F1ed Tools for Changing the Money Supply

Slide 1:
1. Pretend the Federal Reserve can push three buttons. Each button it presses has a different effect
2. The first button is the reserve requirement.
3. Pretend in each of these cases the money supply is equal to zero and a 1000 dollars is created out of thin air
4. Difference of the reserve requirement will change per case from 5, 10, and 20%

Slide 2:
1. Case 1: 1/.05 X $1000 = $20,000
2. Case 2: 1/.10 x $1000 = $10,000
3. Case 3: 1/.20 x $1000 = $5,000
4. Ask: What do you see?

Slide 3:
1. Answer: Money supply is the smallest when the reserve requirement is 20%
2. Smaller the reserve requirement, the bigger the change in money supply.
3. Therefore the Fed can increase or decrease the money supply by changing the reserve requirement
4. Lower reserve requirement → Money supply rises
5. Higher reserve requirement → Money supply falls

Slide 4:
1. Second thing the Fed can do to change the money supply is open market operations.
2. This simply means the fed will buy government securities by the fed.
3. Open market operations are done by the 12 member Federal Open Market Committee.

Slide 5:
1. The U.S. treasury is an agency of the U.S. government
2. Treasuries job is to collect taxes and borrow money needed to run the government

Slide 6:
1. Lets say Congress wants to spend 800 billion dollars on various federal government programs and it collected on 700 billion in taxes
2. Treasury's job to borrow 100 billion from the public to borrow this money, the treasury issues or sells treasury securities to the public.

Slide 7:
1. Treasury or government security is a piece of paper promising to pay a certain dollar amount of money in the future. It is basically an IOU
2. The fed, which is different than the treasury, might buy government securities from the

public or sell them.

Slide 8:

1. When the fed buys a government security it is performing an open market purchase
2. When they sell it, it's called an open market sale.

Slide 9:

1. Pretend you own a government security and the fed offers to purchase it from you for 10,000 dollars.
2. Where does the fed get this money? They make it.

Slide 10:

1. Fed has a checking account and you have a checking account and each account has a certain balance.
2. The fed can erase that balance and increase it at will, legally.
3. So you take your 10,000 dollar check and deposit it. There is now 10,000 dollars more in the money supply.
4. Open Market Purchase → Money supply rises

Slide 11:

1. Just like the fed can create money out of thin air, they can make it disappear too.
2. Say the government sells you a security for 10,000 and you buy it.
3. When you send that check to the fed 10,000 dollars is removed from the economy entirely
4. Open Market sale → reduces the money supply

Slide 12:

1. Fed can also change the discount rate
2. If Bank A wants to borrow 1,000,000 dollars. it can borrow it from another bank or the fed
3. If it borrows it from bank B it pays an interest rate known as the federal funds rate.
4. If it borrows from the fed, it gets charged an interest rate called the discount rate or primary credit rate

Slide 13:

1. Whether it borrows it from the fed or bank B depends on the relationship between the federal funds rate and the discount rate
2. If the federal funds rate is lower than the discount rate then bank a will borrow from bank b
3. If the discount rate is lower than the federal funds rate bank A will probably borrow from the Fed

Slide 14:

1. Whether Bank A borrows from bank B or the fed has important consequences

2. If they borrow from Bank B, no new money enters the market place. Bank B has less money and A more.
3. if they borrow from the fed then it creates new money

Slide 15:

1. Bank asks for a loan
2. Fed grants it by depositing the funds into the reserve account of the bank
3. So if Bank A has 4 million in reserves before it asks the fed for 1 million dollars. the fed simply changes the 4 million to 5 million.
4. Fed lowers the discount rate → money supply rises

Slide 16:

1. If they fed raises the discount rate higher than the federal funds rate, then banks will borrow from one another.
2. However, at some point the banks must repay the funds they borrowed from the fed in the past.
3. When they do money is taken out of the economy and the money supply drops.
4. Raise the discount rate → Money supply falls