EC303: Money and Banking

In-class exercise 11

Spring 2022

Exercise 1

Using the t-accounts of the first national bank and the second national bank given in this chapter, describe what happens when Gray writes a $50 check on her account at the First National Bank to pay her friend Sophia, who in turn deposits the check in his account at the Second National Bank.

Exercise 2

If the bank you own has no excess reserves and a sound customer comes in asking for a loan, should you automatically turn the customer down, explaining that you don't have any excess reserves to lend out? Why or why not? What options are available for you to provide the funds your customer needs?

Exercise 3

If a bank doubles the amount of its capital and ROA stays constant, what will happen to ROE? Hint: ROE=ROA $\times$ EM.

Exercise 4

Harbert Bank holds no excess reserves but complies with the reserve requirement. The required reserves ratio is 8%, and reserves are currently $25 million

1. Calculate the checkable deposits amount.
2. If there is a \$4m deposit outflow, what is the reserve shortage?
3. Assume federal funds rate is 0.3%. If the bank borrows from the Federal funds market to eliminate the reserves shortfall, what is the interest cost?

Exercise 5

Suppose you are the manager of a bank whose \$100 million of assets have an average duration of four years and whose \$90 million of liabilities have an average duration of six years. Conduct a duration analysis for the bank, and show what will happen to the net worth of the bank if interest rates rise by 2 percentage points. What actions could you take to reduce the bank's interest-rate risk?

Exercise 6

Suppose you are the manager of a bank that has \$15 million of fixed-rate assets, \$30 million of rate-sensitive assets, \$25 million of fixed-rate liabilities, and \$20 million of rate-sensitive liabilities. Conduct a gap analysis for the bank, and show what will happen to bank profits if interest rates rise by 5 percentage points. What actions could you take to reduce the bank's interest-rate risk?