

# Banks and other financial institutions

Finance



Problem The following three one-year " discount loans are available to you:

Loan A: \$120, 000 at a 7% discount rate  
Loan B: \$110, 000 at a 6% discount rate

Loan C: \$130, 000 at a 6. 5% discount rate

- determine the dollar amount of interest you would pay on each loan and indicate the amount of net proceeds each loan would provide. Which loan would provide you with the most upfront money when the loan takes place?
- Calculate the percent interest rate or effective cost of each loan. Which one has the lowest cost?

a, amount of interest for Loan A is \$ 8, 400

$$\text{interest} = 120, 000 \times 7\% = 8, 400$$

$$\text{net proceed of loanA} = 120, 000 \text{ minus } 8, 400 = \$ 111, 600$$

amount of interest for Loan B is \$ 6600

$$\text{interest} = 110, 000 \times 6\% = \$ 6, 600$$

$$\text{net proceed of loanB} = 110, 000 \text{ minus } 6, 600 = \$ 103, 400$$

Amount of interest for Loan C is \$ 8, 450

$$\text{interest} = 130, 000 \times 6. 5\% = \$ 8, 450$$

$$\text{net proceed of loanC} = 130, 000 \text{ minus } 8, 450 = \$ 121, 550$$

Loan C provides the largest net proceed of \$ 121, 550

b, Effective rate of Loan A is 7. 53% , computed as follows 8400 divided by 111600 x 100

Effective rate of Loan B is 6. 38% , computed as follows 6, 600 divided by 103400 x 100

Effective rate of Loan C is 6. 95% , computed as follows 8, 450 divided by 121550 x 100

Loan B has lowest cost at 6. 38%.

## Problem 2.

ATM Banc has the following liabilities and equity categories:

deposits \$9 million

other liabilities \$4 million

owners capital ?

total liabilities ?

a. what would be the banks total liabilities and capital if owners capital were half the size of other liabilities?

b. if total liabilities and capital were \$15. 5 million, what would be the amount of the owners capital?

c. if total liabilities and capital were \$14 million, and \$1 million of deposits were withdrawn from the bank, what would be the amount of the owners capital?

a. What would be the bank's total liabilities and capital if owners' capital were half the size of other liabilities?

Deposits – 9 million

Other Liabilities – 4 million

Owners' Capital - 2 million

TOTAL LIABILITIES AND CAPITAL = 15 Million

b. If total liabilities and capital were \$15. 5 million, what would be the amount of the owners' capital?

Deposits – 9 million

Other Liabilities – 4 million

OWNERS CAPITAL – 2. 5 million

Total Liabilities and Capital – 15. 5 Million

c. If the total liabilities and capital were \$14 million, and \$1 million of

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deposits were withdrawn from the bank, what would be the amount of the owners' capital?

Deposits - 9 million - 1 million = 8 million

Other liabilities = 4 million

OWNERS CAPITAL - 2 Million

Total Liabilities and Capital - 14 million

### PROBLEM 3

Rearrange the following accounts to construct a bank balance sheet for second national bank. What are the total amounts that make the banks balance sheet balance?

demand deposits: \$20 million government series owned: \$7 million

cash assets: \$5 million bank fixed assets: \$14 million

loans secured by real estate: \$30 million time and savings deposits: \$40 million

commercial & industrial loans: \$18 million federal funds purchased: \$6 million

owners capital: \$6 million other long-term liabilities: \$2 million

### 3 . Second National Bank

#### Balance Sheet

as of \_\_\_\_ date

(figures in million\$)

#### Assets:

Cash assets: 5

Government Securities owned: 7

Loan secured by real estate: 30

Commercial industrial loans : 18

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Bank fixed assets: 14

Total Assets 74

Liabilities

Federal funds purchased: 6

Demand deposits : 20

Time and saving depos: 40

Other long term liabilities: 2

Owners capital: 6

Total Liabilities and Equity 74

Problem 4.

A new bank has vault cash of \$1 million and \$5 million in deposits held at its federal reserve district bank.

a. if the required reserves ratio is 8%, what dollar amount of deposits can the bank have?

b. if the bank holds \$65 million in deposits and currently holds bank reserves such that excess reserves are zero, what required reserves ratio is implied?

a. If the required reserves ratio is 8 percent, what dollar amount of deposits can the bank have =  $6 \times 8\% = 0.48$  million answer

b. If the bank holds \$65 million in deposits and currently holds bank reserves such that excess reserves are zero, what required reserves ratio is implied =  $6/65 \times 100 = 9.23\%$

Problem 5.

A bank has \$10 million in vault cash and \$110 million in deposits. If total bank reserves were \$15 million with \$2 million consider to be excess reserves, what required reserves ratio is implied?

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$$\text{reserve ratio} = 2/15 \times 100 = 13.33 \%$$

Problem #6.

The Friendly National Bank holds \$50 million in reserves at its Federal Reserve District Bank. The required reserves ratio is 12 percent.

- a. if the bank has \$600 million in deposits, what amount of vault cash would be needed for the bank to be in compliance with the required reserves ratio?
- b. if the bank holds \$10 million in value cash, determine the required reserves ratio that would be needed for the bank to avoid a reserves deficit.
- c. if the Friendly National Bank experiences a required reserves deficit, what actions can it take to be in compliance with the existing required reserves ratios?

a) From Required reserve ratio,

$$\text{Required reserve ratio} = \text{Required reserves} / \text{Deposits}$$

$$0.12 = \text{Required reserves} / \$600,000,000$$

$$\text{Required reserves} = \$72,000,000$$

But we know that,

$$\text{Reserve deficit} = \text{Total reserves} - \text{required reserves}$$

$$= \$50,000,000 - \$72,000,000$$

$$= \$22,000,000$$

Therefore, there is a deficit of \$22,000,000 in the bank reserves which the bank has to cover. The amount of vault cash is \$22,000,000

b) Here the vault cash is \$10,000,000 which is the reserve requirement.

Computing the required reserve ratio:

$$\text{Required reserve ratio} = \text{Required reserves} / \text{Deposits}$$

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$$= \$10,000,000 / \$600,000,000$$

$$= 0.0167 \text{ or } 1.67\%$$

c. sell some of its loans to another bank, sell assets, take a loan from another bank.

#### PROBLEM 7

My current bank is Citi Bank and its website is online. [citibank.com/US/](http://citibank.com/US/) and another financial institution that I have picked is insurance company American International Group (AIG) and its website is [www.aigcorporate.com](http://www.aigcorporate.com).

The services that this bank offers is Banking, Credit cards, Lending, Investing, Business, Rewards and Offers and other services.

The main service of the bank is to accept deposits of the customers and make investments from them in order to earn profit. It also has savings accounts and pays interest on these accounts.

The bank also provides credit card services at different rates to different customer needs.

Additionally the Citi bank also gives out loans to customers who want to invest the money in something and earns interest on them.

Moreover the services also include investing the money in different mutual funds and other securities and different stocks, corporate financing is available for companies, leasing and different saving schemes are also provided.

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The insurance company AIG's main services include General Insurance which include insurance for fire, marine, motor vehicles and miscellaneous things. They also provide health insurance, claim payments.

The bank and insurance company are similar in the form that both provide customer benefits in terms of securing their money where banks can be used for saving money while the insurance company can be used to make health treatments secured, property and other valuable items secured through insurance. Both types of financial institution are also huge benefit to the economy as the world economy relies heavily on these institutions.

Both firms differ in terms of the different types of services that they offer such as banks can be used for saving money and then earning interest on them whereas in a financial institution lease payments are made to insure something.

Financial institutions of today are huge and are everywhere and the world economy cannot survive without them as most of the money is given out through them and the business rely on these firms hugely.

The savings and loans crisis could have been avoided if there was not overregulation in the industry by the government. The high regulation prevented different firms from experimenting with different ways to adapt to changing market trends.

Neither owners nor depositors had anything to lose, and both groups encouraged escalating risk-taking as a result. The disaster could have been avoided if there was more consideration on the part of the owners of these institutions.