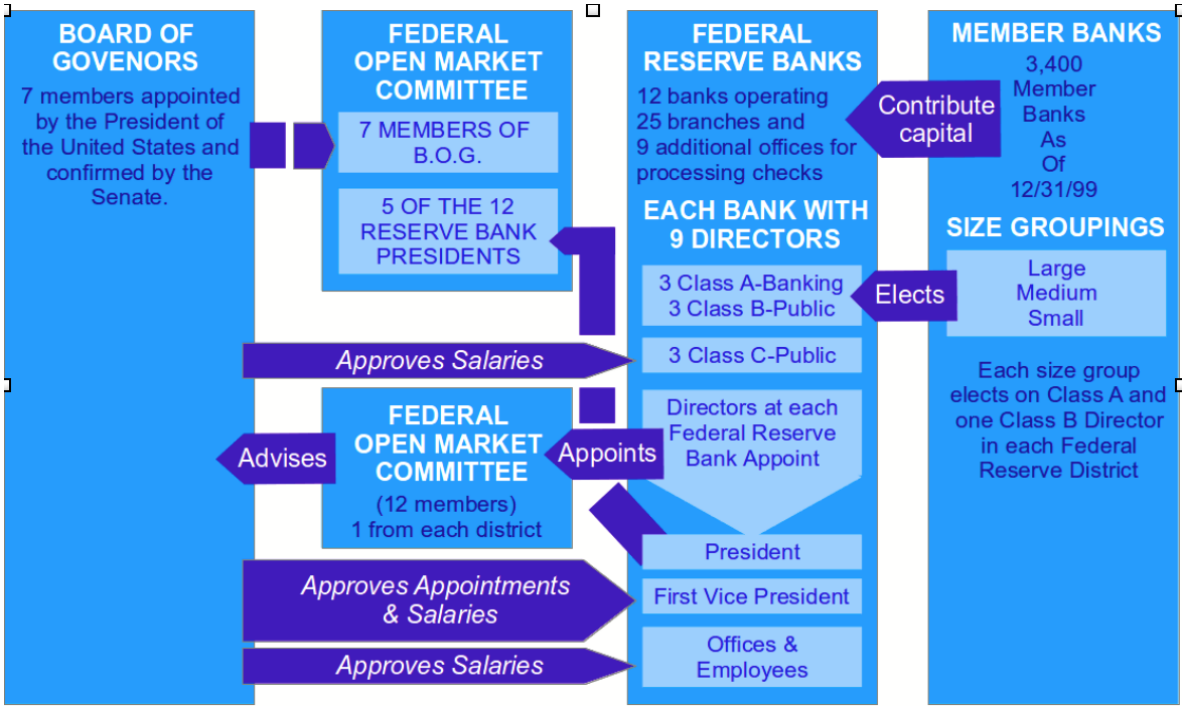
Board of Governors: The center of the Federal Reserve's structure is the Board of Governors. This is an independent government agency comprised of a 7 member board and its staff. Board members are appointed by the President of the United States. Once confirmed by the Senate, members serve staggered fourteen year terms that expire every even numbered year. The reason for these abnormally long terms is to safeguard the system from being influenced by political pressure. The President also appoints a chairman and a vice chairman for the Board, who serve renewable four-year terms, subject to Senate approval.

Board of Governors meeting January 1, 1922. (Source: Federal Reserve)

Federal Reserve Banks: Most normal operations of the Fed are carried out by 12 Federal Reserve banks. These "district banks" walk a fine line between being both a public and private corporations. Although technically set up as non-governmental organizations, these banks operate like private corporations while still serving public interests. Private, commercial banks have representatives that form a board of directors for each Reserve bank. Yet another safeguard against political influence is present here as well, as each bank president is appointed by the board of directors, (comprised of privately funded representatives) and then approved by the Board of Governors.

Federal Open Market Committee (FOMC) within the Fed is responsible for establishing and maintaining the nation's monetary policy. The seven members of the board of Governors, along with a constantly changing selection of five Reserve Bank presidents, make up the FOMC. The only permanent Reserve Bank president serving on the committee is that of the Reserve Bank of New York, who also serves as the vice chairman of the committee. All 12 presidents participate in meetings, whether they are current voting members or not.

Member Bank is part of the Federal Reserve System; or more generally, a bank that is part of a central clearing or central banking system. Such banks have to follow the rules and regulations put forward by the central bank or the clearing system.



(Source: Wikipedia)

The Dodd-Frank Act: Established in 2010, this Act possessed a number of revisions to the Fed's structure. A second vice chairman was added to the Board of Governors, and directors representing commercial banks were excluded from the selection of presidents for the 12 reserve banks. New entities, such as a Consumer Financial Protection Bureau, and an Office of Minority and Women were created, as well.

(Source: Federal Reserve) *How they influence change:* The Fed promotes safety and stability throughout the nation's banking system, stabilizes the financial markets, and ensures compliance with laws that fall under its jurisdiction. It accomplishes this through the use of its authority over the majority of banking institutions in the United States.

Regulation: The Fed is responsible for ensuring banking institutions under its authority comply with laws. The Board of Governors sets operational standards for banks through the use of regulations, rules, and policy guidelines. Legislation passed by Congress, such as the Dodd Frank Act, encourage certain regulations, whether permissive, or restrictive, to be implemented by the Fed.

Supervising Stability of Financial System: The Fed supervises banks, financial holding companies, state chartered banks; and international banking operations. Nationally chartered banks are bound by law to be members of the Federal Reserve banking system. They are supervised by the Office of the Comptroller of Currency. State Chartered banks that are not members of the system are monitored by the Federal Deposit Insurance Corporation.

The Structure and Organization of the System

From: Richmond Federal Reserve
Published: January 2012

The Fed's actions affect the economy and therefore affect you. To ensure that the Fed remains accountable and free from political pressure, the Federal Reserve System is composed of public and private elements. The Board of Governors of the Federal Reserve System provides oversight to the 12 Reserve Banks and their branches. The Federal Open Market Committee (FOMC), the Fed's monetary policymaking body, is made up of the members of the Board of Governors and presidents of the Reserve Banks. The Reserve Banks interact with more than 16,000 depository institutions that provide financial services to the public.

Board of Governors

The seven members of the Board are appointed by the president of the United States and confirmed by the U.S. Senate. The full term of a Board member is 14 years, and members who have served a full term may not be reappointed.

The president also appoints the chairman and vice chairman of the Board from among the seven Board members. The chairman and vice chairman serve four-year terms and may be reappointed to these positions. The Board's seven governors serve as members of the Federal Open Market Committee.

Three advisory councils – the Federal Advisory Council, the Consumer Advisory Council and the Thrift Institutions Advisory Council – inform the Board on matters of current interest. These councils, whose members are drawn from each of the 12 Federal Reserve Districts, meet three to four times a year.

The Federal Open Market Committee

The Federal Open Market Committee (FOMC) can affect overall economic activity through monetary policy. The FOMC sets monetary policy by establishing a target for the federal funds rate (the interest rate banks charge for overnight loans between banks). While all seven members of the Board of Governors and all 12 presidents of the Reserve Banks participate in each FOMC meeting, voting rights rotate among some participants. The seven members of the Board of Governors, the president of the New York Reserve Bank and the presidents of four other Reserve Banks, who serve one-year rotations, vote on monetary policy decisions.

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Reserve Banks

The 12 Reserve Banks are named after the locations of their headquarters – Atlanta, Boston, Chicago, Cleveland, Dallas, Kansas City, Minneapolis, New York, Philadelphia, Richmond, San Francisco and St. Louis. Each Bank is assigned a number and a corresponding letter. As the map on pages 6 and 7 shows, the naming convention begins with the Boston Fed, 1A, in the Northeast and continues south and west across the country to the San Francisco Fed, 12L.

The Fed andYou

Every day people make economic decisions. Deciding what to purchase, how much to save and whether to attend college will impact your life and the larger economy. The Fed's actions can affect the economic environment in which you make these decisions. Therefore the Fed's actions, your decisions and the economy are interconnected.

The Reserve Banks are quasi-governmental, or legally private but functionally public, corporations. Reserve Banks are "owned" by commercial banks in their region (that is, banks hold stock in their Federal Reserve Bank) but serve public goals and are overseen by the Board of Governors, a government entity. While these member banks are considered "owners" of the Fed, they do not have many of the usual rights of stockholders. For example, although 6 percent of their capital is invested in the Reserve Banks, their dividend return on this investment is fixed at 6 percent by law. The purpose of this quasi-governmental arrangement is to ensure a central bank that is both accountable to the American people and insulated from political pressure.

The Reserve Banks carry out a number of important functions. Bank presidents contribute to the monetary policy discussion and vote on the direction of monetary policy during FOMC meetings. While each president brings his or her own unique views on the national economy to these meetings, one of the specific roles of Reserve Banks is to reach out to local communities within each District to gather information about the regional economy.

One channel through which Reserve Banks interact with the public and the banking industry is the Reserve Bank's own Board of Directors. Each Reserve Bank is governed by a Board that represents both member banks and the nonbank public. These nine directors oversee Bank operations and provide Fed officials with considerable "grassroots" information on business and financial conditions. While the member banks elect the Board of Directors, the Directors' decisions are subject to review by the Board of Governors.

The entrepreneurs and leaders who sit on the Reserve Banks' advisory committees also provide vital community-level input on the economy. These committees provide information on matters pertaining to small business, agriculture, labor, community development and payments. Members of advisory committees represent a diverse range of industries and interests in their Districts.

Reserve Banks also engage with the banking industry through supervisory activities and by providing payments services to depository institutions. The Reserve Banks support a number of community development and economic and financial education programs for the public. The Banks also work directly with the U.S. Treasury as its fiscal agent.

Member Banks

Approximately 34 percent of the commercial banks in the United States are members of the Federal Reserve System. Nationally chartered banks are required to be members of the Federal Reserve System and state chartered banks may choose to become members. Member banks are required to hold 6 percent of their capital as stock in their Reserve Bank.

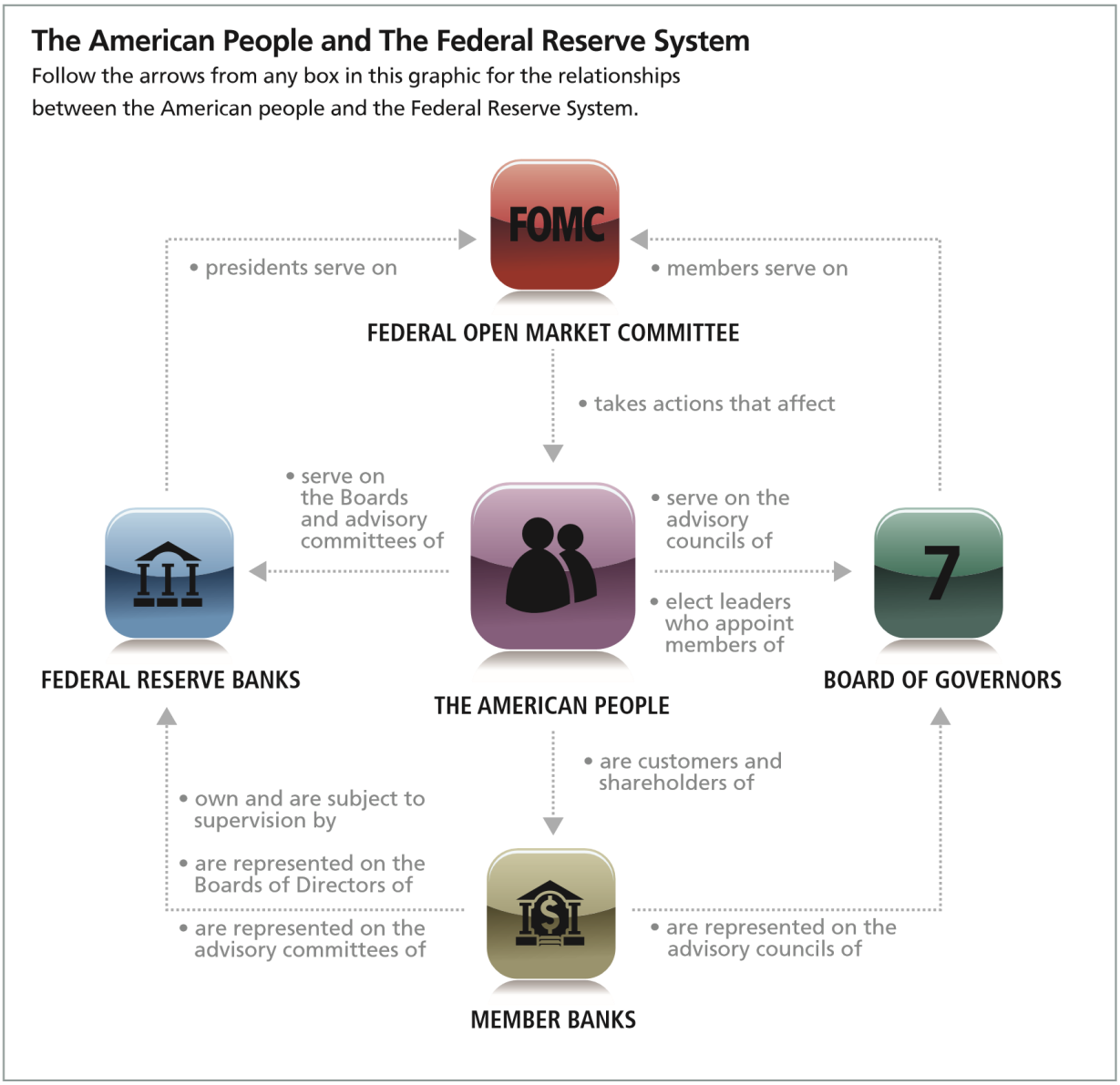
Other Depository Institutions

In addition to member banks, about 13,700 other **depository institutions** provide checkable deposits and other banking services to the American people. These include state-chartered commercial banks, savings banks, savings and loan associations and credit unions. Although not formally part of the Federal Reserve System, these institutions have access to Fed financial services and are subject to System regulations.

American People

The American people play an integral role in the Federal Reserve System. Voters elect the leaders who appoint members to the Board of Governors. Local business people serve on advisory councils and committees. While the actions of the Federal Reserve System impact the public, Federal Reserve policymakers rely on information from a myriad of individuals to make policy decisions. These decisions impact the economy in which we live, work and make our own economic decisions.

http://richmondfed.org/publications/education/federal_reserve_today/frtoday.pdf



Full Employment

Full employment occurs when available skilled and unskilled labor resources are being used to grow the economy. Remaining unemployment is called "frictional unemployment", and used to describe workers who are in-between jobs and still counted in the labor force. Although full employment is attainable, it will often result in a period of rising inflation, as firms bid up the price of labor and thus a rapid influx of disposable income generated by a larger workforce.

Fiscal Policy and Monetary Policy

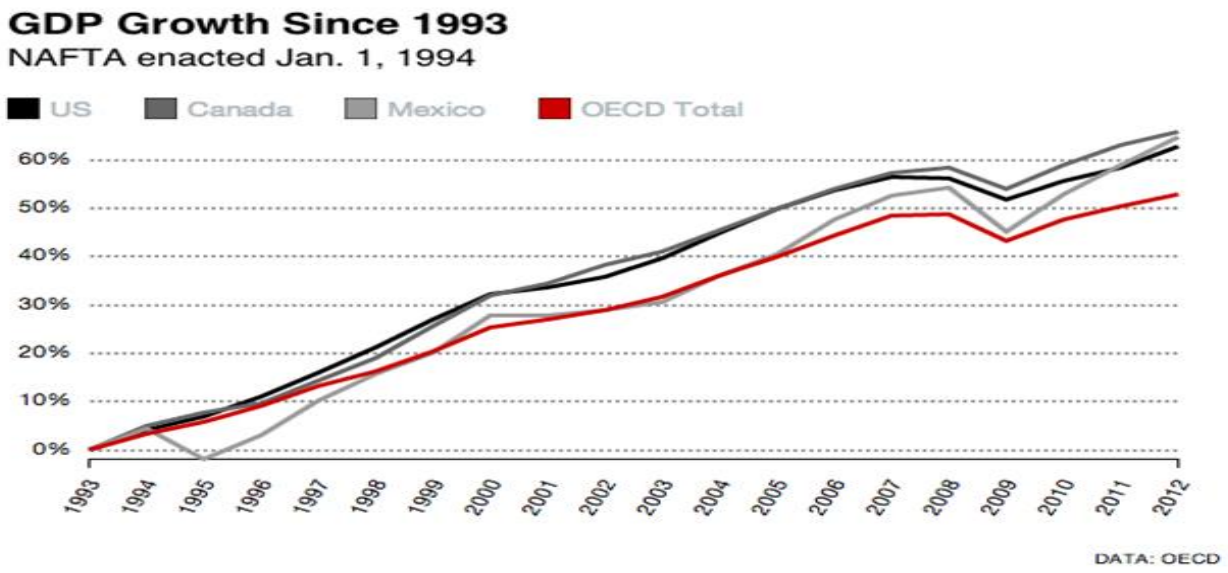
Fiscal policy is controlled and used as a tool by the government. Monetary policy is controlled by the Fed.

Watch YouTube video "Fed Is Responsible for Monetary Policy" by Richmond Fed. It is a concise 2 minute summary of the distinction between fiscal and monetary policy.
Ctrl+click: The Fed is Responsible for Monetary Policy

Fiscal Policy

Fiscal policy is created by the government to influence spending, borrowing, and taxation, in order to monitor and influence the nation's economy. In order to productively do this, the governmental powers are split across the executive and legislative branches. The separation of responsibilities between the two branches forms a system of checks and balances. In the executive branch, the president proposes the budget and signs or vetoes regulation concerning taxes. The Legislative branch is where congress passes the budget, and creates tax/spending regulation.

To measure the success of fiscal policy, Gross Domestic Product (GDP) is often used and is a measurement of the overall size of a nation's economy. GDP measures how efficiently the economy is functioning and indicates the value of all goods. A country's GDP represents the total income of the aggregated population or total spending, the sum of consumer spending, private investment and government spending. Theoretically, both numbers would be the same. A nation's GDP will often mirror the performance of its stock market. Lower GDP will often mean companies within the country have posted lower earnings that year, resulting in lower stock prices. GDP is also used as one of the primary indicators to determine the overall health of a particular nation's economy, and if that nation is in a recession for instance.



The chart above indicated various countries' GDP over time (Source: Businessweek)

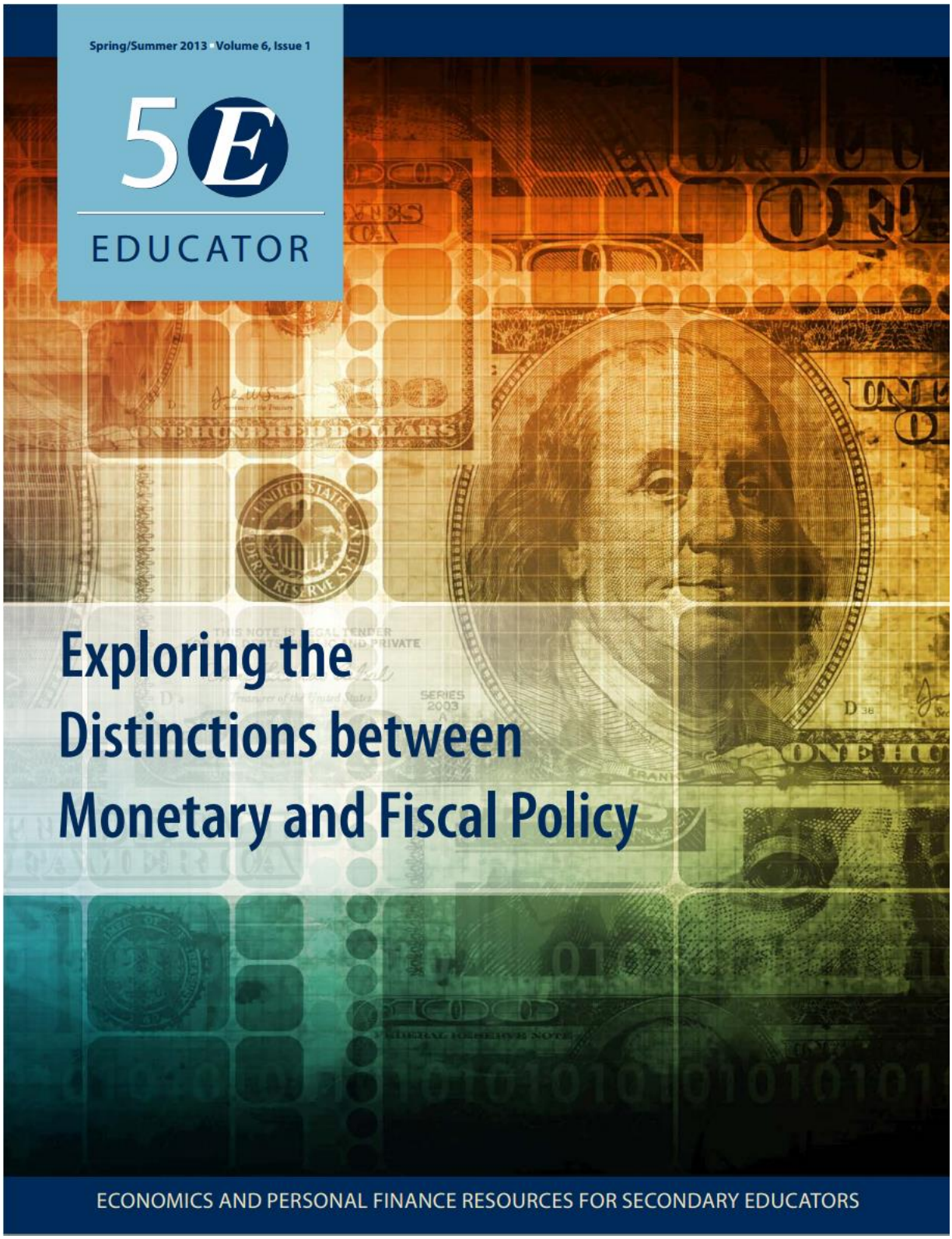
Monetary Policy

Monetary policy is the mechanism by which the Fed manages and controls the economy. One of the most effective ways to influence the economy is to control that economy's money supply. Monetary Policy allows the Fed to directly influence the money supply by buying and selling securities, lending money to banks, and paying interest on bank reserves. These different actions also help to maintain price stability and sustainable employment while influencing interest rates in the desired direction. If the Fed does not regulate the growth in the money supply properly, it may grow too fast and cause inflation, or, if the money supply grows too slowly, it can cause a recession.

The Fed Funds Rate is one of the most impactful tools available to the Fed and explained in more detail below: The Fed does not want money supply to grow too rapidly, because then inflation will drastically increase. If the money supply gross too slowly, then the growth of the economy also slows down.

When determining monetary policy, including which tools to use, the Federal Reserve will look at various economic indicators, including GDP growth, inflation and unemployment.

An Excellent Resource for Educators, including lesson plans:



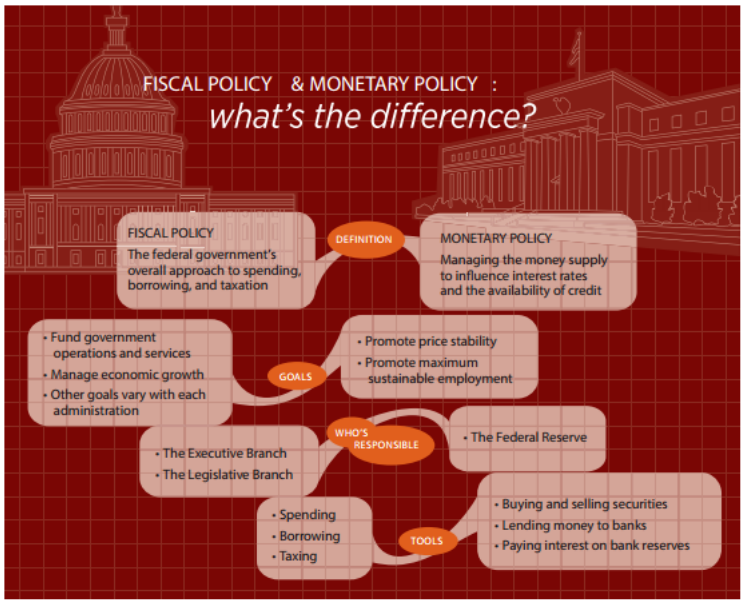
In this issue

MISSION

The *5E Educator* provides secondary teachers with content to enhance understanding of economics and personal finance. It also offers lesson plans and Federal Reserve resources to reinforce state and local curriculum. We seek to enrich the learning experience for students and highlight the importance of economics and financial literacy in the process of everyday decision-making.

Exploring the Distinctions between Monetary and Fiscal Policy

This issue of *5E Educator* highlights the distinctions between monetary and fiscal policy and includes an article excerpt, classroom activities and other resources to help you and your students explore this issue.



Source: Federal Reserve Bank of Richmond 2011 Annual Report (p.6)
www.richmondfed.org/publications/research/annual_report/2011/ar2011.cfm

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www.richmondfed.org/publications/education/5e_educator

Class in Session

Unsustainable Fiscal Policy: Implications for Monetary Policy

This excerpt is taken from the July 2012 Economic Brief written by Economics Writer Renee Haltom and Senior Vice President, and Director of Research, John A. Weinberg, Federal Reserve Bank of Richmond.

The debt of the United States government that is held by the public reached its highest point since World War II in 2011, at 68 percent of gross domestic product (GDP). This number is high by historical comparison, but even more important than its current value is the path it is likely to follow in the future. Several factors point to continued large demands on fiscal resources, most notably the aging population. As baby boomers exit the labor force, the number of people drawing age-related benefits from the government will rise quickly as a fraction of working-age individuals supporting them through taxes and Social Security contributions. This unprecedented demographic shift will increase demands on Social Security, Medicaid, and Medicare.

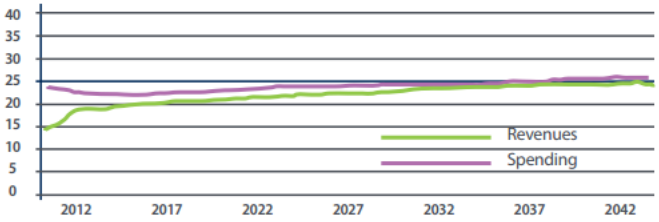
The nonpartisan Congressional Budget Office (CBO) provides a debt forecast under two scenarios: a "baseline" scenario that holds current laws constant and an "alternative" scenario that incorporates the effects of laws the CBO deems likely to pass. The budget outlooks under both scenarios are displayed in Figure 1. The baseline scenario reflecting current laws presents the more optimistic view of the future path of fiscal policy. Revenues would exceed noninterest spending under this scenario, but the federal government would continue to run net deficits when factoring in interest payments on debt. Under this scenario, the CBO argues that deficits would be small enough relative to the size of the economy for debt held by the public to decline slowly over time. Debt held by the public would rise to 76 percent of GDP in 2014, declining gradually thereafter and falling below 50 percent of GDP by 2040, a level still greater than it was from 1957 through 2008 (Figure 2).

The alternative scenario—the one the CBO considers more likely because it reflects the policies that have prevailed in recent years—presents a more alarming picture of growth in federal debt. In this scenario, revenues do not rise much from where they are today, yet spending grows rapidly. Under these conditions, federal debt held by the public would rise sharply after 2011, exceeding its historical record of 109 percent of GDP by 2026. It would surpass 200 percent of GDP—nearly triple today's share of GDP—by the end of the 2030s, exceeding 250 percent of GDP after 2042.

The two scenarios represent optimistic and pessimistic alternatives from a range of possible outcomes, showing that the evolution of the federal government's fiscal position depends largely on policy decisions that have yet to be made. Given the demands on fiscal resources coming from the aging population under existing laws, achieving a path toward fiscal balance will involve very difficult tradeoffs for fiscal policymakers.

When Is Fiscal Policy Unsustainable?
How do we know when high debt levels are a problem? Economists look to a simple framework known as the government's intertemporal budget constraint (IBC). A budget constraint is a basic accounting identity that says an entity must pay for everything that it purchases, while "intertemporal" simply means "over time." The government's IBC says that the value of its outstanding debt must equal the present value of its expected future surpluses (that is, what financial markets believe the surpluses will be, calculated in today's dollars). The main lesson to draw from the IBC is that the sustainability of government finances hinges crucially on financial markets

Figure 1: Projected Budget Gaps as a Percent of GDP
CBO's Extended Baseline Scenario (Current Laws)



CBO's Alternative Baseline Scenario (Expected Laws)

Source: Congressional Budget Office's 2012 Long-Term Budget Outlook, June 2012

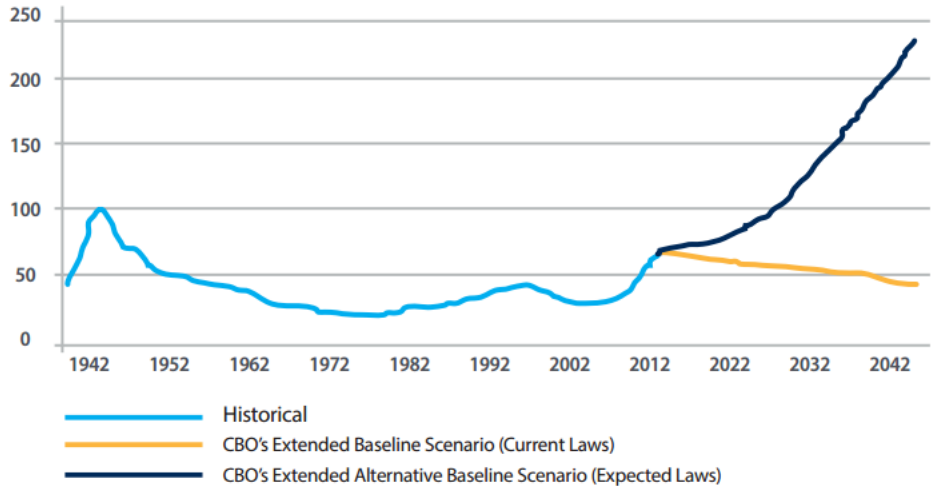
expecting that the government can and will raise adequate future surpluses given its debt.

A budget that is widely out of balance—the expected path for debt is much larger than the likely path of future surpluses—is often described as "unsustainable." That characterization reflects the expectation that financial markets will force an adjustment in fiscal policy before such debt levels could be reached. For example, investors may demand a higher interest rate on government debt to compensate for the apparent risk that the government may not be able to repay its loans, causing a sudden and sharp increase in the government's financing costs that forces it to immediately produce a credible plan for reducing future deficits and therefore debt. Because financial market expectations are not constant, neither the IBC framework nor experience provide a quick answer to precisely what debt level is "sustainable." The budget apparently can remain modestly out of balance for a long time. For example, debt levels grew slowly and steadily from 1970 to 1997 with no obvious concern from financial markets about the sources of future surpluses. This is less likely to occur when the imbalance between outstanding debt and the capacity for producing future surpluses is very large, as in the CBO's alternative scenario. With debt levels predicted to grow much larger than GDP within two decades, many years of higher taxes would be required to produce enough surpluses to resolve the resulting imbalance. There is some level of debt that is high enough—although we don't know how high that is—that generating the required amount of future surpluses required would be infeasible.

What we do know is that painful economic consequences can result from hitting that debt level. Economists have called that point the "fiscal limit," the point at which financial markets refuse to lend further to the government, and the government's existing spending promises therefore cannot be funded. At least one of two events must occur at the fiscal limit: the government reduces its debt levels by defaulting, or the central bank takes action to reduce real debt levels.

The primary way a central bank can reduce the government's real debt burden is by creating surprise inflation. Inflation allows all borrowers, the government included, to repay loans issued in nominal terms with cheaper dollars than the ones they borrowed. Roughly 90 percent of the federal government's debt is issued in nominal terms at prices that reflect the market's expectations for inflation over the life of the loan. A significant unanticipated jump in inflation therefore would produce a large transfer of wealth in the

Figure 2: Federal Debt Held by the Public as a Percent of GDP



Note: Projections begin with 2012,after 2042, debt held by public as a percent of GDP exceeds 250 percent under the alternative baseline scenario and continues falling gradually under the extended baseline scenario.

Source: Congressional Budget Office's 2012 Long-Term Budget Outlook, June 5,2012

government's favor from its lenders. Historically, some central banks—though never the Federal Reserve—have produced inflation for the sole purpose of eroding the value of the government's debt.

Since inflation today is low and stable, and the Fed remains committed to its price stability objectives and operates independently from fiscal policy, the Fed's policies generally have little direct impact on the government's debt burden. This could change, however, if financial markets began to view hitting the fiscal limit as a possibility. That situation would inevitably invite monetary policymakers to intervene since inflation presents one possible source of revenue.

Sources of Fiscal Inflation

Central banks often are called upon to intervene when the economy is facing severe challenges, as would likely be the case if a fiscal crisis arose in which markets forced the government to either default on its debt or enact some combination of severe spending cuts and tax increases. The first prospect, default, would wreak havoc on financial markets, and the second on economic activity. Thus, fiscal crisis almost certainly would jeopardize the Fed's mandate, leaving the Fed with a difficult tradeoff: the economic pain associated with fiscal crisis or the longer-term costs of central bank intervention to reduce debt levels.

Even the most conservative central banker might feel compelled to intervene in hopes of limiting a panic before it could grow more severe. Knowing that the central bank faces these incentives, the market's inflation expectations are liable to shift suddenly when debt levels are very large. Economist Eric Leeper at Indiana University argues that simply being near the fiscal limit is enough to enable an equilibrium in which markets expect the central bank to accommodate the debt with inflation in the future. The public's expectation of higher inflation can push actual inflation higher before the central bank decides to create a single dollar.

The lesson from this literature is that when the public expects fiscal authorities to take action to satisfy the budget constraint while they still can, inflation need not rise. This is perhaps the situation the United States is in today: debt projections under the CBO's more likely scenario exceed historical records for most developed countries, yet markets appear perfectly willing to purchase government debt at low interest rates, indicating that markets believe fiscal imbalances will be resolved through fiscal policy rather than through inflation. However, as long as there is uncertainty over the feasibility of generating sufficient future surpluses, policymakers cannot be sure that market expectations will not shift unexpectedly to produce inflation.

Encouraging Sustainable Policy

The Fed's best contribution to avoiding a fiscal crisis is to maintain its commitment to monetary policy objectives. Credibility may help maintain the expectation that the central bank will not readily step in to erode the debt through inflation. However, credibility may not be sufficient. When the expected path for fiscal policy does not by itself achieve balance in the IBC over time, the price level is the only other factor that can adjust to provide it. Fiscal policy that does not contain the debt may lead to inflation even if the central bank has the best intentions.

Even if inflation were to spike, it might not be effective at reducing debt levels. Most government debt is priced in nominal terms, so while inflation erodes the value of existing nominal debt, it increases the financing costs for newly issued debt. This effect would be greater for governments, such as the United States, that have a short average maturity of government debt and therefore need to reissue it often.

For these and other reasons, the solution to current fiscal imbalances must ultimately come from fiscal authorities. Making these difficult decisions in a planned manner before a crisis arises almost certainly would entail fewer costs than if the decisions were forced by financial markets or by other events. These events include the so-called "fiscal cliff" that is scheduled to arise later this year as dramatic deficit reductions come into place under current law and as the result of automatic budget cuts built into the agreement to raise the federal debt ceiling in 2011 as a way to provide incentive to Congress to produce debt-reduction legislation.

For the time being, markets appear to believe that fiscal policymakers will put future debt, spending, and tax levels on a more sustainable path. If they are correct, our nation will not have to experience the significant economic challenges of a world in which those expectations have changed.

For full article and endnotes:
www.richmondfed.org/publications/research/economic_brief/2012/eb_12-07.cfm

Snacks

To access teaching materials that correlate with the featured article excerpt, check out the following activities designed for middle and high school students by following these links:

The Monetary and Fiscal Policy Two Step

Deficit and Debt Direction Connection

Beyond the Textbook

Consider using the following resources to further reinforce the differences between monetary and fiscal policy.

The Fed Chairman Game

As a follow up to this issue's content focus and the interactive student activities, consider taking your students to a computer lab to play the Fed Chairman Game courtesy of the Federal Reserve Bank of San Francisco, http://www.frbsf.org/education/activities/chairman/index.html

Budget Hero

Have your students try an online budget simulation called Budget Hero published by Minnesota Public Radio, http://minnesota.publicradio.org/projects/2008/05/budget_hero/

Educators, for more information and lesson plans, go to

1. "The Federal Reserve and You" http://www.philadelphiafed.org/education/federal-reserve-and-you/index.cfm

2. "Lesson Plans for Teachers" http://www.philadelphiafed.org/education/teachers/lesson-plans/index.cfm

Balancing Interest Rates

(Source: Investopedia.com) Interest rates also affect the economy. When the (Federal Funds Rate), which serves as the base rate for all other loans, is changed, it affects all loan rates across the nation. The higher the rate, the more expensive it is to borrow money. This can help to slow down an overly strong and healthy economy in order to reduce inflation and maintain consumer spending power. In order to keep inflation in check, the Fed uses increased interest rates when indicators such as Consumer Price Index (CPI) and Producer Price Index (PPI) began to rise at more than 2-3% a year. Once higher borrowing costs are established, spending will began to fall, resulting in a drop in inflation. When the economy is experiencing a recession, the Fed uses the opposite strategy of lowering interest rates. When borrowing money becomes cheaper, people are more likely to spend money again.

When the Fed changes the interest rate, both positive and negative effects subsequently ripple across the U.S. economy. The Fed accomplishes this in several ways. By using interest rates, the Fed can control consumer spending, inflation, and recessions. Interest rates, which are a form of compensation paid by a consumer to the loaner, limit the amount of money consumers are willing to borrow and spend at one time. Low interest rates give people more spending money, which creates a ripple effect across the entire economy. Alternatively, high interest rates reduce spending money, which can adversely affect large businesses, who have to then cut back on large purchases and the number of hired employees (See Federal Reserve Tools)

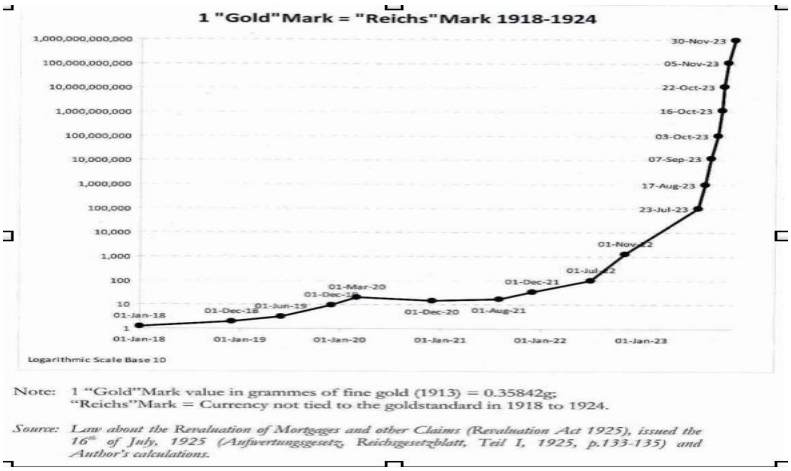
Inflation/Deflation/Hyperinflation/Stagflation

Investopedia.com

Inflation is the continuous increase in prices for goods and services and is generally an indicator of a growing economy. As inflation increases, every dollar buys fewer goods and services. In recent years, stable prices have become synonymous with low rates of inflation of around 2 percent per year.

Deflation- The opposite of inflation, occurs when prices fall. The recent recession that rocked the global economy started with a decline in the liquidity that took place in the US banking sector. Widespread unemployment, a decline in recruitment and a peak in firings by companies all over the world was witnessed during the period starting from December 2007 till June 2009. Repercussions and ripples of economic depression can still be seen and felt at present, though on a much smaller scale than when it started.

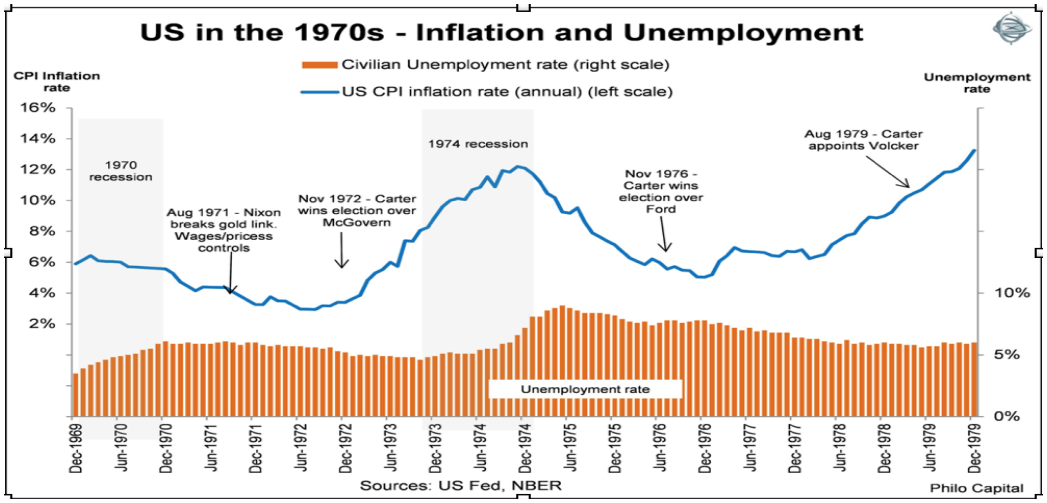
Hyperinflation (Source: USA Gold.com) - Extremely fast inflation that can lead to the collapse of the nation's monetary policy. In Germany in 1923, the Reichsbank began unlimited printing of notes to try and compensate for the drop in gold value of money in circulation from £300 million to £20 million. In December of that year the exchange rate was 4,200,000,000,000 Marks to 1 US dollar.



Note: 1 "Gold"Mark value in grammes of fine gold (1913) = 0.35842g;
"Reichs"Mark = Currency not tied to the goldstandard in 1918 to 1924.

Source: Law about the Revaluation of Mortgages and other Claims (Revaluation Act 1925), issued the 16th of July, 1925 (Aufwertungsgesetz, Reichsgesetzblatt, Teil I, 1925, p.133-135) and Author's calculations.

Stagflation- High unemployment combined with a stagnant economy. This is the one exception to the inverse relation between inflation and unemployment rates.



*In 1976, Carter won over McGovern (not Ford)

The primary cause of inflation can be credited to a theory called "Demand-Pull Inflation", this is generally when demand for goods increases faster than production. Although in some special instances inflation can be good, unexpected inflation can lead to several problems. Domestic products can become less competitive relative to other countries. Consumers living on a fixed income base will experience a massive reduction in spending power, and ultimately, economic output is hurt long term due to consumers less likely to spend because of uncertain financial conditions.

Why the Fed should worry about deflation

Fortune Magazine
by Nin-Hai Tseng
October 30, 2013

FORTUNE — As Federal Reserve policymakers wrap up their two-day meeting Wednesday, some have called on the central bank to do more to avoid threats of deflation.

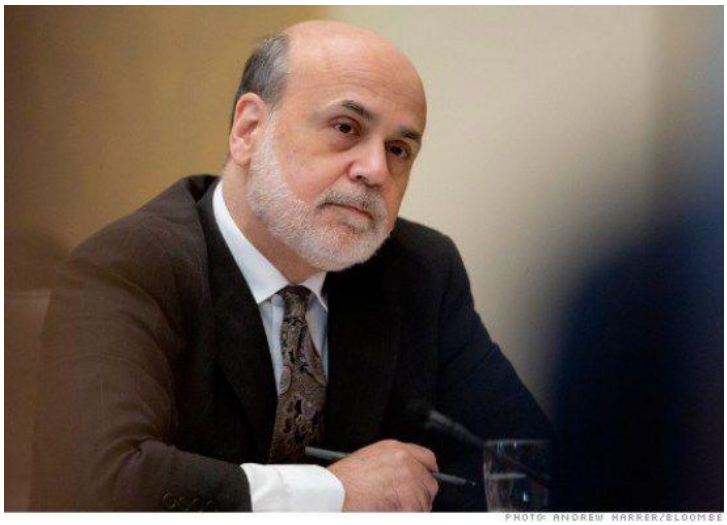


PHOTO: ANDREW HARRER/BLOOMBE

Ben Bernanke

Most don't like having to paying higher prices, and the Fed has long tried to stabilize the U.S. economy by keeping the general costs of everything from shelter to clothes from rising too rapidly. But as the New York Times noted over the weekend, a little inflation could be good for the economy, and there's growing concern inside and outside the Fed that inflation isn't rising fast enough.

Many are wondering if the Fed should worry more about deflation rather than inflation. After all, when the central bank launched its large-scale bond-buying program to stimulate the economy, many expected inflation would climb. As it turns out, that hasn't happened. Just take a look at the price of gold, typically a hedge against inflation. Prices have fallen by 19% so far this year.

If disinflation leads the U.S. into deflation, it would certainly hurt the economy: Real interest rates would rise, potentially discouraging investing and spending; the value of debts would go up; job growth would slow. "Once an economy slips into deflation, the risks of a self-reinforcing deflationary spiral rises," according to a new paper by the American Enterprise Institute for Public Policy. The U.S. isn't alone, however. Over the past two years, European and Chinese inflation rates have drifted steadily lower. And even though Japan has tried hard to end 15 years of deflation, the world's third-largest economy has seen only modest relief.

In August, U.S. inflation rose just above its slowest pace at an annual pace to 1.2% — below the Fed's target of 2% for keeping the economy growing in a healthy way. Deflation arises when the inflation rate falls into negative territory, so the U.S. is safe, at least for now. The question is for how long?

Such worries have further complicated one of the Fed's main jobs to keep prices stable. Some say that while the inflation rate hasn't risen as much as expected, the central bank could lose control of prices as the economy recovers. If and when that happens is another question confronting the Fed.

Perhaps, though, the Fed shouldn't wait. John Makin, economist at the American Enterprise Institute, urges the Fed to take steps now and offers advice for Janet Yellen, President Obama's nominee for the next Fed chair. He suggests extending program and urges the incoming chair to discuss the risks of deflation "at some length."

More than that, Makin suggests an interesting way the Fed could guard against inflation and at the same time avoid deflation by lowering its inflation target. Currently, the central bank has a 2% target, and if inflation rises substantially above that it plans to tighten policy. Makin suggests lowering that target to 0.5% to 1.5%, signaling to investors that the Fed will not let the inflation rate fall below zero and cause the economy to spiral into deflation.

Of course, what the Fed might do next remains to be seen.

Money Supply and Federal Reserve Tools

The money supply, or the amount of money that is in circulation and available for spending, is measured by numerical groupings that divide the supply of money liquidity. These aggregates, in order from most fluid to least, range from M0-M2.M0 and M1, also called narrow money, normally include coins and notes in circulation and other money equivalents that are easily convertible into cash. M2 includes M1 plus short-term time deposits in banks and 24-hour money market funds. M3 includes M2 plus longer-term time deposits and money market funds with more than 24-hour maturity. Since it began to be monitored in the 1950's, the money supply has steadily declined in its influence on Fed policy due to changes in banking accounts, the proliferation of financing companies, and more widespread investment among consumers (stock and bond investments are not captured in M1 and M2 aggregates).It is, however, still monitored and published weekly, and is used as an effective indicator for inflation and consumer spending.

A positive result when the money supply increases, is that there is a decrease in interest rates, which allows for an increase in investments due to more attractive investment opportunities for businesses, ultimately putting more money in the hands of consumers. This leads to an increase in business activity, a higher demand for labor, and healthier employment rates

Dollar's Reaction to being worth 95% less than in 1914

Federal Reserve Tools

1. ***Feds Fund Rate (Source: Federal Reserve):***

The feds fund rate is the average overnight interest rate at which institutions lend money to each other overnight. The Federal Reserve's Open Market Committee (FOMC) determines the fed funds target rate. The Fed then uses Monetary Policy and other tools to influence the money supply and thus the overall Feds Fund Rate to reach the target rate. If the FOMC raises the fed funds target rate, than banks will, on average, charge a higher interest rate to each other. If banks charge a higher interest rate to each other, then in order to maintain their profit margins, they will have to raise the interest rate on loans they make to consumers and businesses. The higher this rate is, the more costly it is to borrow money. When that happens, consumers (or businesses) have less money to spend on other items because they are now paying more in interest expense, consequently slowing down economic growth overall.

Year 1

Total household debt: $100,000

Interest Rate: The bank charges you 5% interest rate

The household is paying $5,000 of its spending money in interest expense

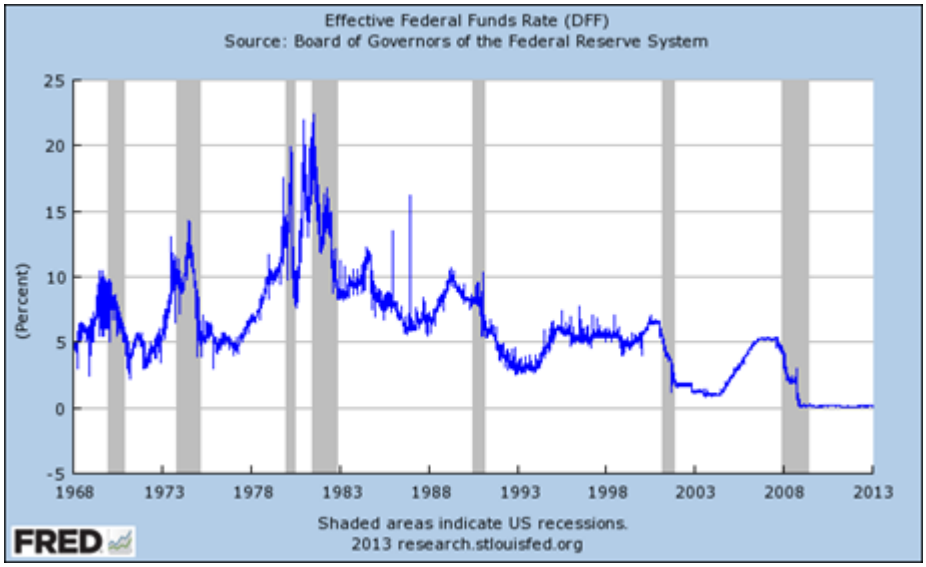
Year 2

Total household debt: $100,000

Interest Rate: The bank charges you 7% interest rate

The household is paying $7,000 of its spending money in interest expense

In year two, the consumer is paying $7,000 a year in interest whereas previously the consumer was paying $5,000/year. As a result, the consumer has $2,000 less to spend on other purchases within the economy, which is why higher interest rates can slow growth overall.



This shows the Fed funds rate in the US over time (Source: Inman)

2. Federal Open Market Operations (Source: Federal Reserve)

The twelve members of the Federal Reserve's Open Market Committee meet about eight times a year to discuss whether or not the Fed funds rate should be increased or decreased, based on the health of the economy and how much consumers are spending. The goal is to ensure steady and predictable growth. Any sudden fluctuations in growth or inflation can trigger economic downturns and potentially recessions. In order to increase the Fed Funds rate, securities are sold by the government.

Open market operations

When the government sells securities (usually bonds, notes and treasury bills) to the market, this is referred to as "open market operations". Open market operations help implement monetary policy throughout the economy. The exchange of government securities in the market is what increases or decreased the money supply. When securities are sold by the government, they receive payment, thus reducing the money supply, and slowing growth which can sometimes be desirable. When securities are purchased by the government, additional money is injected into the economy, thus increasing the money supply. This increase in money being lent out within the economy can be used by individuals and businesses towards new investment and growth opportunities.

3. Reserve Requirements (Source: Investopedia.com)

Reserve requirements are the amount of money that the banks must have in reserve against the deposits made by the customers. It has to be set aside as a "reserve", so it does not get used, or can be deposited at a Federal Reserve Bank. The Board of Governors controls the changes in reserve requirements. The amount that an institution must have depends on the reserve ratio, which depends on the amount of transaction accounts at the depository institutions. The amount is adjusted each year according to different acts that have been passed (The Garn-St Germain Act of 1982, Monetary Control Act of 1980).

4. Discount window lending (Source: Investopedia.com)

Discount window lending allows certain institutions to borrow money from the Federal Reserve. It is useful for when the intuitions are on temporary shortages caused by internal bank or external market disruptions, and the pressures of reserve requirements. The discount rate also allows the Fed to control the money supply, and helps stabilizes financial markets. By decreasing the discount rate, commercial banks can borrow more cheaply, which increases their incentive to borrow, which in turn can be used to lend to business and consumers, thus increasing the money supply. The opposite forces are at work when the Fed increases the discount rate (Source: Investopedia.com).

The discount rate is the rate that commercial banks and other depositors must pay on loans that they receive from their closest Federal Reserve Bank lending facility. There are three different programs:

1. Primary Credit- loans used for a very short term to institutions in good financial condition
    a. This is the main discount window program

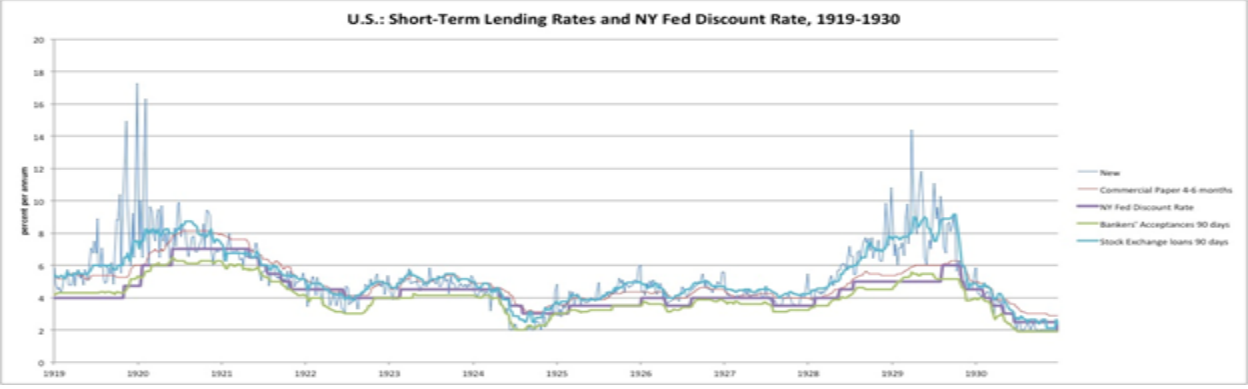
2. Secondary Credit- institutions that cannot meet short term goals and are in financial trouble
    a. The discount rate is above the rate of primary credit
3. Seasonal Credit- used for small institutions that are in need of funding
    a. The discount rate depends on the average of selected market rates

All of the different discount rates are made by the Board of Governors. These rates are the same for all Reserve Banks across the country.

5. Financial Crisis Special Tools

"It's Not Your Mother and Father's Monetary Policy Anymore."

This is an article published in the *Social Education* journal in 2011 about the policy tools used during the financial crisis. It has a great table on the second page which may be useful in describing what the Fed did during the Great Recession



Source: New World Economics

Supervision and Regulation

The Federal Reserve

The Federal Reserve has supervisory and regulatory authority over a wide range of financial institutions and activities. Through collaboration with other state and federal agencies, it ensures safety and stability of financial institutions, soundness of financial markets, and fair treatment of consumers. Due to its status as being the central bank of the United States, the Federal Reserve is able to coordinate its actions with other nations in periods of economic crisis, and supervise corporations with strong international presence.

The Division of Banking Supervision and Regulation is responsible for monitoring U.S. banking companies, foreign banking organizations operating in the U.S., and state-chartered member banks of the Federal Reserve System. It creates and enforces safety and soundness and other regulations for these entities under Board direction and in collaboration with Reserve Banks and other domestic and international regulatory authorities. In addition, it supports the conduct of monetary policy by monitoring current conditions and prospective developments affecting the banking industry and financial markets more generally.

The Federal Reserve is Responsible for the regulation of certain banking segments to ensure safe and sound economic practices. These include:

- Bank holding companies, including foreign banks with U.S. operations
- State chartered banks that are members of the Federal Reserve System (state member banks)
- Foreign branches of member banks
- Edge and agreement corporations, through which U.S. banking organizations may conduct international banking activities
- U.S. state licensed branches, agencies, and representative offices of foreign banks
- Non-banking activities of foreign banks

Enforcement

(Source: Federal Reserve) In the event that the Federal Reserve finds that a state or member bank or holding company has issues that can negatively affect the institution’s safety, or is not in compliance with laws and regulations, it maintains the right to take corrective action. Typically, such findings are communicated to the management and directors of a banking organization in a written report. The management is then required to identify and address all problems and insure that they will not recur. Most problems are resolved promptly after they are brought to the attention of an institution's management and directors. In certain situations, however, the Federal Reserve may need to take an informal supervisory action, requesting that an institution adopt a board resolution or agree to the provisions of a memorandum of understanding to address the problem.

Maintaining Stability in the Economy

Source: Richmond Federal Reserve

The Federal Reserve uses its tools to create a predicable market. As the Fed conducts monetary policy, and uses all of its tools, it helps maintain the stability of the economy. When the economy is stable, it would promote a low and non-fluctuating inflation rate, which then stops chaos within the market by keeping financial institutes healthy.

It is essential for the Fed to maintain a steady price stability, so that there can be long term economic growth and maximum employment. The Fed must stabilize the economy or else the costs of goods would rise too fast.

Avoiding Deflation

If the prices in the economy starting deflating, the economy would hurt because real interest rates would rise, which then limits investing and spending, and also job growth would slow down.

The Fed has the job of collecting and distributing circulated bills, screening them for counterfeits and replacing old or worn out currency.

Moderate Money Supply

The Fed has to manage its money supply, because if it produces too much money, it can lead to inflation, thus hurting the economy.

Federal Reserve Act

The Federal Reserve Act was amended in 1977 to help the Fed achieve its goal. The Act promotes maximum employment, stable prices and moderate long-term interest rates. It establishes a form of economic stability and is very influencing the financial system (Source: Investopedia.com). By following this act, the Fed has a mandate to achieve its goals and be a lender to the banking system. In order to achieve its goals. The Fed must maintain low and stable inflation.

Systemic Risk

(Source: Federal Reserve) The Fed also has to deal with systemic risk, which is present because of the extensive relationships between financial institutions and, as current Fed Chairman, Janet Yellen, notes, the growing shadow banking sector. (Learn more by going to Janet Yellen on Systemic Risk and at Ben Bernanke on Systemic Risk) The Fed wants to reduce systemic risk, so that the financial system can remain stable. The Fed is attempting to address systematic risk by:

1. Close supervision and oversight of financial institutions, risk taking, risk management, and financial conditions while [holding these institutions] to high capital and liquidity standards.

2. Ensur[ing] a robust framework- both legally and in practice- for consolidated supervision of all system-wide, important financial firms.

3. [Developing] improved tools to allow for the orderly resolution of systemically important non-bank financial firm.

4. Increasing the resiliency of funds

Glossary of Terms

Investopedia.com

Federal Reserve System: The central bank of the United States created by Congress and consisting of a seven member Board of Governors in Washington, D.C., 12 regional Reserve Banks, and depository institutions that are subject to reserve requirements.

Federal Deposit Insurance Corporation (FDIC): Agency of the federal government that insures accounts at most commercial banks and mutual savings banks. The FDIC also has primary federal supervisory authority over insured state banks that are not members of the Federal Reserve System.

Financial Institution: An institution that uses its funds chiefly to purchase financial assets (primarily loans and securities) as opposed to tangible property.

Monetary Policy: Federal Reserve actions to influence the availability and cost of money and credit, as a means of helping to promote high employment, economic growth, price stability, and a sustainable pattern of international transactions. Tools of monetary policy include open market operations, discount policy, and reserve requirements.

Federal Open Market Committee (FOMC): A 12 member committee consisting of the seven members of the Federal Reserve Board and five of the twelve Federal Reserve Bank presidents.

Fiscal Policy: Government policy regarding taxation and spending. Fiscal policy is made by Congress and the Administration.

Inflation: A rise, over time, in the average level of prices.

Recession: A significant decline in general economic activity extending over a period of time.

Further Reading / Resources

Links:

Federal Reserve Education:
https://www.federalreserveeducation.org/about-the-fed/structure-and-functions/monetary-policy
https://www.federalreserveeducation.org/about-the-fed/structure-and-functions/financial-services/

Federal Reserve:
http://www.federalreserve.gov/paymentsystems/fedfunds_about.htm
http://www.federalreserve.gov/pf/pdf/pf_5.pdf
http://www.federalreserve.gov/pf/pdf/pf_5.pdf

Investopedia:
http://www.investopedia.com/university/releases/moneysupply.asp

http://www.investopedia.com/terms/f/federalfundsrate.asp

http://www.investopedia.com/articles/stocks/09/how-interest-rates-affect-markets.asp

http://www.investopedia.com/terms/c/consumerpriceindex.asp

http://www.investopedia.com/terms/p/ppi.asp

http://www.investopedia.com/university/inflation/inflation1.asp

Federal Reserve of New York:
http://www.newyorkfed.org/markets/omo/dmm/fedfundsdata.cfm

Federal Reserve of Cleveland:
http://www.clevelandfed.org/about_us/annual_report/2011/maximum_employment.cfm

Federal Reserve of St. Louis:
https://www.stlouisfed.org/publications/regional-economist/january-2008/stable-prices-stable-economy-keeping-inflation-in-check-must-be-no-1-goal-of-monetary-policymakers

Fortune Magazine:
http://fortune.com/2013/10/30/why-the-fed-should-worry-about-deflation/

Federal Reserve of Richmond:
https://www.richmondfed.org/research/our_perspective/pricestability/index.cfm

Federal Reserve of San Francisco:
http://www.frbsf.org/education/teacher-resources/what-is-the-fed/financial-stability

Books:

- The Panic of 1907 by Robert Brunner and Sean Carr. Gives a full account of the events leading up to this crisis and the actions that followed to solve it. This panic was the one that finally spurred action on creating a central bank in the U.S.

- A Monetary History of the United States by Milton Friedman and Anna Schwartz. Published in 1963, this was really the first attempt to provide a solid history of monetary economics. It's a bit more technical and covers a long period of history, but the chapters on the Great Depression include a lot of narrative.

- In Fed We Trust by David Wessel. An account of the Fed's actions during the Great Recession. The author was at the WSJ at the time and is now at Brookings.

- Central Banking After the Great Recession also by David Wessel includes an interview with Bernanke at the end of his term as Chair.

Lessons:

- http://www.federalreservehistory.org is a searchable gateway that contains more than 11,000 artifacts related to the Fed's history. It includes some info on Bernanke.

- Federal Reserve Centennial Lessons: As part of the Centennial, three new classroom-ready lessons have been developed to help high school students understand Fed history, Fed functions and how the roles of the Fed have evolved over time. All of the lessons are tied to the Common Core and national content standards in social studies and economics. Two of the lessons are also accompanied by PowerPoint slides.
    - Lesson 1 - Defining Moments in Federal Reserve System History: 1907-1935
    - Lesson 2 - The Federal Reserve System Shuffle: 1945-1987 | PowerPoint Slides
    - Lesson 3 - The Modern Federal Reserve System: Changes and Trends in Federal Reserve Functions | PowerPoint Slides

*Note: you will have to go onto the Federal Reserve website to find these lessons.

Chapter II: What is the Federal Reserve? Study Questions

Created by Student Interns, The Echo Foundation

1. What is the mission of the Federal Reserve?

2. Explain how monetary policy is used to achieve economic stability.

3. What is the role of interest rates? Explain how the Fed uses interest rates to encourage an appropriate increase or decrease in the amount of spending money in the economy.

4. What economic conditions in the late 19th and early 20th century led to the creation of the Fed in 1913?

5. Why was the Fed designed to operate independently from Congress?

6. Compare and contrast the different types of inflation. Is a certain kind of inflation more detrimental to a nation's economy than another? Explain.

7. Explain the correlation between inflation and employment.

8. How is the Chairman of the Federal Reserve/Board of Governors appointed?

9. Define "Full Employment"

10. Compare Fiscal and Monetary Policy.

11. Explain the theory of "Demand-Pull Inflation"

12. Describe a positive result of an increase in the money supply.

13. Define "Open Market Operations" and how they help implement monetary policy into the economy.

14. Describe the numerical groupings that are used to measure the supply of money that is in circulation and available for spending.

15. Describe the organizational structure of the Fed.

16. How do the personal ethics and talents of the governors influence the Federal Reserve?