

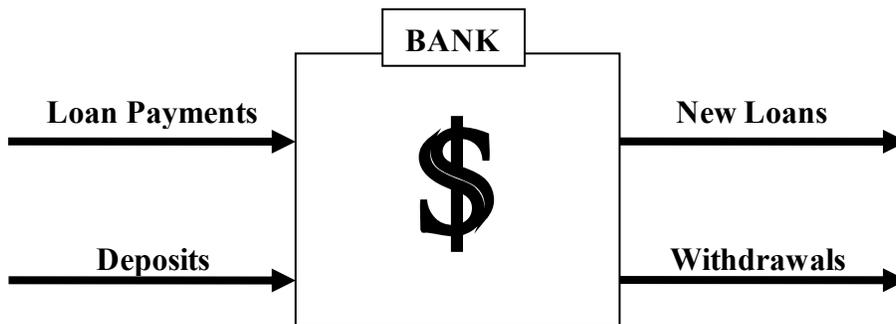
LECTURE 32: HOW BANKS WORK

- I. What good is a bank?
 - a. They keep your money safe. (Security cameras, guards, vaults.)
 - b. They make it easy to use and manage your money. (Checks, ATMs, debit cards, direct deposit.)
 - c. They pay you interest—you get paid for being able to use these nice things! Why?
- II. Fractional reserve system
 - a. Banks are *financial intermediaries*: they connect savers with borrowers. They make money by turning their liabilities (debts) into assets, such as lending out a deposit.
 - i. This system is called the *fractional reserve system*; banks keep a fraction of what's deposited and the rest is lent out. This is how they make their money—the interest they charge for loans is higher than what they pay on deposits.
 - ii. The *reserve ratio* is the portion of deposits banks hold either in their vaults or at the Federal Reserve.¹
 - b. Imagine a world without banks. If you wanted to use your savings to a loan directly to a borrower, “cutting out the middleman,” then you'd have several challenges:
 - i. How do you figure out whom to lend to? Who is trustworthy? Who is a good investment? Who is risky? How do potential borrowers even find you?
 - ii. How do you manage the loan once it goes out? How do you collect payments? How do you punish someone when they don't pay?
 - iii. How do you provide a meaningful amount of money to lend out? Many loans are for six, seven, or even eight figures—to get that kind of money, you'd have to coordinate with other people who also want to save varying amounts of money. How do you split the money? How do you agree on whom to lend to and how to manage the loan?
 - iv. Banks solve all these problems.

¹ There's also this thing called the reserve requirement, or the percent of reserves that banks have to hold onto to cover withdraws. This is a regulatory requirement but even when the reserve requirement is zero, banks still have an incentive to keep cash on hand. No one wants to put money in bank and then not be able to get it back!

c. A house of cards?

- i. So banks get money from depositors and then lend most of it out to others. But you can still stake a claim 100% of the money you deposited. How? It's not there anymore!!!
- ii. If you close your bank account, you'll be taking other people's deposits. This isn't a big deal—these individuals still have a claim to their money. People only want a fraction of the money in their checking account at any one time.
- iii. Every day, the bank brings in money from people paying back loans and from new deposits in accounts. Every day, money flows out in the form of loans and withdrawals. Running a bank is all about doing what you can to manage those inflows and outflows.



- iv. The problem occurs when people take more out than what is there. This is called a bank run and when it happens, it becomes a disaster very quickly.

d. FDIC

- i. Stopping a bank run is very hard. The more people try to take money out, the more urgent it is to withdraw money. In emergencies, the government might declare a “holiday” and close the banks, but that doesn't really solve the problem.
- ii. The Federal Deposit Insurance Corporation insures all deposits under \$250,000. If the bank fails, you'll still get your money. Just make sure your bank is a member of FDIC (it's a really shady bank if it's not).

e. Money creation

- i. If a bank gets new deposits, most of that money is lent out; that's the point of the system. Anyone who borrows money from a bank immediately gets that money in their bank account

so they can spend it. (That's why people borrow money in the first place, after all.)

- ii. When a bank makes a loan, two things happen at the same time:
 1. It creates a new asset: the loan.
 2. It creates a new liability: the demand deposit of the same size as the loan.
- iii. The liability is *new* money; it is money creation. The vast majority of money creation happens through this lending process. It might sound like magic or it came out of nowhere but keep in mind that someone took out a loan—the money creation reflects genuine demand and thus cannot be made willy-nilly.