UNIVERSITY OF THE PEOPLE

BUS 1104-01 Macroeconomics- AY2024-T1

Written Assignment Unit 5

Instructor: Alka Srivastava

The deposit multiplier is determined by the reserve requirement ratio. With a required reserve ratio of 10%, the deposit multiplier is calculated as 1/0.10 = 10. This means every $1 decrease in reserves can potentially decrease deposits by $10 and the money supply by $10.

When I withdraw $25,000 from Comerica Bank, here is how it impacts the banking system's reserves, deposits, and money supply:

First, Comerica's reserves fell by my $25,000 withdrawal. To maintain a 10% reserve ratio, they need reserves equal to 0.10 x deposits. Originally let's assume they had $100,000 in reserves supporting $1,000,000 in deposits (a 10% ratio). After my withdrawal, their reserves are $75,000 while their deposits are $975,000.

With reserves now lower than the required 10% of deposits, Comerica needs to restore their reserves. They will do this by calling in loans or selling securities, reducing funds available to borrowers or securities holders. These funds end up transferred and deposited in other banks. For example, Comerica calls in a $25,000 loan from Ford, who pays it from his deposit account at Chase Bank. This shifts the $25,000 deposit from Chase to Comerica, restoring Comerica's reserves to the 10% level.

However, now Chase's deposits have decreased by $25,000. Chase will similarly need to call in loans or sell securities to maintain its 10% reserve ratio. The $25,000 ends up cycling through the banking system until eventually $250,000 in total bank deposits are extinguished. This occurs because the $25,000 initial drop in reserves truncates deposits by the deposit multiplier of 10.

In terms of the money supply, defined as deposits + currency, my $25,000 withdrawal removed that much currency from the system. Additionally, the $250,000 reduction in bank

deposits further shrinks the money supply by $250,000. So, the total decrease is $25,000 + $250,000 = $275,000.

In essence, my single transaction triggered a domino effect that contracted deposits and the money supply far beyond my initial withdrawal. This illustrates the power and potential economic impact of money creation through the banking system. My actions affect not just my account but the entire monetary base.

Reference:

Greenlaw, S., & Shapiro, D. (2017). Principals of macroeconomics 2e. Openstax. Licensed under CC-BY 4.0. https://openstax.org/details/books/principles-macroeconomics-2e

Word count: 348