**Class Example of “Money Supply”**

**FIN310 chapter 2**

1. Fed bought four dollar worth of Treasury securities from the Treasury by printing out four dollars. Naturally, the four green bills went to circulation. Smith got the four dollars.

$ + $ + $ +$ (Fed) 🡺 Fed Bought Treasury security for 4$. Smith got the four dollars.

Before After

$ + $ + $ +$ (Fed) Four dollar worth of TB (Fed)

 $ + $ + $ +$ (Smith)

1. Smith deposited the three dollars in bank 1’s checking account. The last one dollar in saving account.

Bank 1: Can lend out the $1 without restriction by regulation.

Can lend out 90% of the checking account by regulation (10% as reserve kept by Fed) – fractional banking system.

So bank1:

Lend out $1 in saving

Lend out $2 in checking (kept one dollar in checking as reserve to be conservative).

Result:

Smith: still $1 in saving, $3 in checking.

Bank1: lend out $1 from saving, $2 from checking, to John.

1. John saved the total of $3 in Bank2.

Bank2: Can lend out the $1 without restriction by regulation.

Can lend out 90% of the checking account by regulation (10% as reserve kept by Fed) – fractional banking system.

So bank2:

Lend out $1 in saving to Brian

Lend out $1 in checking (kept one dollar in checking as reserve to be conservative) to Brian.

Result:

John: still $1 in saving, $2 in checking.

Bank1: lend out $1 from saving, $1 from checking, to Brian.

Imagine Brian kept the two dollars in his pocket instead of depositing in banks again. So the game stops here.

1. How much money has been created?

Is it the four dollars created by Fed?

Yes. This is called Monetary base (MB) or M0. M0=4.

More broader measures of money are M1 and M2.

M1=M0+checking amount

 M0=4.

 Checking account =Smith’s $3 and John’s $2 = $5. But double counting the reserve of $2, so checking account = 5-2=3.

M1= 4+3=7.

Another way

 M1= cash + checks.

Cash = 2 (Brian has them)

Check = 3 (smith) + 2 (john) = 5.

 So M1= 2+5=7.

 M2=M1+ saving.

 M1=7

 Saving account = 1+1 =2 (Smith and John)

 So M2=7+2=9.

 So in this scenario, Fed created $4, but the money supply is $9 by M2 and $7 by M1.