Chapter 29

1. Suppose the Bank of England purchases a UK government bond from you for £10,000.

a. What is the name of the Bank's action?

Answer:
Open market operations

b. Suppose you deposit the £10,000 in First Student Bank. Show this transaction on First Student Bank's T-account.

First Student Bank

Assets	Liabilities

Answer:

First Student Bank

Assets		Liabilities	
Reserves	£10,000	Deposits	£10,000

c. Suppose the reserve requirement is 20 percent. Show First Student Bank's T-account if they loan out as much as they can.

First Student Bank

Assets	Liabilities

Answer:

First Student Bank

Assets		Liabilities	
Reserves	£2,000	Deposits	£10,000
Loans	£8,000		

d. At this point, how much money has been created from the Bank of England's policy action?

Answer:
£10,000 + £8,000 = £18,000

e.   What is the value of the money multiplier?

Answer:
1/.20 = 5

f.   After infinite rounds of depositing and lending, how much money could be created from the Bank of England's policy action?

Answer:
£10,000 x 5 = £50,000

g.   If during the rounds of depositing and lending some people keep extra currency and fail to deposit all of their receipts, will there be more or less money created from the Bank of England's policy action than you found in part (f)? Why?

Answer:
Less, because a smaller amount of each loan gets re-deposited to be available to be loaned again.

h.   If during the rounds of depositing and lending, some banks fail to loan the maximum amount of reserves allowed but instead keep excess reserves, will there be more or less money created from the Bank of England's policy action than you found in part (f)? Why?

Answer:
Less, because a smaller amount of each deposit gets loaned out to be available to be deposited again.

2.   Suppose the entire economy contains €1,000 worth of one euro notes.

a.   If people fail to deposit any of the euro notes but instead hold all €1,000 as currency, how large is the money supply? Explain.

Answer:
€1,000, because there is €1,000 of currency and €0 of deposits.

b.   If people deposit the entire €1,000 worth of euro notes in banks that are required to observe a 100 percent reserve requirement, how large is the money supply? Explain.

Answer:
€1,000, because there is now €0 of currency and €1,000 of deposits.

c.   If people deposit the entire €1,000 worth of euro notes in banks that are required to observe a 20 per cent reserve requirement, how large could the money supply become? Explain.

Answer:
€1,000 x (1/0.20) = €5,000, because €1,000 of new reserves can support €5,000 worth of deposits.

d.   In part (c), what portion of the money supply was created due to the banks? (Hint: €1,000 of euro notes already existed).

Answer:
The total potential increase is €5,000, but €1,000 was currency already in the system. Thus, an additional €4,000 was created by the banks.

e.   If people deposit the entire €1,000 worth of euro notes in banks that are required to observe a 10 per cent reserve requirement, how large could the money supply become?

Answer:
€1,000 x (1/0.10) = €10,000.

f.   Compare your answer in part (e) to part (c). Explain why they are different.

Answer:
Banks can create more money from the same amount of new reserves when reserve requirements are lower because they can lend a larger portion of each new deposit.

g.   If people deposit the entire €1,000 worth of bills in banks that are required to observe a 10 per cent reserve requirement, but they choose to hold another 10 per cent as excess reserves, how large could the money supply become?

Answer:
€1,000 x 1/(0.10+0.10) = €5,000.

h.   Compare your answer in part (c) to part (g). Are these answers the same? Why?

Answer:
Yes, they are the same. With regard to deposit creation, it doesn't matter why banks hold reserves. It only matters how much they hold.