

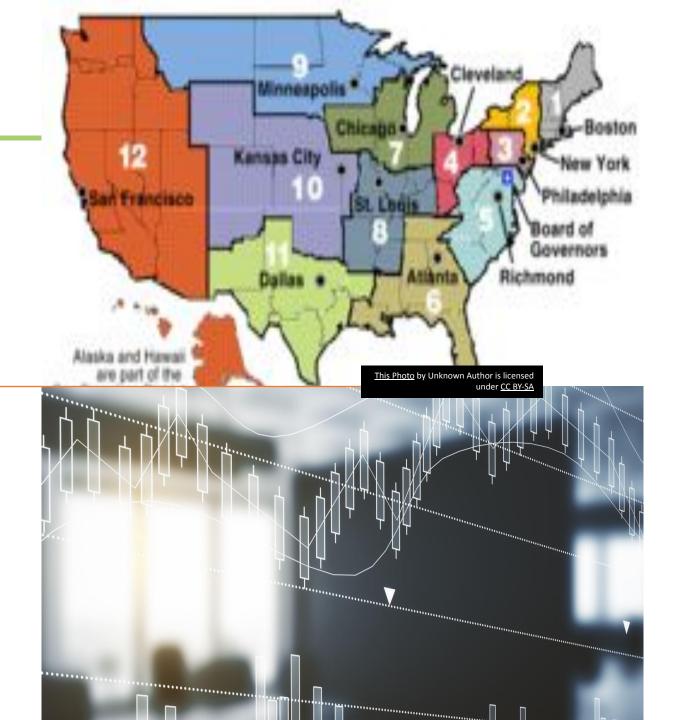
MONETARY POLICY

Monetary Policy Matters

2:45-4:00pm ET

Monetary Policy Matters

Imagine a world without stable money and financial institutions. How would you complete transactions? Measure the value of the goods, services, and resources in your and others' possession? Store value for the future?



This is a

long list!!! Macro courses require

1. Define the three functions of money.

- 2. Define assets and order them based on degrees of liquidity.
- 3. Identify an example of money as commodity money or fiat money.
- 4. Differentiate between various money aggregates.
- 5. Present the organizational structure of the Fed.
- 6. Explain how open market operations impact the money supply.
- 7. Examine the role of monetary policy in influencing an economy.
- 8. Calculate how much money fractional reserve banking can create in different scenarios.
- 9. Determine the impact of a change in reserve requirements on the money supply.
- 10. Given data on a bank's balance sheets, evaluate the bank's reserve situation.
- 11. Calculate the value of the money multiplier using the reserve ratio.
- 12. Given a bank's balance sheet, calculate the leverage ratio.
- 13. Explain how the discount rate impacts the money supply.
- 14. Describe the Current Central Banking Framework: Monetary Policy with Ample Reserves.



- **1**.Define the three functions of money in modern society.
- 2. Define assets and order them based on degrees of liquidity.
- 3. Identify an example of money as commodity money or fiat money.
- 4.Differentiate between various money aggregates.
- 5. Present the organizational structure of the Fed.
- **6.**Examine the role of monetary policy in influencing an economy.



Let's review. Which statistic is used by economists to determine if a macroeconomy is growing in terms of real income per person?

- 1. GDP deflator
- 2. Current GDP
- 3. Real GDP per capita



Which statistic is used by economists to determine inf a macroeconomy is growing in terms of real income per person?

- 1. GDP deflator
- 2. Current GDP
- B. Real GDP per capita

Want to Review? Use Flashcards.

What To Look For

- Nominal GDP is the production of goods and services valued at current prices.
- Real GDP is the production of goods and services valued at constant prices.
- The GDP Deflator is a measure of the price level calculated as the ratio of nominal GDP to real GDP times 100.

Seven Principles

- 1. Instructors are present for their students.
- 2. Students understand that reciprocity and cooperation are expected.
- 3. Course keeps students active.
- Feedback from teacher and students is prompt.
- 5. Time on task learning and completing assignments is reinforced.
- 6. High expectations are set and defined.
- 7. Design course activities for diversified student populations and be inclusive.

Seven Principles of Good Teaching

COURSE SUCCESS

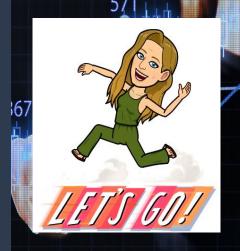
It is common sense.

CEE

Suppose you are going to **lend** someone in this class \$1000 to start a side business. Which provides the optimal situation to you, the lender?

One year from today you receive

- A. A basket of groceries of the borrower's choosing
- B. The borrower returns the principal plus a nominal rate of 4%
- A basket of items selected by your state congress is given to you
- D. The borrower returns the principal plus a real rate of 4%
- E. Nothing. Government declared all loans issued during a tough year are forgiven
- F. Cannot answer. Need more information.





Suppose you are going to **lend** someone in this class \$1000 to start a side business. Which provides the optimal situation to you, the lender?

One year from today you receive

- A. A basket of groceries of the borrower's choosing
- B. The borrower returns the principal plus a nominal rate of 4%
- c. A basket of items selected by your state congress is given to you
- D. The borrower returns the principal plus a real rate of 4%
- E. Nothing. Government declared all loans issued during a tough year are forgiven
- F. Cannot answer. Need more information. The inflation rate is needed to determine if Answer B or Answer D is optimal. Answer D is optimal if the annual rate of inflation is higher than 3%.



Want to Review? Listen or read about the difference at EconLowDown "Getting Real about Interest"

Your Connections to Money



1. Why do you value money?





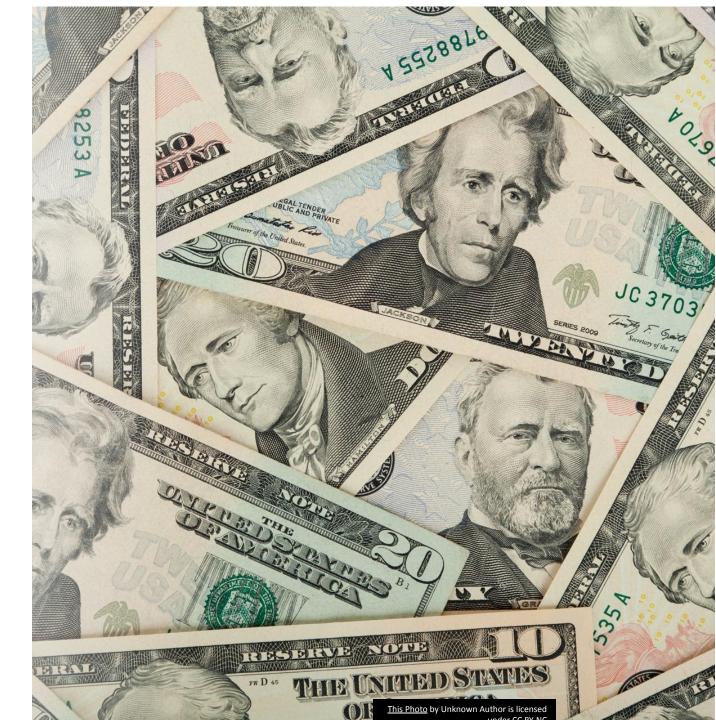
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Money, money, money helps you do some important things!

Write these down. Anything that serves these three functions serves as modern money:

- 1. Medium of exchange
- 2. Unit of account
- 3. Store of value





Money, money, money...

List the three functions modern money serves.

$\mathsf{Recall}_{2.}^{1.}$

3.





Money, money, money...



Anything that serves these three functions serves as modern money:

- 1. Medium of exchange
 - Unit of account
- 3. Store of value

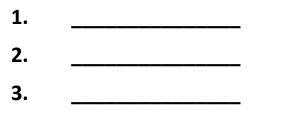
2.



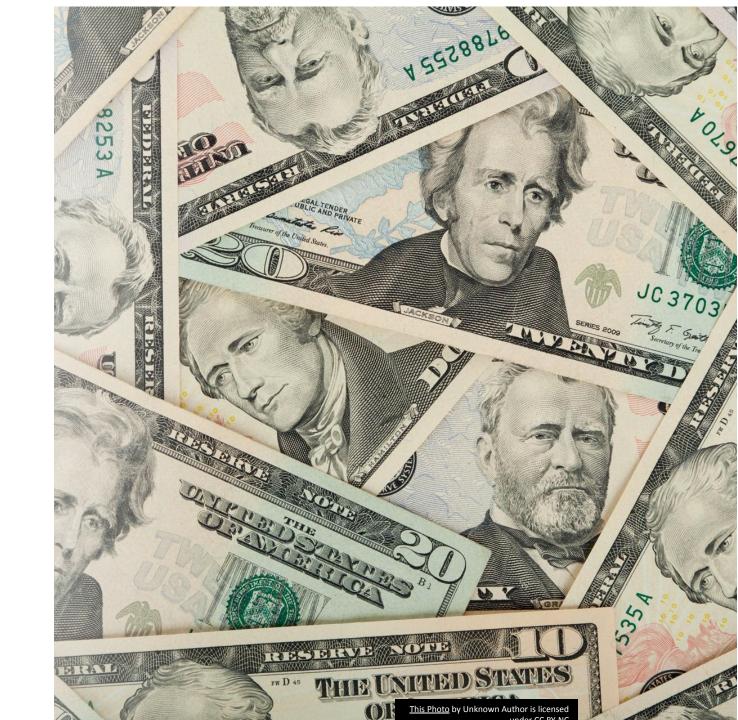


Money, money, money...

List the three functions modern money serves.







Money, money, money in a modern society

- 1. Medium of exchange: Modern money is widely accepted as a method of payment. It is accepted by businesses regularly as payment for goods and services. It also accepted by the owners of resources in payment for use of those resources, including wages. By contrast, Bitcoin or another cryptocurrency or bars of gold are not used daily to transact.
- 2. Unit of account
- 3. Store of value



Money, money, money in a modern society

- 1. Medium of exchange
- 2. Unit of account: Think of money as a measurement device to determine meaningful value in economic transactions. Prices stated in dollars and cents convey value to the general population in commercial society. By contrast, prices stated in Bitcoin, ounces of gold, or number of shells do not convey meaning or value to the person living on Main Street.
- 3. Store of value



Money, money, money in a modern society

- 1. Medium of exchange
- 2. Unit of account
- 3. Store of value: You, I, and ordinary people like us can hold on to dollar and cents (modern money) before spending it because it will typically hold its value until tomorrow, next week, or even next year. The same cannot be said about cryptocurrency. Gold and silver do have a history of holding value as assets that grow, on average, in value. However, they are not used commonly to conduct transactions tomorrow, next week, or next week, or next week, or next guarter.



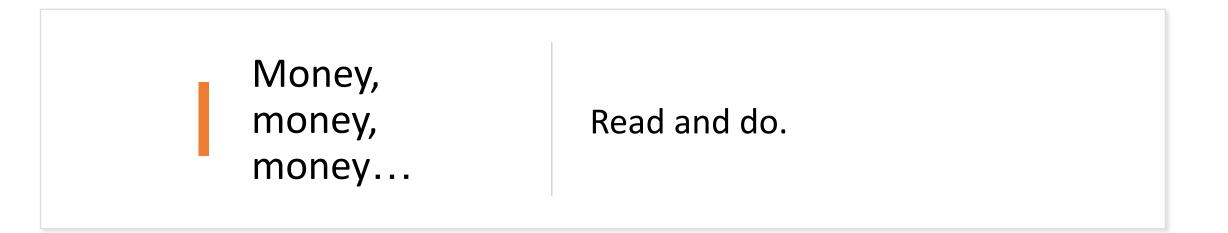
Money, money, money... **Read and do** in groups and return with a designated person to present and others to support the presenter if there are questions.

MONEY: GOLD AND SILVER?

Research the answers to the following questions. Use your own words to explain why gold and silver DO or DO NOT serve the three functions of modern money. (Do not duplicate others' work. Properly, cite your source.)

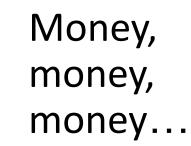
- 1. Medium of exchange
- 2. Unit of account
- 3. Store of value





Research the answers to the following questions. Use your own words to explain why gold or silver does NOT serve the three functions of modern money. (Do not duplicate others' work.)

- 1. Medium of exchange (Businesses will not accept gold or silver as payment for goods and services. Neither will workers. Since gold or silver cannot be trade what you have for what you want effortlessly, they are not considered money.)
- 2. Unit of account (Wages, interest rates, and other prices are denominated in dollar and cents, not in ounces of gold and silver. Since gold or silver cannot be used easily to evaluate the worth of the goods, services, and resources in common denominations, they cannot be used to trade what you have for what you want. They are not considered money.)
- **3. Store of value** (Presently, gold and silver do retain their value, with it increasing, on average, over time. However, modern money allows people to hold it and use it to conduct future transactions. People possessing gold or silver will have a difficult time quickly accessing it and converting it for consumption or business purposes.)



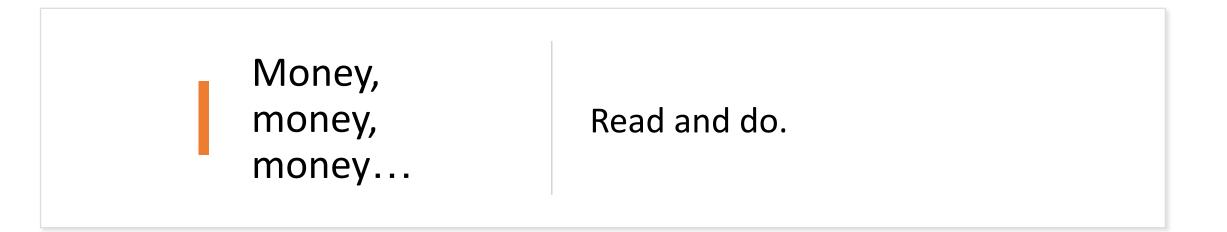
Read and do in same groups with different leaders.

MONEY: CRYTOCURRENCY?

Research the answers to the following questions. Use your own words to explain why gold and silver DO or DO NOT serve the three functions of modern money. (Do not duplicate others' work. Properly, cite your source.)

- 1. Medium of exchange
- 2. Unit of account
- 3. Store of value





Research the answers to the following questions. Use your own words to explain why gold or silver does NOT serve the three functions of modern money. (Do not duplicate others' work.)

- 1. Medium of exchange (The mass majority of businesses will not accept cryptocurrency as payment for goods and services. Neither will workers. Since cryptocurrency cannot be trade what people in the general population have for what they want effortlessly, it is not currently considered modern money.)
- 2. Unit of account (Wages, interest rates, and other prices are denominated in dollar and cents, not in cryptocurrency. Since crypto cannot be used easily to evaluate the worth of the goods, services, and resources in common denominations it is not considered money.)
- **3. Store of value** (Cryptocurrency is highly volatile. People cannot hold on to it and use it to conduct future transactions. People, on average, have a difficult time quickly accessing it and converting it for consumption or business purposes. It is not is not considered money.)



Liquidity or Assets?

In a growing economy, we are all about ASSETS and their varying degrees of LIQUIDITY.

In a world of scarcity people face trade-offs. This is core to economics. The trade-off that is most relevant for understanding financial decisions regarding assets or holding money is the trade-off between risk and return.

- Liquidity is the ease with which an asset can be converted into the economy's medium of exchange.
- Assets gets their value from contractual rights or ownership claims that are protected. Cash held as a store of value, stocks, bonds, mutual funds, and bank deposits are all are examples of financial assets. These are non-tangible assets. They will be our focus.
- These assets vary with respect to liquidity, risks, and returns. (Review based on the instructor's preferences and students' level of understanding.)

Liquidity and Money in a Modern World

Money (modern) is the most liquid asset. It can immediately be used to make purchases because the people who use it have faith in it and are confident in its ability to serve the three functions.

Are U.S. dollars **commodity money** with gold and silver backing it? Or, are they **fiat money** – money that the government says is money but does not have the backing of gold or silver?

- a. Commodity money
- b. Fiat money





Liquidity and Money in a Modern World

•Money (modern) is the most liquid asset. It can immediately be used to make purchases because the people who use it have faith in it and are confident in its ability to serve the three functions.

•Are U.S. dollars fiat money or commodity money

- Fiat money
 - There is no precious metal backing fiat money. It is money by government decree.
 - It is legal tender whose value is backed by the issuing government.
 - There is no physical good like gold or silver backing fiat money.
 - It is not commodity money.

•The most important aspects of modern currency in a growing nation are the relative **STABILITY** of money's **VALUE**, ease to **TRANSACT**, and ability to serve as a **UNIT OF ACCOUNT**.



Identify which you'd rather have to conduct a new business right now, if presented the opportunity.

\$1000 USD • Medium of exchange

- Store of value
- Unit of account



\$1000 in gold • Medium of exchange

- Store of value
- Unit of account

Time is money. So, a competitor will seize the business opportunity if you do not.

business,



if presented the option today.

\$1000 USD • Medium of exchange

- Store of value
- Unit of account

\$1000 in gold • Medium of exchange

- Store of value
- Unit of account

business,



if presented the option today.

\$1000 USD • Medium of exchange

- Store of value
- Unit of account

\$1000 in gold • Medium of exchange

- Store of value
- Unit of account

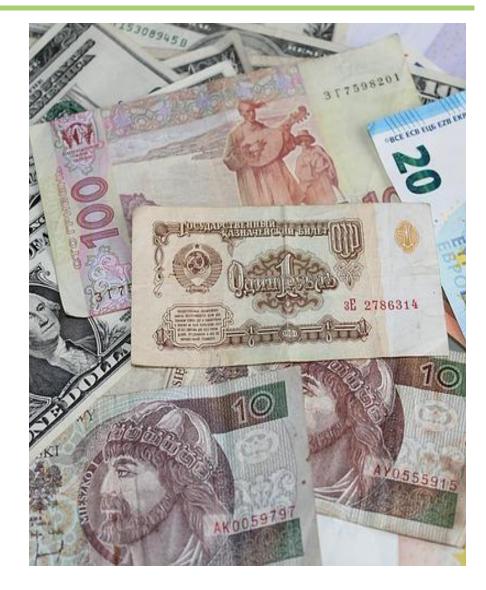


Liquidity, Money, and Assets



Money is the most **liquid asset**. It can immediately be used to conduct transactions. Assets, like gold, stocks, or bonds, require additional action.

The most important aspect of a modern-day money or currency is the ease of use and relative stability of value (even compared to gold or silver).



Liquidity and Money



- Money (modern) is the most liquid asset. It can immediately be used to make purchases.
- Savings in a depository institution is the next most liquid asset. In exchange for business interest payments, savers agree to maintain balances, limited their total number of withdrawals, and so forth.
- Saving is an essential component of building personal wealth for the individual. It helps increase net worth and build wealth when the total value of a person's assets, such as liquid assets (cash or something you can easily turn into cash), real estate, businesses, and cars, exceed any liabilities (money owed; debt).

Disposable income coming into your household is used for personal consumption (C) and savings (Sp).

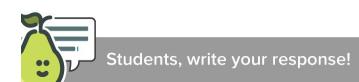
Connecting your checking deposits and

savings to others' investments.

Write this down twice.

Savings and checkable deposits can be put to work in the fractional reserve banking system through bank's demand deposits.









A country's central bank manages its supply of money.

Monetary funds readily accessible for spending in the U.S. M1 stock consists of:

- 1. currency outside the U.S. Treasury, Federal Reserve Banks, and the vaults of depository institutions;
- 2. traveler's checks of nonbank issuers;
- 3. demand deposits in checking accounts; and
- 4. other checkable deposits (OCDs)

Board of Governors of the Federal Reserve System (US), M1 Money Stock [M1], retrieved from FRED, Federal Reserve Bank of St. Louis; <u>https://fred.stlouisfed.org/series/M1</u>, July 16., 2023.



- Monetary funds readily accessible for spending.
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- 2. traveler's checks of nonbank issuers;
- 3. demand deposits; and
- 4. other checkable deposits (OCDs)

Checking accounts in banks provide the means by which banks can generate private loans.

Board of Governors of the Federal Reserve System (US), M1 Money Stock [M1], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/M1, February 15, 2021.



Compelling question: How do you contribute to demand deposit aggregates across the banking system in your personal life?





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Individuals contribute to demand deposit aggregates across the banking system through their checking accounts.

When banks have excess reserves because of deposits, they can generate loans for production expansion, investment in capital, and financing new homes. These activities contribute to economic growth and prosperity.





Monetary Aggregates: M2 (includes M1 and...)

M2 includes M1 plus:

- 1. savings deposits (which include money market deposit accounts, or MMDAs);
- small-denomination time deposits (time deposits in amounts of less than \$100,000); and
- 3. balances in retail money market mutual funds (MMMFs).

Fractional Reserve Banking: The System

The Federal Reserve needs help tracking the money created by banks. Let's review the mechanics of **fractional reserve banking**. Review the following scenario.

- 1. Sally deposits \$1000 into her checking account.
- 2. Bob, the next day, approaches the bank for a \$900 loan for a business computer.
- 3. In the fractional reserve system, the bank receiving the deposit must place a fraction in require reserves. The rest can be lent out for use for investment and consumption purposes.
- So, let's assume the Fed sets the reserve requirement at 10%. After placing \$100 in its vaults or on deposit with the Fed, the bank can lend out \$900.
- 5. That same day Bob takes the loan for his business and deposits it in another bank for later capital/computer improvement use.

	Sally	Sally & Bob
Bank Depositors	\$	\$
Sally	1000	1000
Bob		900
Joe		
Tom		
Bertha		
Ed		
Dina		
Borrowed		
money put		1.1 × 1.2 × 1.2
back into the		900
banking		
system		
Total in the banking system		1900

Cally

Fractional Reserve Banking: The System

The Federal Reserve needs help tracking the money created by banks. Let's review the mechanics of **fractional reserve banking**. Review the following scenario.

- 1. Bob has placed \$900 in his checking account at his bank.
- 2. Determine how much his bank is required by the Fed to place in its required reserves. _____
- 3. Calculate what remains for bank lending.
- Assume Joe borrows this amount for schoolbooks (an investment in his human capital). He places what he borrows in checkable deposits at his bank.
- 5. Fill A, B, and C in the table with this information.

	Sally	Sally & Bob	Sally, Bob, & Joe
Bank Depositors	\$	\$	\$
Sally	1000	1000	1000
Bob		900	900
Joe			1
Tom		201	
Bertha			
Ed			
Dina			
Borrowed	LETS	601	
money put			
back into the		900	В
banking system			
Total in the banking system		1900	C

Fractional Reserve Banking: The System

The Federal Reserve needs help tracking the money created by banks. Let's review the mechanics of **fractional reserve banking**. Review the following scenario.

- 1. Bob has placed \$900 in his checking account at his bank.
- Determine how much his bank is required by the Fed to place in its required reserves. \$90
- 3. Calculate what remains for bank lending. \$810
- Assume Joe borrows this amount for schoolbooks (an investment in his human capital). He places what he borrows in checkable deposits at his bank.
- 5. Fill A, B, and C in the table with this information.

	Sally	Sally & Bob	Sally, Bob, & Joe
Bank Depositors	\$	\$	\$
Sally	1000	1000	1000
Bob		900	900
Joe			<mark>\$810</mark>
Tom			
Bertha			
Ed			
Dina			
Borrowed		_	
money put			
back into the		900	<mark>\$810</mark>
banking			
system			
Total in the			
		1900	<mark>\$2710</mark>
banking	system	= \$810	
system			+ \$1900

Resource with full assignment for teachers: EconEdLink's <u>GRADE 9-12</u> <u>It's a Not So Wonderful Life (Inspired by the movie It's a Wonderful Life)</u>/

M2 = Currency + **Demand Deposits + Saving Deposits** plus Other Forms of M1 and M2



Using your assigned resources, describe how **fractional reserve banking** provides a system in which banks can lend out after meeting requirements to keep a fraction of customer deposits as required reserves, analyzing its potential impact on the macroeconomy's production, investment, employment, and price levels.





Fractional reserve banking provides a banks and their customers with a system that permits banks to lend out excess reserves after meeting their reserve requirements.

- If fractional reserve banking results in advanced production, sound investment, more efficient employment of resources, and lower pressures on price levels, it allows banks to create loans and expand the money supply beyond the initial deposits without inflation.
- If it encourages counterproductive activity, it also introduces the potential for a credit expansion cycle, where excessive lending can lead to economic instability and financial crises.

M3: Another important monetary aggregate watched carefully



- 1. <u>M3</u> = M2 plus + all other CDs (large time deposits, institutional money market mutual fund balances), deposits of eurodollars and repurchase agreements.
- 2. <u>Currency</u> consists of Federal Reserve notes and coin outside the U.S. Treasury and Federal Reserve Banks.
- **3.** <u>Reserve balances</u> are balances held by depository institutions in master accounts and excess balance accounts at Federal Reserve Banks.
- 4. <u>Monetary base</u> equals currency in circulation plus reserve balances.
- 5. <u>Total reserves</u> equal reserve balances plus, before April 2020, vault cash used to satisfy reserve requirements.

econlowdown[•]









The FED Monitors and Regulates the Fractional Reserve System

* Image links to the websites are available. Click on images.

* Some useful resources are listed to the right.

- Monetary Policy Econ Lowdown (Online module)
- The Federal Reserve and You Video Series
- <u>Monetary Policy The Economic Lowdown Video</u>
 <u>Series</u>
- <u>Monetary Policy The Economic Lowdown Podcast</u>
 <u>Series</u>
- The Fed's New Monetary Policy Tools



3 Main Functions and Dual Mandate

Functions of the Federal Reserve				
Monetary Policy	Payment Services	Supervision & Regulation BANK		
Discount rate Discount rate Interest on required and excess reserves Open market operations Overnight reverse repurchase agreements Reserve requirements Term deposit facility	Electronic payments Check collection & cash services Fiscal agent for the U.S. Treasury Banker's bank Funds transfers	Regulations Bank exams Stress tests Safety & soundness		

(Video link



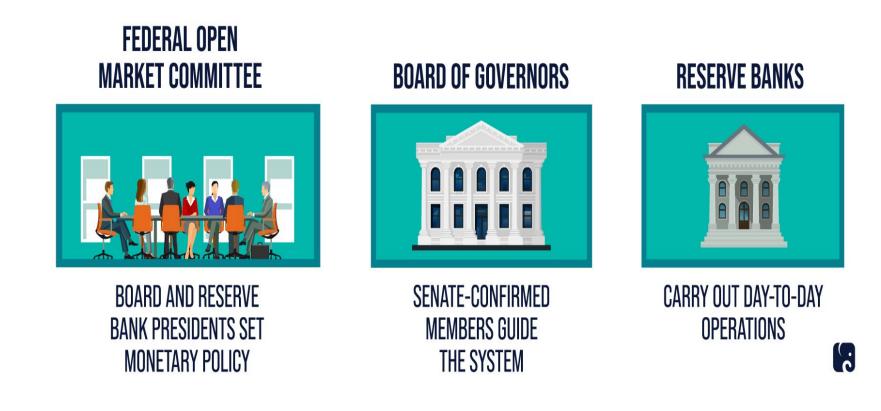
as reflected in the FOMC's Summary of Economic Projections

Essay assignment on the dual mandate.

here)

FOMC, Board of Governors, and Reserve Banks





Central Bank in the United States, Its Functions, and Dual Mandates



Your Connection to the Economy and the Fed Infographic Activity Look over the Richmond Fed's infographic, Your Connection to the Economy and the Federal Reserve. In brief statement explain how your deposits at a bank empower business looking to strategically invest.

Your Connection to the Economy and the Federal Reserve



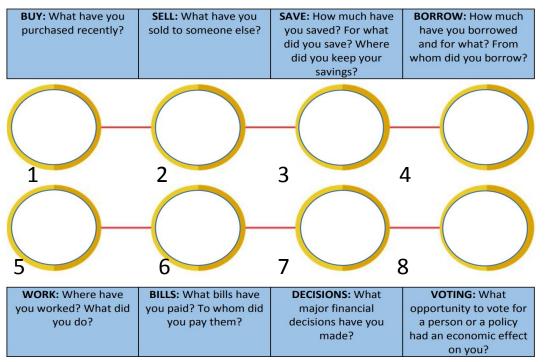
Have you ever wondered why the Federal Reserve matters to you? This infographic guides you through your role in the economy, the Federal Reserve's role in the economy, and the ways the Federal Reserve connects to your daily life.

Download Infographic 🔁 Order Printed Infographic

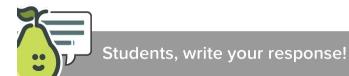
Follow-up Assignment: Establish your relationship with the Fed by completing <u>Your Connection to the Fed</u> Activity.

A. Analyzing your role in the economy

The infographic illustrates eight different roles most individuals in an economy play. In each circle below, give a personal example of how you play the role. If you do not have an example from the past, use something you plan to do in the future.

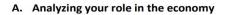




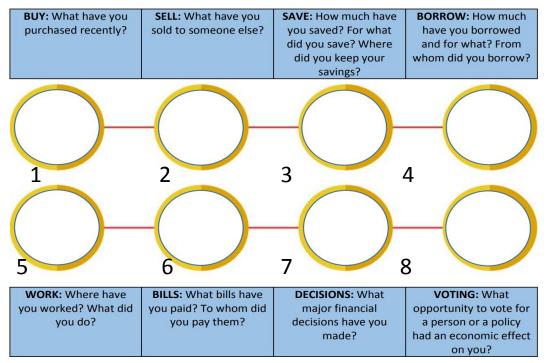


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Establish your relationship with the Fed by completing <u>Your Connection to the Fed Activity</u>.

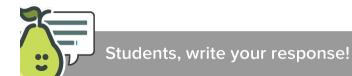


The infographic illustrates eight different roles most individuals in an economy play. In each circle below, give a personal example of how you play the role. If you do not have an example from the past, use something you plan to do in the future.









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Fractional Reserve Banking, You, and Economic Growth



- Your **checkable deposits** in banks empower these lending specialists to **make loans to borrowers**.
- **Borrowers** who use funds for strategic **investments** (with net positive returns) can help the community, region, and economy grow.
- •Fractional reserve banking boosts **Ig** and spurs **economic growth** and boosts **real income per capita** (if the investment is strategic).





Turn to Quality Resources to Teach How Banks Create Money

ABOUT

Review the Foundation for Teaching Economics <u>Activity 6: Show</u> <u>Me the Money! A Fractional Reserve Banking Simulation</u>.

- Identify the two economic agents featured in the activity.
- State their goals and describe their risks and returns.
- Link the role of each to the health of the macroeconomy.



Exit Ticket: What Remains Unclear?



- **1**.Define the three functions of money.
- 2.Define assets and order them based on degrees of liquidity.
- 3.Identify an example of money as commodity money or fiat money.
- 4.Differentiate between various money aggregates.
- 5.Present the organizational structure of the Fed.
- 6.Examine the role of monetary policy in influencing an economy.

Resources

- 1. "<u>The Federal Reserve and Monetary Policy</u>" Introduce students to the role of the Federal Reserve and its monetary policy tools. This EconEdLink resource covers topics such as interest rates, money supply, and the objectives of monetary policy.
- "<u>The Basics of Monetary Policy</u>" This online module from EconLowDown provides a comprehensive overview of monetary policy. It covers topics such as the money market, the role of central banks, and the implementation of monetary policy.
- 3. "<u>Monetary Policy and the Federal Reserve</u>" This online lesson from SERC Teaching and Learning focuses on the relationship between monetary policy and the Federal Reserve. It explores the tools and strategies used by central banks to control the money supply and stabilize the economy.
- 4. "<u>Monetary Policy and the Economy</u>" is an online lesson from EconEdLink examines the effects of monetary policy on the economy. It covers topics such as inflation, unemployment, and the business cycle. The lesson provides interactive activities, simulations, and real-world examples to help students understand the goals and challenges of conducting effective monetary policy.
- 5. <u>"Monetary Policy Tools and Goals</u>" This online module from EconLowDown explores the various tools and goals of monetary policy. It covers topics such as open market operations, reserve requirements, and the dual mandate of the Federal Reserve.
- 6. <u>The Federal Reserve and You Series</u> is an educational resource offered by EconLowDown, a platform dedicated to providing economic and financial education materials. This series aims to increase understanding and awareness of the Federal Reserve System and its role in the U.S. economy. It consists of a collection of online lessons and resources designed for educators and students. <u>Videos</u> and <u>lesson plans</u> are available.
- 7. Other resources are provided in the individual slides.

Invest In Girls





Girls, let's get smart(er) about money

Our FREE online programs are tailored to high school girls so they can learn about personal finance in a supportive environment and build confidence on money matters.

Winter offerings



Master the basics of personal finance



Learn how to invest money



Discover careers in finance

Scan to see upcoming programs

FREE TO JOIN



Or visit investgirls.org/students

Questions? Email Cristina Medina at cmedina@investgirls.org







FinEd50 is a coalition of non-profit organizations, researchers, corporate partners, and professional organizations that believes that personal finance education is a crucial tool to helping people better navigate their financial lives, make informed decisions regarding their life choices, and take more control over their own futures.

FinEd50: Financial Education for American

Currently, only 24 states require personal finance education courses in the United States. Research indicates that a quality financial education leads to improved future credit scores, declines in payday lending, student loan payment increases, student borrowing shifting to lower cost options, and overall financial well-being!

Recognizing that education is the realm of state and local leadership, FinEd50 is dedicated to achieving:

State Level Action: State-level action that guarantees equitable access for every student to a robust, high-quality personal finance course;

National Standards: Courses and educational materials that address the content outlined ir National Standards for Personal Financial Education and are culturally relevant and responses to students' lived experiences;

Innovative Funding: Innovative funding mechanisms and professional development place to support and develop a corps of high-quality teachers with access to nr professional development opportunities to teach personal finance; r Measurement: A mechanism for measuring access to courses on personal fir equitable reach of state requirements.

Learn more about FinEd50:

Suggested Presentation Deck



CEE Affiliates



A network of 200 nationwide affiliates

Provide professional development for K-12 teachers, advocate for including economics and personal finance in K-12 schools, conduct research, and forge partnerships.

https://www.councilforeconed.org/resources/local-affiliates/

Include your local affiliate page



5 7

Thank you!

Tawni Hunt Ferrarini, PhD

Professor

Plaster College of Business and Entrepreneurship Lindenwood University Saint Charles, MO

Tawni.org

Tawni.Ferrarini@gmail.com



Expanding economic education around the globe

