



TEST YOURSELF: MONEY

Money doesn't talk, it swears.

Bob Dylan

What is barter?





Barter is the direct exchange of one good for another good, rather than for money.





What are the problems with bartering?



The **problems with bartering** are that it requires:

- double coincidence of wants
- a standard unit of account
- subdivision of goods
- information
- incentives for the production of large and very costly goods

What is money?





Money is anything that serves as a medium of exchange, unit of account and store of value.

In the Middle Ages, gold was the money of choice in most European nations.



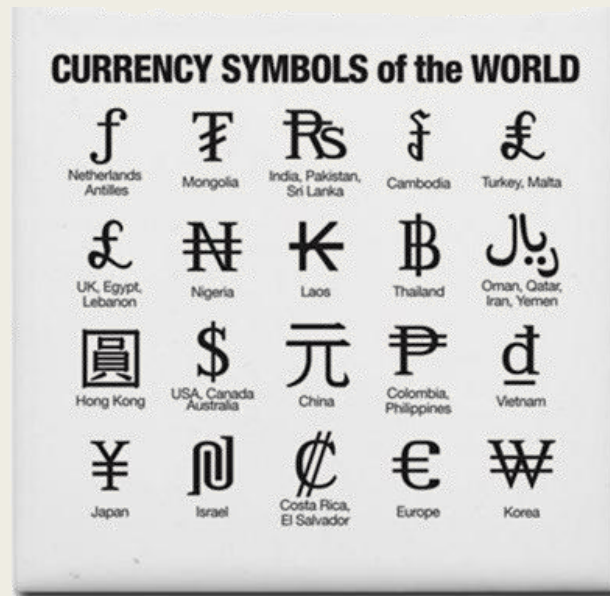
What is currency?





Currency is another name for money, including coins and paper money.

In the Middle Ages, people would use the receipts they received from goldsmiths as paper money.



What is the advantage of money?





The advantage of money is that its use *simplifies*, and therefore *increases*, market transactions.



What are the functions of money?





Money functions as a:

- **medium of exchange** - widely accepted in exchange for goods and services
- **unit of account** - provides a common measurement of the relative value of goods and services
- **store of value** - is available to spend in exchange for goods and services without any additional expense
- **standard of deferred payment**

In addition, money must be **portable**, **divisible**, **uniform** and **acceptable**.



What does it mean that money is liquid?



Liquidity means that money is available to spend in exchange for goods and services without any additional expense or action.



Are credit cards money?





No, credit cards do not act as a store of value
and are therefore *not* money.





What is the best amount of money
in circulation?



The **supply of money** must be large enough to meet ordinary transaction needs, but not be so plentiful that it becomes worthless.





What is commodity money?



Commodity money is anything that serves as money while also having *market value in other uses*. It consists of objects that have value in themselves as well as value in their use as money.

Commodities that have been used as mediums of exchange include gold, silver, copper, oil, salt, peppercorns, tea, large stones (such as Rai stones), decorated belts, shells, alcohol, cigarettes, cannabis, candy, cocoa beans, cowries and barley.



What is fiat money?





Fiat money is money *accepted by law* and not because of redeemability or intrinsic value.

Our paper money was redeemable for gold until 1934 and for silver until 1963. It is now fiat money. All our bills claim “this note is legal tender for all debts public and private.”

Legal tender means dollar bills cannot be refused as payment for a debt.





What is checkable deposits?



Checkable deposits is the total of checking account balances in financial institutions convertible to currency *on demand* by writing a check (or similar means) without advance notice.

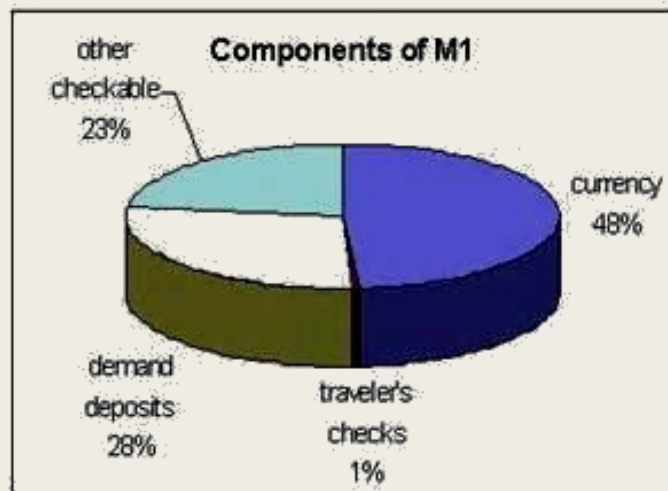
What is M1?





M1 is the narrowest definition of the money supply. It includes currency, traveler's checks and checkable deposits – the most liquid components of the money supply.

What distinguishes M1 from M2 and M3 is that M1 is *more liquid* than either.



What is M2?





M2 is the definition of the money supply that equals M1 plus *near monies*, such as savings deposits and small time deposits of less than \$100,000.



What is M3?





M3 is the definition of the money supply that equals M2 plus *large time deposits* of \$100,000 or more.



Who were the founders of our
modern banking?



Goldsmiths, people who would keep other people's gold safe for a service charge, were the founders of modern banking.

Some goldsmiths made loans and received interest.

Where do banks get money to lend?





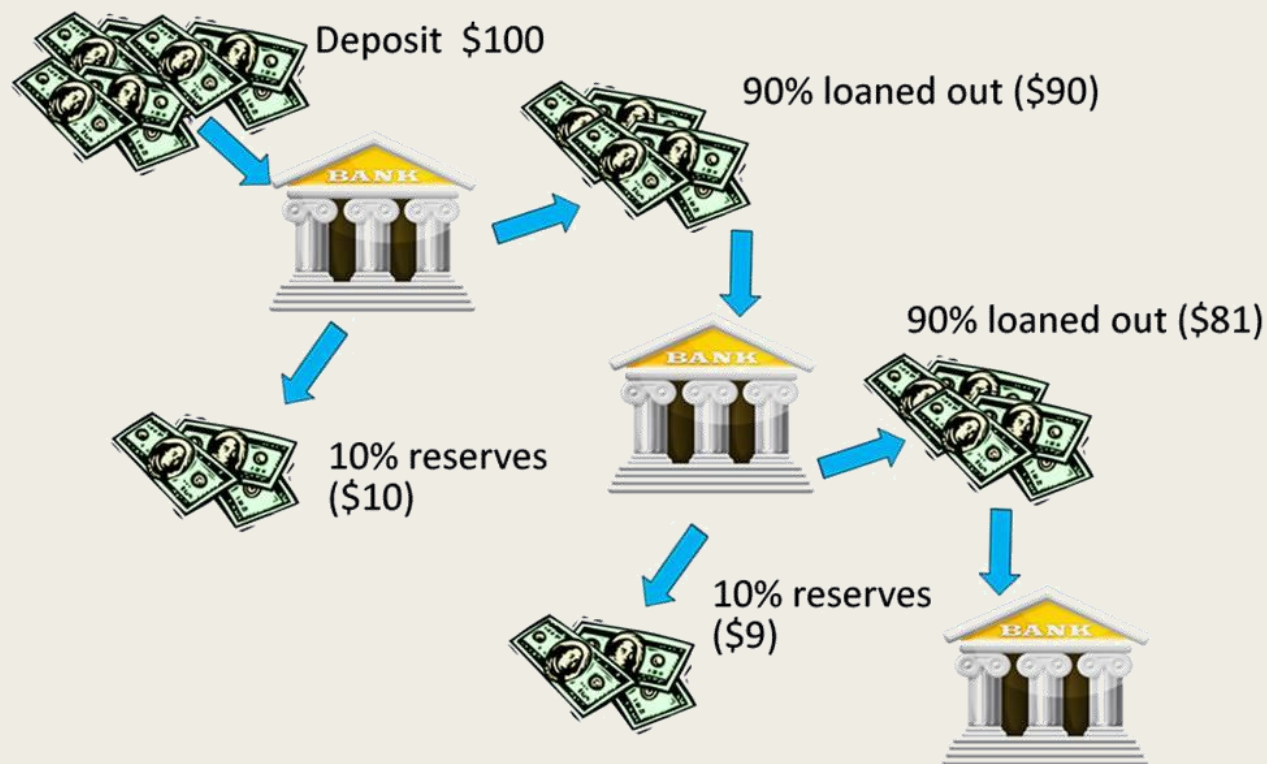
Banks get money to lend from their *depositors*.

What is fractional reserve banking?





Fractional reserve banking is a system in which banks keep a small percentage (fraction) of their deposits in reserve.





What is required reserves / required
reserve ratio?



Required reserves / a required reserve ratio is the minimum amount / percentage that the Fed requires a bank to hold in vault cash or on deposit with the Fed.

The current requirements are:

Liability Type	% of Liabilities Required	Effective as of
Net Transaction Accounts		
\$0 to \$15.2 million	0%	1-21-16
More than \$15.2 million to \$110.2 million	3%	1-21-16
More than \$110.2 million	10%	1-21-16
Non-Personal Time Deposits	0%	12-27-90
Eurocurrency liabilities	0%	12-27-90



What are excess reserves?



Excess reserves are potential loan balances held in vault cash or on deposit with the Fed in excess of required reserves.

Total Reserves equals required reserves plus excess reserves.

Banks are allowed to loan money taken from their excess reserves. Ideally, banks continue to loan excess reserves until they're gone ...
i.e. their total reserves equal their required reserves.



When will the money supply
increase?



The money supply increases when banks lend money to borrowers.

change in money supply =
(initial change in excess reserves (ER)) X
(money multiplier (m))

$$\Delta M1 = (\Delta ER) \times (m)$$



What is the money multiplier?





Because money is passed from person to person, there is a multiple effect (the **money multiplier**) on any initial money banks lend to borrowers.



What is the money multiplier equal to?



There is an *inverse* relationship between the size of the required reserve ratio (RR) and the money multiplier.

money multiplier = $1 \div \text{required reserve ratio}$

$$m = 1 \div RR$$





If the required reserve ratio is 10%,
what is the money multiplier?



$$m = 1 \div RR$$

$$10\% = 0.10$$

$$m = 1 \div 0.10$$

$$\text{money multiplier} = 10$$



If the required reserve ratio is 5%,
what is the multiplier?



$$m = 1 \div RR$$

$$5\% = 0.05$$

$$m = 1 \div 0.05$$

$$\text{money multiplier} = 20$$

[Compare this answer to the previous answer and you'll see that the smaller the reserve requirement, the larger the money multiplier.]

That's because (theoretically) the smaller the reserve requirement, the larger the amount of excess reserves available for lending.]



Can the multiplier be smaller than indicated?



Yes, the multiplier can be smaller than indicated because of cash *leakages* and the chance that banks will not use all of their excess reserves to make loans.





What is an example of leakage?

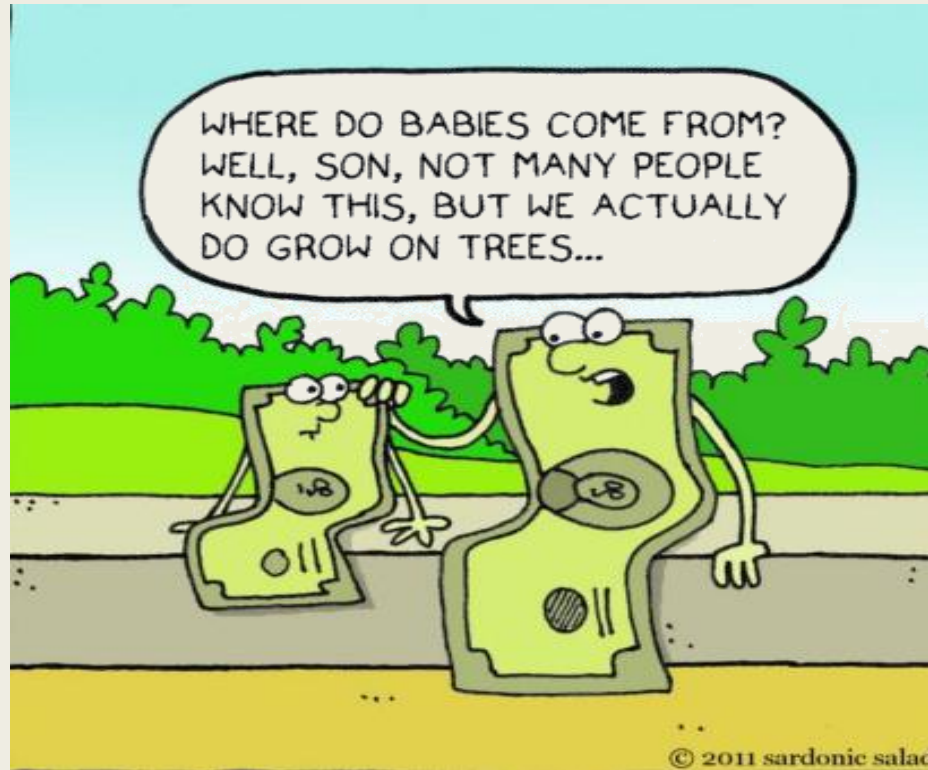


An example of **leakage** is people receiving money but deciding to save the entire amount instead of spending most of it. Because that money was not spent, it is no longer part of the money supply.

Keep in mind, though, that if the money is in a bank's saving account, the bank can put part of it back into the money supply by lending it to someone else.



How did you do?! If you didn't do as well as you'd like, review the margin notes and presentations and test yourself again.



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FINANCIAL INTERMEDIATION
AND BANKS