

Econ 330: Money and Banking

Fall 2014, Handout 4

Chapter 10 : Banking and the Management of Financial Institutions

1. Banking operation can be best summarized by looking at a simplified version of Balance sheet called **T-Account**.

$$\text{Total Assets} = \text{Total Liabilities} + \text{Capital}$$

(a) Assets :

- i. Reserves
 - Total Reserve = Required Reserve + Excess Reserve
 - Total Reserve = Deposits at the Federal Reserve + Vault Cash
 - Required Reserve = Checkable Deposits \times Required Reserve Ratio
- ii. Cash Items in Process of collection
- iii. Deposits at Other Banks
- iv. Securities
- v. Loans
- vi. Other Assets

(b) Liabilities :

- i. Checkable Deposits
- ii. Nontransaction Deposits
- iii. Borrowings
- iv. Bank Capital

2. What banks have to do is to manage their businesses to gain the highest profit. Generally, bank management has centered on the following four aspects.

- (a) **Liquidity Management:** The acquisition of sufficiently liquid assets to meet the bank's obligations to depositors.

Excess reserves are insurance against the costs associated with deposit outflows. When a bank holds insufficient excess reserves, it may

- i. Borrow from other banks or corporations
- ii. Sell securities
- iii. Borrow from the Fed
- iv. Call in or sell off loans

- (b) **Asset Management**¹: The bank manager must pursue an acceptably low level of risk by acquiring assets that have low rate of default and by diversifying asset holdings.
- (c) **Liability Management**: Acquiring funds at low cost.
- (d) **Capital Adequacy Management**: The manager must decide the amount of capital the bank should maintain and then acquire the needed capital.

While capital helps banks to prevent bank failure, it affects returns for the owners of banks. A minimum amount of bank capital is required by regulatory authorities.

- i. The tradeoff between safety and returns to equity holders
- ii. Safety: Banks capital is a cushion against a drop in value of its assets, which could force the bank into insolvency.
- iii. Returns

3. Measures of bank profitability

(a) Return On Assets (ROA)

$$ROA = \frac{\text{Net profit after taxes}}{\text{Assets}}$$

(b) Return On Equity (ROE)

$$ROE = \frac{\text{Net profit after taxes}}{\text{Equity Capital}}$$

(c) Equity Multiplier(EM)

$$EM = \frac{\text{Assets}}{\text{Equity Capital}}$$

Note: $ROE = ROA \times EM$

Practice questions:

[Q1] (Spring 2010) Suppose that from a new checkable deposit, First National Bank holds two million dollars in vault cash, eight million dollars on deposit with the Federal Reserve, and one million dollars in required reserves. Given this information, we can say First National Bank faces a required reserve ratio of _____ percent.

- A) ten
- B) twenty
- C) eighty
- D) ninety

¹Next week we will focus on how banks manage credit risk and interest rate risk

[Q2](Spring 2010) Which of the following statements are true?

- A) A bank's balance sheet shows that total assets equal total liabilities plus equity capital.
- B) A bank's liabilities are its uses of funds.
- C) A bank's assets are its sources of funds.
- D) A bank's balance sheet indicates whether or not the bank is profitable.

[Q3] (Spring 2010) Total Reserves minus vault cash equals

- A) bank deposits with the Fed.
- B) excess reserves.
- C) currency in circulation.
- D) required reserves.

[Q4] (Spring 2010) If the required reserve ratio is equal to 10 percent, a single bank can increase its loans up to a maximum amount equal to

- A) its excess reserves.
- B) its total reserves.
- C) 10 times its excess reserves.
- D) 10 percent of its excess reserves.

[Q5] If, after a deposit outflow, a bank has a reserve deficiency of \$ 3 million, it can meet its reserve requirements by

- A) reducing deposits by \$3 million.
- B) increasing loans by \$3 million.
- C) selling \$3 million of securities.
- D) repaying its discount loans from the Fed.

[Q6] If a bank has \$200,000 of checkable deposits, a required reserve ratio of 20 percent, and it holds \$80,000 in reserves, then the maximum deposit outflow it can sustain without altering its balance sheet is

- A) \$50,000.
- B) \$40,000.
- C) \$30,000.
- D) \$25,000.

[Q7] When Jane Brown writes a \$100 check to her nephew (who lives in another state), Ms. Brown's bank _____ assets of \$100 and _____ liabilities of \$100.

- A) gains; gains
- B) gains; loses
- C) loses; gains
- D) loses; loses

[Q8] Because of an expected rise in interest rates in the future, a banker will likely
A) make long-term rather than short-term loans.
B) buy short-term rather than long-term bonds.
C) buy long-term rather than short-term bonds.
D) make either short or long-term loans; expectations of future interest rates are irrelevant.

[Q9] (Fall 2010) _____ may antagonize customers and thus can be a very costly way of acquiring funds to meet an unexpected deposit outflow.

- A) Selling securities
- B) Calling in loans
- C) Selling negotiable CDs
- D) Selling loans

[Q10] In general, banks would prefer to meet deposit outflows by _____ rather than _____.

- A) selling loans; selling securities
- B) selling loans; borrowing from the Fed
- C) borrowing from the Fed; selling loans
- D) calling in loans; selling securities