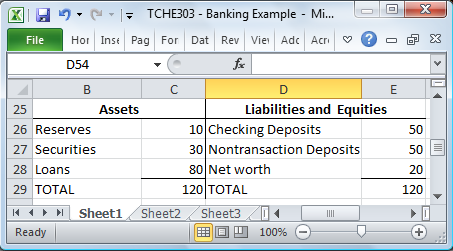
**TCHE 303 – MONEY AND BANKING**

**TUTORIAL ASSIGNMENT 6**

1. Suppose Annie’s Bank starts with the balance sheet as shown here. Show how the balance sheet changes in each of the following scenarios.

* The bank issues $20 of new stock and uses the proceeds to make loans. **Issuing $20 new stock -> equity +20; make loans -> loans in assets +20**
* Britt moves $25 from his savings account to his checking account. **Saving account -25, checking account +25, Liabilities same**
* The bank lends $5 of reserves to another bank in the federal funds market. **Reserve -5, equity -5**

1. Suppose again that Annie’s Bank starts with the balance sheet as above. Then the bank sells $10 of loans for $10 of cash.

* What is the immediate effect on the balance sheet? **Reserves +10, Loans -10**
* After the loan sale, what additional transactions is the bank likely to make? **Buy securities, make new loans** What will the balance sheet look like after these transactions? **Securities +, Reserve -; Loans +, Reserve -**

TABLE 9.4 Liquidity Risk at Melvins Bank
(B) Balance Sheet After $50 Withdrawal
(A) Initial Balance Sheet
Assets
Liabilities

1. Suppose the central bank raises short term interest rates, an action that is likely to reduce aggregate output temporarily. Describe the various effects on the profits of commercial banks. **CN raises short-term interest rate ->com.bank charges higher int rate on loans (-> lower demand for loans to invest) -> higher interest income; -> interest expense increases because when short-term interest rates rise, banks may need to pay higher interest rates on their liabilities, such as deposits or short-term borrowings 🡺 reduce bank’s profit**
2. Why has the development of overnight loan markets made it more likely that banks will hold fewer excess reserves? **Vay qua đêm -> nhanh, low cost**
3. 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? **No. You may lose that customer’s business forever, which is extremely costly. Instead, you may go out and borrow another banks, or the Fed to obtain fund to make loans. Or else, you can sell negotiable CDs or securities**
4. If a bank finds that its ROE is too low because it has too much bank capital, what can it do to raise its ROE? **Lower capital buy bank’s stock, pay higher dividends, issue CDs, purchase securities.**
5. If a bank is falling short of meeting its capital requirements by $1 million, what three things can it do to rectify the situation? **Raise capital by issuing common stock, reduce dividends payment, make fewer loans, shrink the size of the bank**
6. Why do equity holders care more about ROE than about ROA? **Because ROE, the return on equity, tells stock holders how much they are earning on their equity investment, while ROA, the return on assets, only provides an indication how well the bank’s assets are being managed**
7. If a bank doubles the amount of its capital and ROA stays constant, what will happen to ROE? **ROE will fall in half, lower capital, higher return on equity of stockholders**
8. What are the benefits and costs for a bank when it decides to increase the amount of its bank capital? **The benefit is that the bank now has a larger cushion of bank capital and so is less likely to go broke if there are losses on its loans or other assets. The cost is that for the same ROA, it will have a lower ROE, return on equity**
9. A bank almost always insists that the firms it lends to keep compensating balances at the bank. Why? **A business getting a $10 million loan may be required to keep compensating balances of at least $1 million in its checking account at the bank. This $1 million in compensating balances can then be taken by the bank to make up some of the losses on the loan if the borrower defaults.**
10. ‘Because diversification is a desirable strategy for avoiding risk, it never makes sense for a bank to specialize in making specific types of loans.’ Is this statement true, false, or uncertain? Explain your answer. **False. While diversification is an established strategy for mitigating risk, evidence shows that it makes sense for banks to specialize in specific types of loans.**
11. Suppose that you are the manager of a bank whose €100 billion of assets have an average duration of four years and whose €90 billion 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? **Shorten the duration on bank’s assets, lengthen it on bank’s liabilities, purchase financial derivatives**
12. Suppose that 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? **Change in profit = (30m-20m)\*5%=500,000**
13. If lines of credit and other off-balance-sheet activities do not, by definition, appear on the bank’s balance sheet, how can they influence the level of liquidity risk to which the bank is exposed**? If borrowers draw on their lines of credit during periods of financial stress or if the bank is required to fulfil other contingent liquidity commitments, it can strain the bank's liquidity position.**
14. A bank with a two-year investment horizon has issued a one-year certificate of deposit for $50 million at an interest rate of 2 percent. With the proceeds, the bank has purchased a two-year Treasury note that pays 4 percent interest. What risk does the bank face in entering into these transactions? What would happen if all interest rates were to rise by 1 percent? Banks hold more liquid assets than do most businesses. Explain why. **The bank faces the risk that the short-term interest rate will rise before the second year, increasing the amount of interest the bank has to pay on the CD, but leaving the interest income that the bank receives from the Treasury note unchanged.**
15. The required reserve ratio is 10%. Bank One has the following balance sheet:

Assets Liabilities

Reserves $75 m Deposits $500 m

Loans $525 m Bank capital $100 m

1. How much excess reserves is the bank currently holding? **$25m**
2. Give one reason why this bank may choose to hold excess reserves? **to ensure liquidity and meet unexpected cash demands**
3. Suppose the bank suffers a deposit outflow of $50 m. Show how the balance sheet changes. **R-50, D-50**
4. What actions must the bank take to stay afloat? **Borrow to increase reserve**
5. If the return on assets is 2%, find the return on equity for this bank using the initial balance sheet. **2%\*(600/100)=12%**
6. Give examples of off-balance sheet activities of a bank. **Loans sales……..**
7. Give one or more examples of financial innovations used by banks and savings institutions over the last 20 years.
8. If the president of a bank told you that the bank was so well run that it has never had to call in loans, sell securities, or borrow as a result of a deposit outflow, would you be willing to buy stock in that bank? Why or why not? **No, because the bank president is not managing the bank well. The fact that the bank has never incurred costs as a result of a deposit outflow means that the bank is holding a lot of reserves that do not earn any interest. Thus, the bank’s profits are low, and stock in the bank is not a good investment.**
9. “Bank managers should always seek the highest return possible on their assets.” Is this statement true, false, or uncertain? Explain your answer. **False, Because a bank manager should make thorough knowledge about risk and expected return of the asset.**
10. Why has non-interest income been growing as a source of bank operating income?