Fun Set 4.5

Name: ____________________________________

2012 FRQ #2

The following is a simplified balance sheet for Mi Tierra Bank in the United States.

Mi Tierra Bank

Assets		Liabilities	
Required reserves	$10,000	Demand deposits	$100,000
Excess reserves	$5,000		
Loans	$85,000	Owner's equity	$ 0

(a) What is the reserve requirement?

(b) Assume that Luis withdraws $5,000 in cash from his checking account at Mi Tierra Bank.

(i) By how much will Mi Tierra Bank's reserves change based on Luis' withdrawal?

(ii) What is the initial effect of the withdrawal on the M1 measure of money supply? Explain.

(iii) As a result of the withdrawal, what is the new value of excess reserves on the balance sheet of Mi Tierra Bank based on the reserve requirement from part (a) ?

(c) Assume that the next day John withdraws from Mi Tierra Bank an amount that exceeds the bank's excess reserves. Assuming that no loans are called in, how can Mi Tierra Bank cover its required reserves?

2011 FRQ #3

3. Sewell Bank has the simplified balance sheet below.

Assets		Liabilities	
Required reserves	$2,000	Demand deposits	$10,000
Excess reserves	$0	Owner's equity	$10,000
Customer loans	$8,000		
Government securities (bonds)	$7,000		
Building and fixtures	$3,000		

(a) Based on Sewell Bank's balance sheet, calculate the required reserve ratio.

(b) Suppose that the Federal Reserve purchases $5,000 worth of bonds from Sewell Bank. What will be the change in the dollar value of each of the following immediately after the purchase?

(i) Excess reserves

(ii) Demand deposit

(c) Calculate the maximum amount that the money supply can change as a result of the $5,000 purchase of bonds by the Federal Reserve.

(d) When the Federal Reserve purchases bonds, what will happen to the price of bonds in the open market? Explain.

(e) Suppose that instead of the purchase of bonds by the Federal Reserve, an individual deposits $5,000 in cash into her checking (demand deposit) account. What is the immediate effect of the cash deposit on the M1 measure of the money supply?

2012 FRQ #2 Rubric

5 points (1 + 3 + 1)

(a) 1 point:
- One point is earned for calculating the correct reserve requirement of 10 percent ($10,000/$100,000).

(b) 3 points:
- One point is earned for stating that total bank reserves will decrease by $5,000.
- One point is earned for stating that the $5,000 withdrawal has no effect on the M1 measure of the money supply because it only changes the composition of M1 between cash and demand deposits.
- One point is earned for stating that the new value of the excess reserves is $500.

(c) 1 point:
- One point is earned for stating that the bank can borrow from the Federal Reserve or from another bank.

2011 FRQ #3

6 points (1 + 2 + 1 + 1+1)

(a) 1 point:
- One point is earned for calculating the correct required reserve ratio of 0.2.

(b) 2 points:
- One point is earned for stating that the excess reserves will increase by $5,000.
- One point is earned for stating that the change in demand deposits is zero.

(c) 1 point:
- One point is earned for calculating the increase in the money supply: $5 \times \$5{,}000 = \$25{,}000$.

(d) 1 point:
- One point is earned for stating that the price of bonds will increase because the purchase of bonds increases the money supply, which decreases the interest rate.

(e) 1 point:
- One point is earned for stating that the cash deposit will not immediately change the money supply.