

Banks and Banking Regulation:

The United States has a system of fractional reserve banking. I'll explain exactly what that means over the next hour, but it is important to remember that the US has *always* had a fractional reserve system of banking.

No matter how the system was structured, and no matter which level of government regulated banks, it is always a fractional reserve system. The goals of banking regulation are tied to the problems any fractional reserve system faces. This was true in the 1830s, in the 1930s, and it is still true today in 2006.

The starting point in understanding the monetary system is to understand that most money takes the form of "liabilities of the banks."

This sounds odd, but it isn't.

When you put money into your checking account, you have a deposit.

The deposit is an asset to you and a "liability" to the bank.

It is an asset to you because you can convert it into goods and services "on demand."

In the early 19th century most banks issued bank notes. These were literally paper money that was the liability of the bank. Note holders had the right to demand that the bank convert the bank note into "specie" (typically gold or silver coins).

Changes in the banking system introduced during the Civil War "National Banking Act(s)" made it unprofitable for most banks to issue notes. So they dramatically expanded the creation of deposit liabilities through a rapid expansion of checking accounts. Today, most of the money in the United States is held in the form of bank deposits.

Here is how the system works.

Start with Individual A making a \$100 deposit. The bank follows the policy of making \$80 in loans for every \$100 in deposits it receives, maintaining reserves of \$20.

"A" believes he has \$100 in the bank.

The bank makes an \$80 loan to individual B, which he deposits in his bank. He thinks he has \$80. The next bank makes a loan of \$64 on the basis of individual B's deposits.

As in the following table:

Deposits	Reserves	Loans
100	20	80
80	16	64
64	12.8	51.2
51.2	10.24	40.96
.	.	.
.	.	.
Sum		
500	100	400

The result of the initial deposit of \$100, is to increase the money supply by an additional \$400.

The “money multiplier” is the ratio of the initial deposit to the change in the total money supply, mathematically it is equal to $1/\text{reserve ratio}$, where the reserve ratio is the amount of a deposit that the bank keeps on hand.

Money Multiplier = $1/\text{RR}$

One key thing about the money multiplier in a fractional reserve system is that it works in both directions. If an individual withdraws \$100 from his bank account and puts it in his mattress, the money supply ultimately must decrease by \$500.

You can see the central problem:

The liabilities of the banking exceed the reserves of the banking system, but not the assets of the banking system.

This is what we mean by a "fractional reserve" system of banking.

It means that if all the banks depositors come in on a given day and try to withdraw their deposits, there will not be enough reserves in the bank.

What typically results is a banking panic, people frantically trying to get their deposits out of the bank. Since the money multiplier works in reverse as well, when people take their money out of the banking system, the money supply falls by a multiple of the initial withdrawal.

This plays a big role in understanding the Great Depression.

(1) The first central element in banking regulation, therefore, is regulating the reserves that the banking system holds.

Banks have an inherent financial interest in holding as few reserves as possible. Funds held on reserve do not earn any interest. So the more loans a bank makes and the fewer reserves it holds, the higher the profits.

On the other hand, banks have an inherent financial interest to increase the amount of reserves they hold. The more reserves they hold, the better able they are to withstand unexpected depositor withdrawals.

These two conflicting forces determine the actual amount of reserves that banks hold.

An important part of bank regulations, therefore, is specifying the amount of reserves that banks must hold against various types of liabilities.

In the National Banking Act of 1863, the national government created "national banks" who were able to issue "national bank notes." But those notes had to be 110% backed by federal government bonds. [The federal government was very interested in borrowing money from the banks during the war]. Because the notes were 100% backed, the national banking act ended bank panics by note holders.

The Federal Reserve Act of 1914 created the Federal Reserve system. The FED regulates the reserve ratios of member banks.

Banks are required to have minimum reserves, which the banks can hold as cash in their own vaults, or on deposit with the Federal Reserve System.

- (2) Enforcing reserve requirements requires the banking regulator to regularly audit the books of the banks. This is the second central type of bank regulation.

Bank regulators must have accurate and timely information to determine whether individual banks are meeting their reserve requirements. This leads to the creation of mechanisms whereby real time information on the state of individual banks is available to the regulators.

As a result, banks that are in difficulties are often closed by the regulators.

Enforcing reserve requirements, however, does not stop banking panics!!!!

Remember, panics occur because the reserves of the banking system are less than the outstanding liabilities. The banking system is solvent, its assets are more valuable than its liabilities, but most of the banking system's assets are loans to individuals that cannot be liquidated quickly.

What ended banking panics in the United States was the establishment of the Federal Deposit Insurance Corporation (FDIC). The FDIC insured depositors up to a maximum level (today it is \$100,000).

Since individual depositors knew they would be able to get their money from the FDIC, they did not panic when an individual bank ran out of reserves on a given day.

The only bank panics that have occurred since the 1930s in the United States occurred in places where the banks – or more accurately the savings and loans – were not adequately insured.

The problem with insuring bank depositors, however, is that the second check on the banks reserve decision, which is also its loan decision, has changed. Banks no longer have to worry about depositors suddenly running on the bank. As a result, banks want to make as many loans as possible and keep limited reserves.

They are partly constrained by the reserve requirements. But the reserve requirements only apply to reserves, they do not apply to the kind of loans banks make. As a result, banks have an incentive to make riskier loans.

So the third part of banking regulations is:

(3) Because of the incentive to make riskier loans when deposits are insured, bank regulators limit the kind of loans that banks can make.

From the 1930s to the 1990s, commercial banks were prohibited from making loans for the purchase of stock. Commercial banks were prohibited in general from participating in "investment banking."

Savings and loans were a type of bank whose loans were restricted to home mortgages. In the early 1980s these restrictions were eased, and the savings and loan crisis followed shortly thereafter. The cause of the crisis was not deregulation, it was the behavior of the S&Ls, but the two were connected.