Too Much, Too Little

Grade Levels:  9,10,11,12
Document Type:  Lesson Plans

Description:
Teacher’s guide designed to accompany a video which explains how the United States has dealt with the issue of the appropriate amount of money for the economy and reviews the events that led to the establishment of the Federal Reserve System. Ask for the 25-minutes VHS videocassette.

This document may be printed.
A Teacher’s Guide to

Too Much, Too Little
CONCEPT

The problem of providing the "right" amount of money for the economy has roots older than the nation itself. The Federal Reserve System, created by Congress in 1913, evolved from political and economic attempts throughout America's history to address this problem.

STUDENT OBJECTIVES

After viewing the video program, students will be able to:

• name at least three events in American history that influenced Congress to create the Federal Reserve System and empower it to try to control the supply of money in the United States;

• identify the Federal Reserve System as the institution responsible for providing the "right" amount of money for a healthy and growing economy;

• explain that money is only one of several factors influencing our economy;

• cite at least one advantage of the political independence of the Federal Reserve System; and

• describe one way in which the Federal Reserve System's goals to promote economic stability might affect them or their families.

PROGRAM SYNOPSIS

Centering on a simple transaction involving two high school students and the sale of a car, the video traces the historical development of banking, and money and its management. Throughout history, the United States has struggled with a variety of institutional arrangements to obtain the "right" amount of money. Too much money, or even too little, can have a significant effect on the functioning and health of our economic system.

The video portrays episodes in American history when the country was faced with problems of too much or too little money. These episodes include the Colonial and Revolutionary War periods, the
years of the two Banks of the United States, the Civil War period, and the Greenback and Populist eras.

Several conventions and institutions devised to solve problems posed by too much or too little money and by the instability in the U.S. economy are highlighted: Colonial paper money issues, the Continental Congress, the First and Second Banks of the United States, the free banking era, the national bank system, the gold and silver standard debates, and the Panic of '07 and the creation of the Federal Reserve System.

The Federal Reserve System is presented as the agency created by Congress and given the responsibility of promoting a healthy economy through the control of the banking system's ability to "create money." This power over money creation is, however, only one factor affecting the economic well-being of the American people.

**POST VIEWING QUESTIONS**

Students should be able to answer satisfactorily the following questions after having seen the video.

1) In the Colonial era, how did the amount of paper notes issued affect the level of prices?

2) Why did the British restrict the Colonies' issuance of money? What was the result of this restriction?

3) In the early years of our history, in what form did banks make loans to customers? Today, how do banks make loans to their customers?

4) Does a currency's backing by gold or silver give money its value? When specie redemption was suspended, what gave paper money its value?

5) Why did the protest movements of the 1870s and 1890s focus on the institutional arrangements which determined the money supply?

6) What is a financial panic?
7) What was the impetus for the establishment of the Federal Reserve System?

8) What is a central bank and how does it affect the behavior of private banks?

9) In addition to the Federal Reserve, what are some of the other factors that affect our economic system?

10) Why is it desirable to have a politically independent central bank?

QUESTIONS FOR FURTHER STUDY

Answers to the following questions are based on the material contained in this Teacher's Guide.

1) What were the components of the money supply in Colonial times? Today?

2) What were some of the problems with using commodity money in Colonial America?

3) How did the Continental Congress finance its spending programs? What was the economic effect of its financing arrangements?

4) What is a bimetallic standard? How does Gresham's Law describe what often happens to such a standard?

5) Why did Hamilton support the establishment of the First Bank of the United States? Why did Jefferson oppose it?

6) How did the First Bank of the United States differ from banks which existed at the time?

7) Why did a central bank become necessary as the U.S. economy developed?

8) Without the First Bank of the United States, how was the War of 1812 financed? What was the economic result of the federal government's financing arrangement?
9) What are "pet" banks? How did they come about?

10) What is "free banking"? What is "wildcat banking"? Are the two related?

11) Why did the national bank system come into existence? Why did the federal government impose a tax on the paper note issues of state-chartered banks during the Civil War? What was the effect of that tax?

12) What were the monetary planks of the Greenback Party and the Populist Party platforms?

13) What were the major changes which occurred in our monetary and banking system between 1862 and 1913?

14) What did Congress do in response to the Panic of 1907?

15) The structure of the Federal Reserve System is the result of compromise. Explain.
HISTORICAL NOTES

Introduction

Money and banking have been subjects of active public and political debate since the days of Colonial America. In fact, questions concerning the control of the quantity of money and the role of financial institutions have often dominated the political scene in the United States.

Throughout our history, the interplay of several political and economic events has raised some interesting questions. For example, did changes in the supply of money adequately meet the needs of a dynamic and growing economy? Did the mechanisms for controlling the supply of money produce the "right" amount, consistent with the goals of price stability, economic growth and reasonably full employment of resources?

Neither the videotape nor this Guide fully answers these questions. Rather, each attempts to shed some light on the role of money in our economic history and the creation by Congress in 1913 of the Federal Reserve System as the agency primarily responsible for maintaining the stability and health of our monetary and financial system.

The Colonies

The issue of what constitutes the "right" amount of money dates from the Colonial times. Because money is so essential to an economy's trade and commerce and to the living standard of its people, the thirteen Colonies (generally independent of each other) devised ways to supplement the rather limited amount of gold and silver coins (specie) in circulation. Much of the gold coin in circulation in the Colonies -- called Spanish dollars or "pieces of eight" -- originated with Colonial trade with the West Indies. While satisfying much of the Colonists' domestic needs of trade, these Spanish coins were also used to pay for imports from England and other nations.

Some Colonies resorted to the use of commodity money, or "country pay," where a Colony's principal commodity would often circulate as a medium of exchange. In the New England and Middle Atlantic Colonies, for example, wampum or sea shells were used; in the Southern Colonies, tobacco and rice; and throughout most of the Colonies, animal skins, powder and gun shot, and livestock were
often used. Since the market value of commodity money was
determined by demand and supply, its value as money chronically
deprecated when there was an oversupply in the marketplace. In
addition, commodity money lacked uniform quality, was prone to
spoilation, and was often difficult to transport and costly to store --
shortcomings which reduced its usefulness as a medium of exchange.

With gold and silver coins in short supply and commodity money
an unreliable standard, a number of the Colonies turned to the
issuance of paper money. This type of money consisted of bills of
credit issued by some Colonial legislatures and bank notes issued by
land banks. These banks, which bear a faint resemblance to
commercial banks today, made loans in the form of bank notes
secured by the value of borrowers' mortgaged land. Since these land
banks did not accept deposits but only issued notes, they were called
"banks of issue." It was not until the early nineteenth century that
these banks began to create deposits, instead of issuing paper notes,
in connection with their lending activities, making them the
forerunners of today's commercial banks. By 1790 there were only
four banks in existence.

Often, when the amount of bank-issued paper notes increased at a
rate faster than the needs of trade and commerce, their purchasing
power fell dramatically. The resulting inflation in prices prompted
the British Parliament in 1751 and 1764 to forbid the issue of paper
money, an action which was one of several factors leading to the
American Revolution. On the eve of the Revolution, approximately
three-quarters of the money supply was in the form of paper
currency of banks of issue; the rest consisted of gold and silver coins.

In 1776, the Colonies established the Continental Congress which
had the powers to borrow and spend but not the power to tax.
Financing the Revolution was accomplished principally by printing
paper money called "Continentsals." Additional wartime financing
came from foreign loans, primarily from France and Holland, and
from voluntary assessments on the several states which they met by
also resorting to printing money. At the time, it was assumed that
the war for independence would be short-lived and that the limited
amount of Continentals would be retired by the states through local
taxes. Both assumptions proved to be wrong, however.

The new government, as well as the several states, issued excessive
amounts of paper money. This resulted in sharp inflation and thus a
dramatic reduction in the purchasing power of paper money, giving rise to the expression "not worth a Continental." Further, wartime-induced shortages of certain commodities such as iron, salt and sugar aggravated the inflation. In fact, in 1779 a Continental with a face value of one dollar was only worth two cents. The currency depreciation was so great that barter and payment in kind flourished. Further, gold and silver specie (both regarded more valuable as commodities than as money) were driven from general circulation. In 1790 the Constitutional Congress authorized the redemption of the Continentals outstanding in exchange for government bonds of the newly formed Republic.

The First Bank

After the adoption of the Constitution in 1789, which gave the new federal government spending, borrowing and taxing powers, one of the first problems faced by the young nation was the creation of a national monetary and financial system. While Article 1, Section 8 of the Constitution expressly gave Congress the power to coin money, the states were prohibited by Article 1, Section 10 from minting coins or issuing paper money in any form. In fact, the Constitution prohibited the states from making anything but gold or silver coin a tender in the payment of debts.

The economic vitality of the new Republic depended on the flow of money. Much of this money had come from foreign sources, primarily from England, but it slowed in the years following the Revolution. The fledgling economy had to devise its own institutions: commercial banks to issue paper notes and to accept deposits; other financial institutions (resembling today's investment banks) to underwrite and sell the securities of business corporations which would need tremendous amounts of capital to finance railroad and canal construction; and stock exchanges to enable investors to trade the newly issued corporate securities.

Alexander Hamilton, the first Secretary of the Treasury, played a pivotal role in the development of the new monetary system. He penned the Coinage Act of 1792, which provided for equal monetary roles of gold and silver. That is, a bimetallic monetary standard was established to avoid a shortage of money which had plagued the Colonists. When the minting of coin began in 1794, the newly established Mint set a specie exchange rate of one troy ounce of gold for fifteen troy ounces of silver. By the end of the eighteenth
century, the market price of silver began to fall; an ounce of gold exchanged for fifteen and three-quarter ounces of silver. Since gold was worth more in terms of silver in the market than at the Mint, the use of gold coin as money all but ceased. (See Gresham's Law, page 10.)

Silver coins also began to disappear from circulation as profiteers exported the coin to Latin America where it was worth more. With silver specie reserves diminishing, Congress halted any further coinage of silver dollars in 1806; silver dollars were not coined again until 1836. What few U.S. silver coins remained were retained by banks as reserves against their paper note issues. Consequently, there was increased use of foreign coins for trade and commerce and as bank reserves. Hamilton's anticipated dual monetary roles of gold and silver specie failed to materialize.

The difficulty of establishing and maintaining at the Mint an exchange parity of gold and silver which matched that in the open market was to be a recurring problem throughout the nineteenth century. However, the operation of Gresham's Law provided fertile ground for political and economic debate. It pointed up the need for a reliable monetary system not subject to the day-by-day vagaries of the market nor to the caprice of political or private institutions to provide the "right" amount of money.

Hamilton precipitated a heated political debate by recommending the chartering of the (First) Bank of the United States. He indicated that "whatever enhances the quantity of circulating money adds to the ease with which every industrious member of the community may acquire that portion of it which he stands in need." Hamilton's ideological rival, Thomas Jefferson, argued not only that the Bank's establishment was unconstitutional -- that the power to create a bank was not among those enumerated in the Constitution -- but also that banking establishments were more dangerous than standing armies.

Hamilton prevailed and the Bank, chartered by an Act of Congress in 1791, was among the largest companies in the nation at the time. The Bank was privately owned; the federal government was a minority shareholder. Private subscriptions of the Bank's stock were made in specie and in the form of federal government bonds.
The Bank marks the first deliberate step taken by the federal government in addressing the problem of determining the "right" amount of money. However, while the Bank was not intended to perform the functions of a central bank--those functions were not to be undertaken until Congress created a true central bank (the Federal Reserve System) -- it did exert a considerable influence over the economy.

The Bank, through its several branches, performed certain fiscal functions for the federal government such as holding the government's cash deposits (mainly state bank notes) and extending it temporary credit. It also printed a uniform national paper currency which, like the paper notes of state chartered banks of issue, was redeemable on demand in gold or silver specie.

It is generally agreed that one of the Bank's greatest successes was in providing a stable and sound uniform paper currency. Still, charges that it represented an unconstitutional monopoly of the federal government continued to permeate political discussions, and Congress, by a margin of one vote, decided not to renew the Bank's charter in 1811.

When the Bank's charter expired, there were approximately 88 state-chartered banks. By 1815, more than 200 banks were in business. This proliferation was due partly to the demise of the First Bank, which had exerted a restraining influence on the number of banks and their issuance of paper notes. More importantly, the surge in the number of banks was related to the federal government's borrowing requirements in financing the War of 1812. Reluctant to raise taxes and unable to borrow sufficient funds, the federal government turned to banks, which bought government bonds with newly printed paper bank notes. Between 1811 and 1815, the volume of bank notes increased more rapidly than the volume of specie reserves thereby forcing banks to suspend specie payments. Confidence in banks and in their paper note issues waned, pushing the banking system to the brink of collapse.

The Second Bank

The end of the War of 1812 marked the opening of the Western frontier and the growth of agriculture and manufacturing -- developments requiring a sound and flexible banking and financial system. In 1816 Congress responded by chartering the Second Bank
of the United States. The Second Bank brought a feeling of confidence and, in early 1817, banks resumed specie redemption of their paper notes.

The Second Bank was similar to the First Bank, but on a much larger scale. It was also privately owned with the federal government a minority shareholder. When the Second Bank collected payments due the federal government (made largely in the form of state bank notes), it only accepted notes issued by banks which stood ready to redeem them on demand for gold and silver. When the Second Bank presented notes for specie redemption to the banks of issue, it exerted a significant influence, if not control, over the amount of paper notes in circulation.

Like the First Bank, the Second Bank had its political enemies who charged that it was unconstitutional and would cause concentration of economic power. The Bank's constitutionality was upheld, however, in the landmark Supreme Court decision of *McCulloch v. Maryland* in 1819.

In 1832, President Andrew Jackson, who vetoed a bill to recharter the Second Bank, began placing the federal government's funds in several favored state-chartered, or "pet," banks. Four years later, the Second Bank's charter was allowed to expire.

**The Antebellum Period**

States continued to be the sole regulator of banks, bank note issues and bank chartering. Since a charter and the authority to issue bank notes were financially rewarding, bank organizers often used corrupt means to obtain the limited bank franchises from the state. In addition, with restricted entry and little competition, banks tended to engage in lending activities and paper note issuance which made the banking system prone to periods of instability.

These problems led to an era of "free banking" where entry into banking was open to any who satisfied certain minimum capital requirements. Rather than receiving charters from state legislatures, banks were chartered under general incorporation laws of the state and were authorized to issue paper currencies provided they were secured with state bonds. This collateral requirement assured that the states would have a ready market for their bond issues. In
addition, banks were required to redeem on demand their paper note issues in gold or silver specie.

This era has been called the "wildcat" banking period and was supposedly characterized by widespread fraud and bank speculation, mismanagement and failures. It is now generally recognized that was not an accurate description. In fact, what was learned during free banking at the state level served as a basis for the establishment of the national bank system at the federal level. By the eve of the Civil War, approximately half of the thirty-two states had some form of free banking.

The Civil War...

The Civil War prompted a number of important changes in the banking and monetary system. Uncertainty about the length of the War, its outcome and how it would be financed caused widespread suspension of specie redemption both by the banks and the federal government, except on the interest payments on government bonds.

In 1861 Congress began to issue United States notes, called Greenbacks, the first instance of the federal government issuing fiat money, i.e., paper currency not redeemable in either gold or silver. In 1879 Congress resumed the convertibility of paper currency into gold. At the time of issue, Greenbacks were made legal tender for all private and public debts except for payments of custom duties and interest on the government's debt, both of which were to be made in hard (specie) currency form.

In 1863, Congress passed the National Bank Act which established a national bank system designed to reduce the cost of financing the Civil War. National banks -- chartered by the newly established Office of the Comptroller of the Currency --were authorized to issue a uniform paper currency (called national bank notes) collateralized by the war bonds of the federal government. The collateral requirement created a ready market for the government's securities. By linking the issue of national bank notes to the amount of government bonds, Congress sought to provide a political mechanism to prevent the over-issuance of paper currency.

In 1865 Congress amended the Act in an attempt to encourage more banks to become national banks by placing a ten percent tax on the bank notes issued by state banks. While many state-chartered
banks became national banks to avoid the tax, others began to use a new form of money -- demand deposits or checkbook money. To a large extent, the government's bank-note tax hastened the growth and widespread use of checkbook money. By 1870, more than half of the nation's money supply consisted of demand deposits.

...And After

After the Civil War, prices in the economy declined until the end of the nineteenth century. In this environment, the Greenback and Populist Parties were launched. Both parties sought to reverse a falling price level and relieve frequent periods of economic distress through an expansion of the specie and paper forms of money. The Greenback Party advocated increasing the money supply through an increase in the outstanding volume of Greenbacks, while the Populist Party sought to expand the money supply through an increased minting of silver coins.

While it was not successful in obtaining an increase in the supply of paper currency, the Greenback Party did block the government's attempts to retire Greenbacks. The Populists were successful in passing a compromise -- the Sherman Silver Purchase Act of 1890 -- which required the purchase and coinage of a specified amount of silver each year. In 1893, the silver purchase and coinage requirement was repealed. The threat to gold convertibility was reduced when William McKinley defeated the pro-silver William Jennings Bryan for President in 1896. The pro-silver movement continued to wane as increases in the production of gold led to a worldwide gold-based inflation of prices.

The fifty year period following the Civil War, characterized by relatively high but uneven rates of economic growth and periods of slump, saw important changes in our monetary and banking system. There was the formal adoption of the gold standard in 1900, linking the money supply (paper currency and bank deposits) to the quantity of gold; the substitution of bank deposits for paper currency as the principal medium of exchange; the development of the dual banking system of national-and state-chartered banks; and the creation of a central bank -- the Federal Reserve System -- as a formal body with powers to influence our nation's supply of money and credit.
The Federal Reserve System

The economic boom which started in the 1890s lasted until a recession in 1907 triggered a banking panic. City banks found their reserves sharply depleted as depositors withdrew money. Also, country banks which held their reserves as deposits in city banks made withdrawals to meet the demands of their depositors. Banks all over the country were forced to restrict withdrawals or suffer the consequences. The concentration of monetary reserves in city banks and the seasonal demands for credit in agricultural areas made the banking system susceptible to shocks which were often magnified throughout the economic and financial system.

In 1908 Congress created a National Monetary Commission to study the banking system and its problems and to recommend changes to enhance its stability. After several years of study and debate, Congress passed the Federal Reserve Act which was signed into law by President Woodrow Wilson on December 23, 1913.

Today, the Federal Reserve System reflects the compromises which led to its establishment: (1) the seven top decision-makers -- the Board of Governors in Washington, D.C. -- are appointed by the President, with the advice and consent of the Senate; (2) the Governors are appointed for a term of fourteen years, thereby insulating their decisions from day-to-day political pressures; (3) twelve regional Federal Reserve Banks perform the operations of the Federal Reserve System, thus assuring that local considerations play a part in the decision-making of the central bank; (4) the directors of the Reserve Banks reflect the agricultural, service, labor and consumer, commercial and industrial, and banking and financial sectors of the economy; and (5) the Federal Reserve is not dependent on the Congress for its funding; instead, the central bank derives the bulk of its operating revenues from the interest it earns on its holdings of U.S. government securities.

One of the principal tasks of the Federal Reserve is to conduct monetary policy. By providing more or fewer reserves through monetary policy actions, the Federal Reserve is able to affect the ability of banks to make loans and investments. Unlike the banking institutions in our earlier history, today's banks create deposits when they make loans to borrowers. It is the supply of bank deposits which constitutes approximately seventy-five percent of our nation's money supply. The balance is in the form of coin and paper currency.
The amount of loans made and the new checkbook deposit money created by the banking system have an effect on the spending and investing decisions of households and business in our economy. This, in turn, heavily influences the general level of prices, the structure of interest rates, the intensity with which we use available human and material resources. As a result of the power of its monetary policy, the Federal Reserve remains the subject of public and private debate -- a debate over money and banking that is more than 200 years old.

**Gresham's Law --**

**Maintaining a Bimetallic Monetary Standard***

*Named after Sir Thomas Gresham who served as head of the English Mint during the reign of Queen Elizabeth I.*

Throughout the early part of our monetary history, between 1792 and 1862, the U.S. was on a bimetallic standard. Under bimetallism, the U.S. Mint coined both silver and gold. However, it was only for brief periods that both minted coins circulated simultaneously.

For the monetary standard to work properly with both metals circulating, the Mint established an exchange value or rate between gold and silver. For example, the exchange rate at the time of Hamilton's coinage program of 1792 was one ounce of gold for every 15 ounces of silver. This rate was identical to that determined in the market at that time by the forces of supply and demand for these metals.

Shortly after minting began, the market price of silver began to fall and by 1799, an ounce of gold had a market value of 15.75 ounces of silver. In other words, an ounce of gold commanded three quarters more of an ounce of silver in the market that at the Mint. The resulting problem is explained by Gresham's Law: gold (the "dearer" metal) was hoarded while silver (the "cheaper" metal) was kept in circulation, and the bimetallic standard gave way to a single (silver) metal standard.
BIBLIOGRAPHY OF FREE MATERIALS AVAILABLE FROM THE FEDERAL RESERVE SYSTEM

Coins and Currency, 1981
This booklet reviews American money from wampum to Federal Reserve notes.

Request from:
Federal Reserve Bank of New York
Public Information Department
33 Liberty Street
New York, New York 10045


These articles give an historical perspective on each subject and its significance in the economic development of the U.S.

Request from:
Federal Reserve Bank of Dallas
Public Affairs Department
Station K
Dallas, Texas 75222

Glass Insulation, 1978

This booklet discusses how the Federal Reserve was created and the significance of its independence from political pressures.

Request from:
Federal Reserve Bank of Philadelphia
Public Information Department
P.O. Box 66
Philadelphia, Pennsylvania 19105

Historical Beginnings. . .The Federal Reserve, 1977
This booklet traces the history of the U.S. banking system, describing nineteenth century banking problems and the legislation that led to the creation of the Federal Reserve System.


This article discusses several important pieces of federal banking legislation between 1862 and 1982.

Request from:
Federal Reserve Bank of Boston
Bank and Public Services Department
Boston, Massachusetts 02106


These articles discuss developments in U.S. history leading to the passage of the Federal Reserve Act in 1913.

"Beginnings" and "The Formative Years," *Weekly Letter*, October 26, 1984 and November 9, 1984

These articles discuss the structure of the Federal Reserve System from an historical point of view.


This article describes the Federal Reserve System today.

Request from:
Federal Reserve Bank of San Francisco
Public Information Department
P.O. Box 7702
San Francisco, California 94120

"Free Banking, Wildcat Banking and Shinplasters," *Quarterly Review*, Fall 1982

This article discusses the free banking era.

Request from:
Federal Reserve Bank of Minneapolis
Research Department
Minneapolis, Minnesota 55480
A TRIP BACK IN TIME TO THE ORIGINS OF THE FEDERAL RESERVE SYSTEM.
THE ON-GOING PROBLEM OF "TOO MUCH" OR "TOO LITTLE" MONEY IS AS OLD AS THE COUNTRY ITSELF. A HEALTHY ECONOMY NEEDS A MONEY SUPPLY GROWING IN A WAY THAT PROMOTES ECONOMIC GROWTH AND HIGH EMPLOYMENT WITHOUT INFLATION.

ADAPTED FROM THE VIDEO, "TOO MUCH, TOO LITTLE", BY:

DANIEL ROSEN
RICHARD TRAINER
AL WENZEL

ART BY:
AL WENZEL
WOW, THAT WAS A SUPER MOVIE, MR. ALLEN.

YEAH! THANKS FOR TAKING US, DAD.

MY PLEASURE KIDS! LET'S GO FOR A SODA!

I'D LIKE TO, MR. ALLEN, BUT I'VE GOT TO DO A PAPER FOR MY ECONOMICS COURSE.

ME TOO! WE'RE STUDYING THE FEDERAL RESERVE SYSTEM.

DAD, I TOLD YOU I HAVE TO WRITE A REPORT ON IT.

I KNOW, KIDS! I TEACH ABOUT THE FEDERAL RESERVE IN MY HISTORY COURSE. MAYBE I CAN HELP!

OKAY, BUT IT BETTER BE QUICK.
WELL, WE'RE STUDYING HOW AND WHY THE FEDERAL RESERVE SYSTEM DEVELOPED.

...AND JUST WHAT ITS ROLE IS IN OUR ECONOMY!

HMM... WELL, THAT'S QUITE A STORY ACTUALLY, IT GOES ALL THE WAY BACK TO COLONIAL AMERICA... BEFORE THE REVOLUTION.

TOO BAD WE DON'T HAVE A TIME MACHINE LIKE THE ONE WE SAW IN THE MOVIE.

SAY, THAT'S NOT A BAD IDEA! LET'S IMAGINE OUR BOOTH IS A TIME MACHINE! WE COULD GO BACK IN TIME AND SEE HOW IT ALL BEGAN!

HEEY, THAT'S GREAT!

ALL RIGHT, WE'RE SITTING IN THE TIME MACHINE... HERE'S THE CONTROL PANEL!

YEAH! LOOK AT ALL THOSE DIALS!

AND FLASHING LIGHTS!
Okay...we’ll go back to Colonial times, before the Revolution!

Ready guys? I’m going to push the lever and send us back to 1690!

We’re ready!

Hey...the sun and moon are zipping across the sky backwards!
WOW! EVERYTHING'S A BLUR OUTSIDE!
WE JUST PASSED 1860! THAT'S BEFORE THE CIVIL WAR!
NOW IT'S 1760! THAT'S BEFORE THE REVOLUTION!
YES AND WE'RE BEGINNING TO SLOW DOWN!

WE'RE HOVERING OVER A CLEARING. THE DIAL SAYS IT'S 1830!
PUBLICATION SOMEWHERE OVER VIRGINIA. I SEE PEOPLE DOWN THERE. LET'S SEE WHAT'S GOING ON.

I WONDER WHERE WE ARE?

THIS IS LIKE BEING IN A FLYING SAUCER!
NO... WE CAN SEE THEM, BUT THEY CAN'T SEE US.

WOULDN'T WE SCARE THEM?

WHAT ARE THEY DOING, MR. ALLEN?
LOOKS LIKE THEY'RE TRADING. LET'S LISTEN IN.

I'LL GIVE YOU TWO KNIVES FOR TEN BEAVER SKINS.
NO! TEN SKINS ARE WORTH TWO KNIVES, ONE AX, AND ONE BALE OF TOBACCO.
They seem to be having trouble reaching an agreement, Mr. Allen. That's one of the drawbacks of a barter system. Robert, money as we know it today was practically non-existent in Colonial America.

The early colonists occasionally used the coin or currency of other nations, such as "pieces of eight" or "Spanish dollars." But barter was more usual...and it seriously limited the amount of economic activity that could take place.

Why is that, Mr. Allen?

Directly exchanging goods and services instead of using money is difficult.

"Finding a trader who wants what you have can be very difficult. For example, if you can't find someone interested and you have food to trade, it might spoil; and if you're trading cows, how do you make change?"

Did they move from barter right into today's money?

No. Money started to develop when people began to find that using such things as tobacco and animal skins as a medium of exchange didn't work very well.

Why not?

Well, suppose people were using tobacco as money, and the usual rate was 5 bales of tobacco for one plow. What do you think would happen if there was a huge tobacco harvest?
Let's see! With lots of tobacco, that means there'd be lots of money.

And lots of spending with people buying up as much as they could. I guess that would cause prices to skyrocket.

'So there was always a danger in using a commodity as money because its supply could change suddenly.'

Plows 5 bales tobacco.

What about this? Why didn't they use this stuff?

They did—occasionally. When goods were sold to foreigners they paid us with their own monies. Remember that rare coin that Aunt Clara has?

BEEP!

BEEP!

BEEP!

BEEP!

Sure, Dad! That's a beautiful old coin!

Why didn't the colonists produce their own money, Mr. Allen?

Some did, even though it was against British law. Let's move on in time and see how money and England's refusal to let the colonies print and mint their own contributed to the revolution.

Let's stop and see what it was like in 1776.

Okay!
THE WAR HAS STARTED!

YES... AND THE NEW GOVERNMENT HAS THE PROBLEM OF FINANCING THE WAR.

HOW COULD IT WITHOUT ENOUGH MONEY, MR. ALLEN?

WELL, IT WASN'T EASY... THE CONTINENTAL CONGRESS COULD NOT COLLECT TAXES THE THIRTEEN COLONIES RESERVED THAT RIGHT, SO THEY BORROWED MONEY ESPECIALLY FROM THE FRENCH AND DUTCH.

THE CONTINENTAL CONGRESS AUTHORIZED THE PRINTING OF PAPER MONEY, CALLED "CONTINENTIALS."

LOOK! THERE'S A BATTLE GOING ON DOWN THERE!

I BET THAT'S BUNKER HILL!

HURRAH! THE SURRENDER AT YORKTOWN!

THE WAR'S OVER, MR. ALLEN!

YES, BUT IT WAS VERY COSTLY IN LIVES AND MONEY! THE GOVERNMENT ISSUED EXCESSIVE AMOUNTS OF "CONTINENTALS," CAUSING A SHARP INFLATION. BY 1779, A "CONTINENTAL" WAS WORTH ONLY TWO CENTS! "NOT WORTH A CONTINENTAL" WAS THE EXPRESSION OF THE DAY.
Now it was a case of too much money! Exactly! That, plus war-caused shortages made prices zoom on commodities such as salt and sugar.

Well, after the adoption of the Constitution in 1790, the new Congress faced the problem of creating a national monetary system. It authorized the redemption of the Continentals in exchange for government bonds.

In 1791 Congress issued a 20-year charter to the Bank of the United States. It also established a Mint in 1792.

The Mint coined gold and silver which established a bimetallic standard.

The Bank of the U.S. issued paper currency backed by gold and silver. All of that should've solved the money problem!
At first it worked, but a few years later the market price of silver dropped. Because so much was mined and as the value of silver dropped, it bought fewer commodities, including gold.

The less valuable silver coins were increasingly used and the more valuable gold was driven from circulation.

That's Gresham's Law!

Hah, I see. The bimetalled standard became a single, silver standard!

With only silver in circulation, and silver buying less, there was too little money and the economy contracted.

It certainly was a problem to find the right balance between "too little" and "too much."

Maintaining a healthy economy without causing inflation or recession is still the most difficult problem we have to deal with.

What about the first bank of the United States. Wasn't there anything it could do to solve the problem?

The bank was a step in the right direction.
THE BANK HELD GOLD AND SILVER DEPOSITS, AND ISSUED BANK NOTES WHEN IT MADE LOANS... BUT THE BANK'S CHARTER EXPIRED IN 1811.

BUT WHERE DID PEOPLE GO TO BORROW MONEY?

"BANKS WERE STARTING TO POP UP ALL OVER THE PLACE AS THEY TOOK OVER THE ISSUANCE OF MONEY.

HEX! LOOK OUT! BOMBS ARE BURSTING ALL AROUND US!

WE ALMOST GOT HIT BY A ROCKET!

THAT'S FORT McHENRY DOWN THERE BEING BOMBARDED BY THE BRITISH FLEET!

WE'RE IN THE MIDDLE OF THE WAR OF 1812!

I WONDER IF FRANCIS SCOTT KEY IS DOWN THERE WRITING THE STAR SPANGLED BANNER?

NOT UNTIL TOMORROW, ROBERT. REMEMBER, HE HAS TO SEE "THE DAWN'S EARLY LIGHT!"

ANOTHER WAR, HOW TRAGIC!

AND AS WARS USUALLY DO, THE WAR OF 1812 HAD A TREMENDOUS EFFECT ON THE ECONOMY.

IN WHAT WAY, MR. ALLEN?
The borrowing needs of the federal government to finance the war once more spurred the growth of state chartered banks.

I guess bank notes were coming out of the woodwork!

Right! And some banks issued more notes than were backed by their gold and silver reserves.

With war-time shortages and too much money, prices took off. By the end of the war, the economy and the banking system were near collapse.

In an effort to restore confidence in the banking system, Congress in 1916 issued a 20-year charter to a second bank of the United States.

That seems like a good move.

"Yes, it was! It restored confidence in banks by being very strict about gold and silver reserves. When the second bank collected tax payments for the government, it accepted only bank notes that could be exchanged for gold and silver."

And this solved the over-issuance problem? To a large extent.
SO THE SECOND BANK OF THE UNITED STATES WAS SUCCESSFUL.

YES, BUT LIKE THE FIRST BANK, IT HAD ITS POLITICAL ENEMIES WHO CHARGED THAT IT WAS UNCONSTITUTIONAL AND WOULD CAUSE CONCENTRATION OF ECONOMIC POWER.

PRESIDENT ANDREW JACKSON SUPPORTED THAT ARGUMENT AND THE SECOND BANK'S CHARTER EXPIRED IN 1836. HE PULLED THE FEDERAL GOVERNMENT'S FUNDS FROM THE SECOND BANK AND DEPOSITED THEM IN SEVERAL FAVORED OR "PET" BANKS.

WITHOUT THE SECOND BANK, STATES WERE THE SOLE CHARTERERS OF BANKS.

WAISN'T THIS THE ERA OF "FREE BANKING," MR. ALLEN?

YES, THE NUMBER OF STATE BANKS EXPLODED.

AND SO DID THE NUMBER OF NOTES THEY ISSUED! SOME HAD INSUFFICIENT GOLD AND SILVER RESERVES TO BACK THEM.

"THE NEXT 20 YEARS SAW GREAT TURMOIL IN THE BANKING SYSTEM. SOME BANKS COULDN'T PAY GOLD AND SILVER ON DEMAND AND DEFAULTED. AND ONCE AGAIN THE PUBLIC'S CONFIDENCE IN BANKS AND THEIR NOTES FAULTED."

SORRY NO STATE BANK NOTES, COIN ONLY!
THEY'RE FIRING ON FORT SUMPTER! IT'S 1861 AND THE CIVIL WAR IS STARTING.

ANOTHER WAR! THAT WILL SHAKE UP THE ECONOMY!

IT SURE DID! THE GOVERNMENT COULDN'T PAY FOR THE WAR WITH TAXES ALONE. IT HAD TO BORROW BY SELLING BONDS TO STATE-CHARTERED BANKS.

SO THE BANKS PAID WITH BANK NOTES?

NO. THE GOVERNMENT WOULDN'T ACCEPT THEM. IT HAD JUST SET UP NATIONALLY-CHARTERED BANKS TO ACHIEVE A UNIFORM CURRENCY. THEY ISSUED DIFFERENT NOTES CALLED "GREENBACKS" THAT WERE NOT REDEEMABLE IN GOLD OR SILVER. BANKS USED THEM TO PAY FOR THE BONDS.

YOU COULD SAY THAT "GREENBACKS" WERE DECLARED LEGAL TENDER FOR ALL PUBLIC AND PRIVATE DEBTS.

LOOKS LIKE THE FEDERAL GOVERNMENT WAS REGULATING BANKING AND MONEY AGAIN.
DID THIS SYSTEM WORK?

THERE WAS ONE PROBLEM. STATE BANKS CONTINUED TO ISSUE THEIR OWN NOTES. TO DISCOURAGE THIS, CONGRESS TAXED STATE BANKS. SOME CHANGED THEIR CHARTER AND BECAME NATIONAL BANKS.

"SOME TOOK THEIR CUSTOMER'S GOLD AND SILVER COINS AND GREENBACKS, AND ISSUED A NEW TYPE OF MONEY CALLED 'CHECKBOOK MONEY' WHICH CUSTOMERS COULD SPEND!"

AFTER THE CIVIL WAR, THE TREASURY REDUCED ITS DEBT BY CALLING IN GREENBACKS. PRICES DECLINED WHILE THE ECONOMY SLOWED.

"A CASE OF "TOO LITTLE" MONEY AGAIN!"

DAD, WHAT'S SO BAD ABOUT FALLING PRICES?

FARMERS AND SMALL BUSINESSES WERE IN A PINCH. THEY GOT LESS FOR THEIR GOODS, BUT THEIR COSTS STAYED PUT. THIS trigGRED A STRONG POLITICAL REACTION AND THE POPULIST AND GREENBACK PARTIES EMERGED."
THE GREENBACKS WANTED MORE PAPER MONEY, RIGHT MR. ALLEN?

RIGHT!

AND THE POPULISTS WERE PUSHING FOR MORE GOLD AND SILVER COINAGE.

I GUESS THEY THOUGHT THESE ACTIONS WOULD STIMULATE THE ECONOMY.

EXACTLY. THE POPULISTS WON A PARTIAL VICTORY WITH LEGISLATION THAT CAUSED MORE SILVER COIN TO BE MINTED.

BUT WHAT HAPPENED MR. ALLEN? I'VE READ THAT IN 1900 THE GOLD STANDARD STARTED.

TRUE, BUT BECAUSE OF SOME NEW LARGE GOLD DISCOVERIES GOLD PRICES FELL SHARPLY AND SILVER WAS HOarded.

MORE GREENBACKS

MORE SILVER VOTE

VOTE POPULIST

YES! THE U.S. MOVED TO A GOLD STANDARD WHICH EUROPE ALREADY HAD.

WHAT ABOUT PAPER NOTES?

HERE COMES GRESHAM'S LAW AGAIN!

"THEY WERE STILL AROUND AND YOU COULD EXCHANGE THEM FOR GOLD COIN. THE MORE GOLD A COUNTRY HAD, THE MORE NOTES IT COULD HAVE BECAUSE PAPER MONEY WAS BACKED BY GOLD."
How did we pay for things we bought from Europe?
I'll bet we used gold!
You've got it! And if we sold more to foreigners than we bought from them, we got more gold, money expanded and...

Prices shot up!
And when we bought more than we sold, we paid out gold, the money supply and the economy contracted.
The banking system must have bounced around.

"It sure did! When we lost gold, people rushed to their banks to get their money. Banks failed, the economy suffered and panic developed. International gold flows helped trigger a severe banking panic in 1907."
I want my money!
Me too!

"The panic shocked congress into studying the banking and economic system. This resulted in the Federal Reserve Act, which President Wilson signed into law in 1913."
Well, gang, what say we get our time machine back to the present!

I'm ready!

Okay, I've set the time and date, hold on kids, here we...

Beep! Beep! Beep!

Me too!

Future

Wow, that was a great trip! Thanks a lot, Mr. Allen!

I enjoyed it too, kids!... But now we'd better get going. You've got to get those reports done!

It'll be easy now! I never knew homework could be such fun!

Cola
As I was telling my son and his classmates this weekend, trying to solve the problem of too much or too little money resulted in the creation of the Federal Reserve System.

How did that help, Mr. Allen?

Its major accomplishment was to take the issue of controlling money out of partisan politics.

How does it do that?

The system consists of twelve regional reserve banks and a seven-member Board of Governors in Washington D.C.

Governors are appointed by the President with Senate approval, for a fourteen year term, that insulates their decisions from day-to-day political pressures, and Reserve Bank Presidents participate with the governors in important policy decisions.

Who pays for all of this?

The Fed gets its revenues from the interest it earns on government securities it holds. It is not funded by Congress.

So that must give the Federal Reserve some independence.
"As you history students know, there were some very difficult economic times since the Fed was established, such as the Great Depression of the 1930s and various wars. These times simply overwhelmed the Federal Reserve System's ability to keep the economy running smoothly. However, monetary policy is far better able to cope with economic difficulties now than before."

"Just how does the Federal Reserve control money?

Today, the Federal Reserve influences money creation by controlling bank reserves.

Just what are reserves?

They are the "raw material" the Federal Reserve creates and banks are required to use as backing for their money-creating activity. These reserves are cash in banks' vaults and their balances at Federal Reserve banks.

Most of today's money is in the form of deposits -- you know the checking accounts your folks have.

And the rest of it is this.

So the economy runs smoothly now?

Certainly better than before."
By constantly adjusting reserves, the Federal Reserve strives to sustain a robust economy with full employment without inflation.
THE JOB OF THE FED IS TO TRY TO ADJUST RESERVES SO THAT NEITHER "TOO MUCH" NOR "TOO LITTLE" MONEY IS CREATED. AND THE FEDERAL GOVERNMENT THROUGH ITS TAXING, SPENDING AND BORROWING, ALSO SEeks THE SAME GOALS AS THE FEDERAL RESERVE — TO HAVE THE ECONOMY GROW WITH STABLE PRICES AND FULL EMPLOYMENT.