

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.
- By how much will Mi Tierra Bank's reserves change based on Luis' withdrawal?
 - What is the initial effect of the withdrawal on the M1 measure of money supply? Explain.
 - 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?

A) $\frac{\text{required reserves}}{\text{liabilities}} = \frac{10,000}{100,000} = 0.1$
 reserve requirement is 10%

B) i) Their reserves will lower by \$5,000

ii) M1 will not change because cash money and checking deposits both make up M1. The money is staying within the M1 measure of money supply.

iii) \$500 their reserves lowered to \$10,000, but their liabilities also declined to \$95,000. So now they only require \$9,500 reserves

C) Mi Terra can cover its required reserves by discounting, or borrowing money from the Federal Reserve. The Fed always lets banks borrow from them in case they don't have enough to cover their required reserves.