

Primer of U.S. Accounting Rules

Federal Reserve Bank of New York

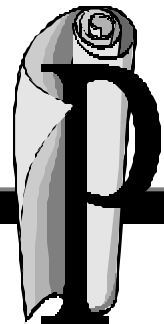
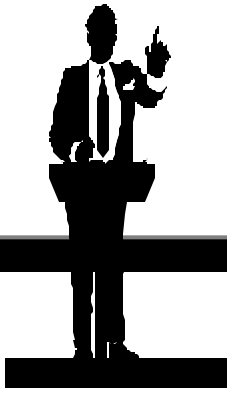
Central Banking Seminar
Preparatory Workshop in Financial Markets,
Instruments and Institutions

Kenneth Lamar
October 17, 2002

Agenda

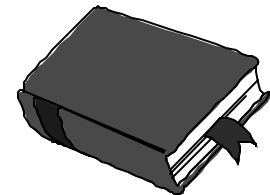
- Summary U.S. Accounting Principles
- Components of Financial Statements
- Overview of Assets, Liabilities and Equity

Introduction to U.S. Generally Accepted Accounting Principles (GAAP) and Financial Accounting



Accounting Principles

- Development of GAAP
- Understanding GAAP
- Accrual vs Cash Basis
- Balance Sheet
- Income Statement
- Statement of Retained Earnings

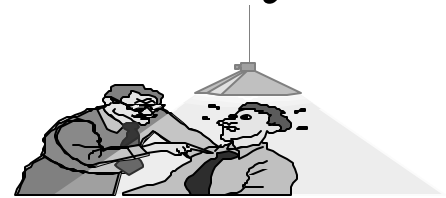


Understanding GAAP

- The purpose of accounting is to provide useful information to make investment, credit and similar decisions
- A FASB project called the **conceptual framework** defines several accounting terms that should be understood by financial statement users
- The purpose of the framework is to describe the characteristics that make accounting information useful for decisions

Business Entity Principle

- Requires every business to be accounted for separately and distinctly from its owners
- Also requires us to account separately for other entities that might be controlled by the same owners



Going-Concern Principle

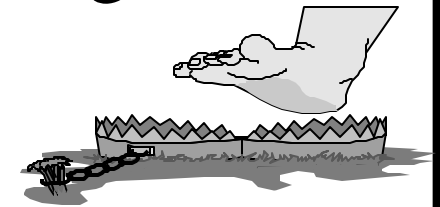
- Requires financial statements to reflect the assumption that the business will continue operating instead of being closed or sold
- The **going-concern** principle leads to reporting relevant information because many decisions about a business are made with expectation that it will continue to exist in the future

Revenue Recognition Principle

- Revenue should be recognized at the time it is earned
- The inflow of assets associated with revenue does not have to be in the form of cash
- The amount of recognized revenue should be measured as the cash received plus the cash equivalent value (fair market value) of any other asset or assets received

Matching Principle

- Report expenses on the income statement in the same accounting period as the revenues that were earned as a result of the expenses
- Results in an accurate net income figure for the accounting period



Materiality Principle

- Requirements of accounting principles may be ignored if the effect on the financial statements is unimportant to their users
- Failure to follow the requirements of an accounting principle is acceptable when:
 - The failure does not produce an error or misstatement large enough to influence a financial statement reader's judgement of a given situation

Consistency Principle

- Requires that a company uses the same accounting method period after period, so that the financial statements of succeeding periods will be **comparable**
- Whenever a company must choose between alternative accounting methods, consistency requires that the company continues to use the selected method period after period

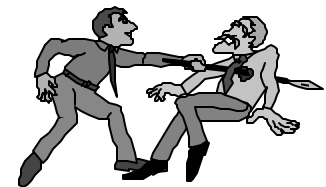
Conservatism Principle

- The principle guides an accountant in uncertain situations where amounts must be estimated
- It implies that when two estimates of amounts to be received or paid in the future are about equally likely, the less optimistic estimate should be used



Accrual Basis of Accounting

- Revenues are recognized in the period they are earned and expenses are recognized in the period they are incurred
- Accrual accounting is directly in line with the **matching principle**
- Accrual accounting is **GAAP**



Cash Basis of Accounting

- Revenues are recognized when cash is received and expenses are recorded when cash is paid
- Provides a poor indication of enterprise performance
- Cash basis accounting is **not** GAAP

Balance Sheet

- **Assets = Liabilities + Stockholders' Equity**
- Purpose is to provide information that helps users understand a bank's financial status as of a given date
- Describes conditions that exist at a **point** in time

Clear Bank Corp.

Balance Sheet

December 31, xx

(000)

Assets

Cash	\$ 8,400
Loans	14,600
Trading Sec.	10,000
Bank Building	<u>5,000</u>
Total Assets	<u>\$38,000</u>

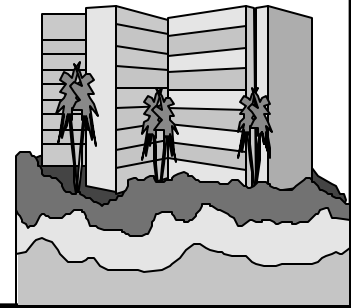
Liabilities

Demand Deposits	\$10,000
Time Deposits	<u>15,600</u>
	<u>25,600</u>
<u>Stockholders' Equity</u>	
Capital stock	400
Retained Earn.	<u>12,000</u>
	<u>12,400</u>
Total Liab & SE	<u>\$38,000</u>

Assets

- Properties or **economic resources** owned by the business
- “Probable future economic benefits obtained or controlled by a particular entity as a result of past transactions or events”

Examples: Loans, cash, building, investments, furniture and fixtures



Liabilities

- Represent a **claim** against a business
- “Probable future sacrifices of economic benefits arising from present obligations of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions”

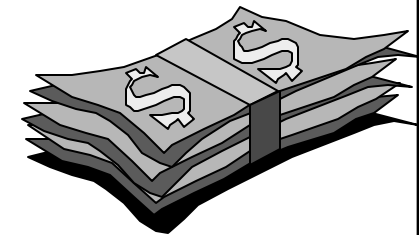
Examples: Savings accounts, accounts payable and demand deposits

Stockholders' Equity

- “Residual interest in the assets of an entity that remains after deducting liabilities”
- Represents the owners' **claims** on assets

Income Statement

- Displays the results of operations of a business over a **period of time**
- Shows whether a business earned a profit (**net income**)
- Net income is earned if revenues exceed expenses
- Net loss is incurred if expenses exceed revenues



Clear Bank Corp. Income Statement

For the year ended December 31, xx
(000)

Interest Income:

Loans	\$2,000
Trading securities	<u>1,900</u>
Total Interest Income	3,900

Interest Expense:

Deposits	1,000
Net Interest Income	2,900

Noninterest Expenses:

Salaries and wages	<u>700</u>
Net Income	<u>\$2,200</u>

Revenues

- Inflows of assets received in exchange for goods or services provided to customers as part of the major or central operations of the business
- Revenues also may occur as a decrease in liabilities

Examples: Interest revenues, fees, and commissions



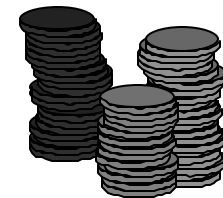
Expenses

- Outflows or the using up of assets as a result of the major or central operations of a business
- Expenses may also occur as an increase in liabilities

Examples: Interest expense, salary expense, repair and maintenance expense

Statement of Changes in Stockholders' Equity

- Presents information about everything that happened to equity during the reporting period
- Net income and issuance of stock increase stockholders' equity
- Net losses and dividends decrease stockholders' equity



Clear Bank Corp.
Statement of Changes in Stockholders' Equity
 For year ended December 31, xx
 (000)

	<u>Retained Earnings</u>	<u>Capital Stock</u>
Balance, Jan. 1, xx	\$10,800	400
Add: Net income	<u>2,200</u>	<u>-</u>
	13,000	-
Less: Dividends	<u>1,000</u>	<u>-</u>
Balance, Dec. 31, xx	<u>\$12,000</u>	<u>400</u>

Assets



What are assets?

- Resources with potential for providing a firm with future economic benefits
- Recognizable and reasonably measurable
- All assets are future benefits (SFAC 6, ¶ 25).
However, not all future benefits are assets.

How are assets valued?

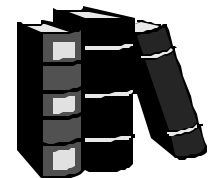
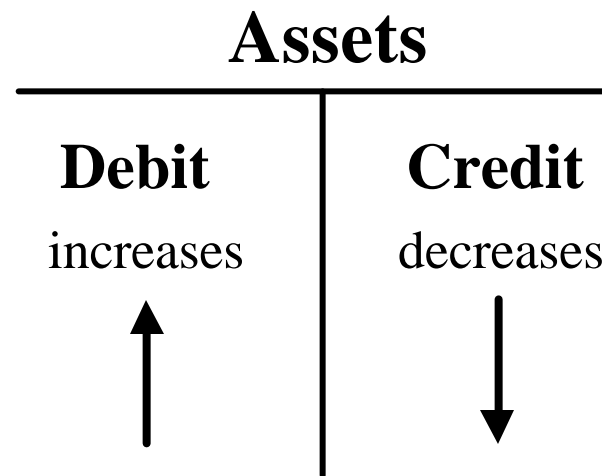
- Accounting principles and standards dictate two valuation methods
 - Historical cost or acquisition cost
 - Fair value (including present value of future net cash flows)

Asset Valuation

- Non monetary assets
 - Assets purchased for use in the business
 - Reported at historical cost
- Monetary assets
 - Current purchasing power
 - Reported at fair value (including present value)

Balance Sheet Classification

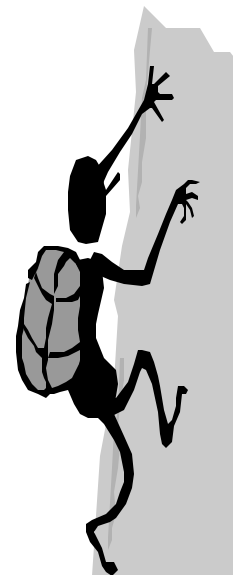
Assets = Liabilities + Stockholders' Equity



What are the Major Assets of a Bank?

- Cash and balances due from depository inst.
- Securities purchased
- Loans and lease financing receivables

- Trading assets
- Premises
- Intangible assets



Securities

- Instrument signifying an ownership position in a corporation (e.g., equity security, stocks); a creditor relationship with a corporation (debt securities, bond); or rights to ownership (option)
- Accounting for these assets is governed by FASB Statement No. 115 (FAS 115) “Accounting for Certain Investments in Debt and Equity Securities”

How is FAS 115 applied?

- All securities are classified into three categories
 - Held-to-maturity securities
 - Available-for-sale securities
 - Trading securities
- Valuation of security is based on category

Held-to-maturity Securities

- Debt securities for which an institution has both the intent and ability to hold to maturity
- Institutions holding equity securities do not have the ability to hold these securities to maturity since the securities do not have a maturity date
- Reported on the balance sheet at historical (acquisition) cost

Accounting for Held-to-maturity Securities

1. Acquisition

HTM securities	\$55,000	
Cash		\$55,000

To record the asset.

2. At Maturity

Cash	\$55,000	
HTM securities		\$55,000

To record the maturity of the security.

Trading Securities

- Securities held with the intent of generating short term profits from temporary differences in market prices
- Reported on the balance sheet at fair market value
- Changes in the market value of securities held are reported in income

Accounting for Trading Securities

1. Acquisition

Trading Securities	\$40,000	
Cash		\$40,000

To record current asset

2. Period end “mark-to-market”

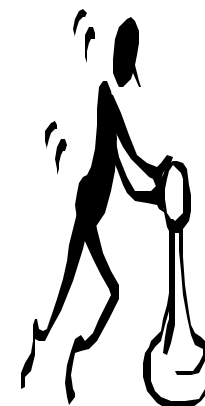
Trading Securities	\$1,000	
Unrealized gain on trading securities		\$1,000

To revalue trading securities to market value and recognize holding gain in income.

3. Subsequent sale of security

Loss on sale	\$500	
Cash	\$40,500	
Securities		\$ 41,000

To record the sale of the security and the associated loss on sale.



Available-for-sale Securities

- Securities that are neither trading securities nor held-to-maturity securities
- Reported on the balance sheet at market value
- Changes in the market value of securities held do not affect income until the institution sells the security

Accounting for Available-for-sale Securities

1. Acquisition

AFS securities	\$32,000	
Cash		\$32,000

To record current asset.

2. Period end “mark-to-market”

AFS securities	\$2,000	
Unrealized gain on AFS securities*		\$2,000

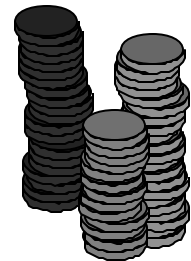
To revalue available-for-sale securities to market value.

* Unrealized Gain on available-for-sale securities is reported in the Equity Section of the balance sheet and does not increase income.



Loans

- Loans are extensions of credit resulting from either direct negotiation between the bank and its customers or the purchase of such assets from others
- Represent future expected cash flows



Accounting for Loans

1. Origination of loans

Loan	XX	
Cash		XX

To record expected future cash flows.

2. Accrued Interest on loans

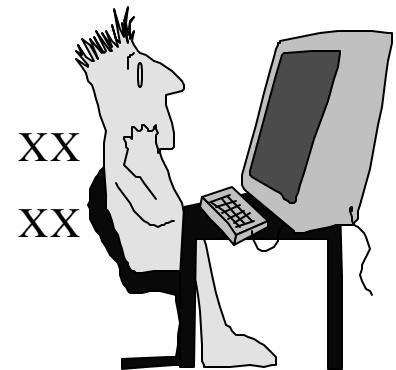
Accrued Interest Receivable	XX	
Interest Income		XX

To record interest earned but not collected on loans (Matching Principle.)

3. Receipt of payment on loan

Cash	XX	
Loan		XX
Accrued Interest Receivable		XX

To record receipt of interest and principal.



Unearned Discount on Loans

- The income or unearned discount on loans is collected in advance and amortized over the life of the loan. Some examples include:
 - Any interest collected in advance
 - Unamortized loan origination fees
 - Commitment fees



Accounting for Unearned Discount on Loans

Bank issued a \$100,000 loan (at discount, \$88,000). The loan matures in 12 months.

Loans	\$100,000	
Unearned Discount - Loans		\$12,000
Cash		\$88,000

To record a loan issued at discount.

Unearned Discount	\$1,000	
Income		\$1,000

To record monthly amortization of unearned income.

Allowance For Loan Losses

Banks must maintain an adequate allowance for credit losses. This is the estimated amount of loans that will not be collected.

FASB Statement No. 5 (FAS 5) “Accounting for Contingencies”, is the primary document concerning the accounting and reporting of estimated losses.

An estimated loss should be accrued if the loss is both

- Probable
- Can be reasonably estimated

Accounting for Loan Losses

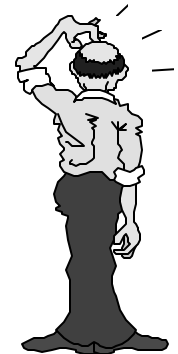
3. Receipt of funds from a loan that was charged-off or recovered

Loans	XX	
	Allowance for Loan Loss	XX

First step is to re-establish the portion of the loan that was written off and subsequently recovered.

Cash	XX	
	Loans	XX

Record the receipt of cash.



Restructured Loans

- To reduce the potential loss on a problem loan, a bank may try to restructure, or renegotiate the loan. This may take the following forms:
 - Modification of terms (e.g., reduction in interest or principal)
 - Acceptance of property in full or partial satisfaction of the loan
 - A combination of the above



Restructured Loans

FASB Statement No. 15 (FAS 15) “Accounting by Debtors and Creditors for Troubled Debt Restructurings”, is the primary authoritative document for the accounting of restructured loans.

FAS 15 defines a troubled debt restructuring as one in which the bank grants a concession to the borrower that it would not otherwise consider.

Restructured Loans

- To determine whether the bank has a loss on a restructured loan, FAS 15 requires that the amount of the loan recorded on the bank's books be compared with the undiscounted future cash payments
 - The bank recognizes a loss if the total of the future payments is less than the recorded amount of the loan; otherwise no loss is recognized

Restructured Loans

Example: A bank reduced the annual interest rate on a loan with a carrying amount of \$500,000 from 15% to 4%. Principal and interest are due in a year.

The following calculation determines whether a loss should be recognized.

Future principal payment	\$500,000
Future interest payment ($\$500,000 \times .04$)	<u>20,000</u>
Total future cash payments	\$520,000
Less loan amount on bank's books	<u>(500,000)</u>
Excess of future payments over amount recorded on books	<u>\$ 20,000</u>

No loss is recognized because the total future payments of \$520,000 are greater than the \$500,000 amount of the loan on the books.

Intangible Assets

- Right or nonphysical resource that is presumed to represent future benefits to the institution
- Examples include:
 - Patents and copyrights
 - Trademarks
 - Goodwill
- Guidance provided in APB Opinion No. 17 (APB 17) “Intangible Assets”



Fixed Assets

- Assets used in the business such as buildings or equipment
- Non-monetary assets
- Recorded at historical cost (acquisition price.) This includes all costs incurred to place the asset in use.



Accounting for Fixed Assets

- Depreciation: the charge made to the current operations for the portion of the cost of the asset consumed (used) during the period

- Determined:

$$\frac{\text{Acquisition cost} - \text{Estimated salvage value}}{\text{Number of periods in useful life}}$$



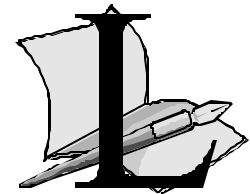
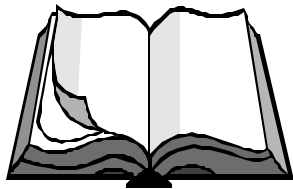
Accounting for Fixed Assets

Record in a contra-asset account titled “Accumulated depreciation” and recognize expense in income.

Depreciation Expense	xx	
Accumulated Depreciation	xx	(<i>Contra asset</i>)

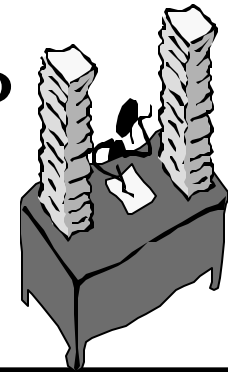


Liabilities



What are liabilities?

- ? Economic obligations
- ? Probable future sacrifices of economic benefits arising from present obligations (SFAC 6, ¶ 35)
- ? Recognizable and reasonably measurable in conformity with GAAP
- ? These are amounts owed by a bank



How are liabilities valued?

? Accounting principles and standards dictate two valuation methods

(A) Historical cost or acquisition cost

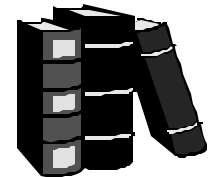
(B) Present value of future net cash flows



Balance Sheet Classification

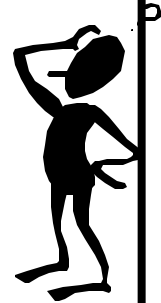
$$\text{Liabilities} = \text{Assets} - \text{Stockholders' Equity}$$

Liabilities	
Debit decreases ↓	Credit increases ↑



What are the Major Liabilities of a Bank?

- ? Deposits
- ? Repurchase agreements
- ? Other borrowed funds
- ? Trading liabilities



Deposits

- Unless otherwise specified, depositors expect access to deposited funds on demand
- Banks offer interest rates on deposits not available on demand (e.g., savings, time deposits)



Deposits

- Banks depend on deposits and its ability obtain and use deposits from
 - Households, businesses and governments
- The bank has a liability to customer (depositor) to repay the funds either on demand or at a specified time
- The bank generates income from deposits by
 - Charging fees for services provided
 - Lending funds obtained from deposits

Accounting for Deposits

A customer deposits \$5,000 cash into a checking account

Cash	\$5,000	
Demand Deposit		\$5,000

To record receipt of demand deposits.

A customer cashes \$250 check, drawn on a checking account

Demand Deposit	\$250	
Cash		\$250

To record payment of \$250 check on depositor's account.

Accounting for Deposits

A customer purchases a \$5,000 time certificate of deposit (CD).

Cash	\$5,000	
Certificate of Deposit		\$5,000

To record purchase of \$5,000 time CD.

A customer transfers \$750 from a MMDA to NOW account

MMDA	\$750	
NOW		\$750

To record a transfer of funds from MMDA to NOW account.

Interest Accrued and Paid on Deposits

Accounting Entries

The interest banks owe on deposits may not be paid until maturity. However, banks accrue the expense periodically

- Most banks accrue this expense daily

Interest Expense xx
 Accrued Interest Payable xx
To accrue interest expense on CD.

Accrued Interest Payable xx
 Time Deposit xx
To record payment of interest on CD.

Trading Liabilities

- Trading account positions are positions taken in the near term to profit from short term movement in prices of assets
- Examples include:
 - Short sales of securities
 - Revaluation losses from the marking-to-market of off-balance sheet financial instruments held for trading purposes



Trading Liabilities

- Trading account liabilities are captured in “Trading liabilities” account at fair market value
- Unrealized gains and losses associated with trading account assets or liabilities should be reported in current income

Trading Liabilities

- When a bank sells an asset it does not own, it has established a short position
- Securities sold short can be covered in one of the following ways:
 - Buy the securities in the open market at the prevailing market price
 - Enter into a resale agreement
 - Borrow securities

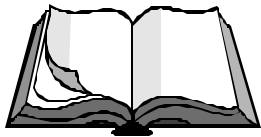
Subordinated Notes and Debentures

- Form of debt subordinated to the claims of the depositors
- They have long-term maturities
- Subordinated notes and debentures are one of the components of bank capital because they closely serve the function of capital

Subordinated Notes and Debentures

- Long term debt is incurred to provide the company with more working capital
- A bondholder is a creditor of the corporation (a stockholder is an owner)
- Most popular reason for long-term debt financing is “leverage” (e.g., borrow a million dollars for a year at 8% and employ the million to generate 10%)
 - Interest expense is a tax deduction

Stockholders' Equity



Stockholders' Equity

Stockholders' Equity = Assets - Liabilities

- SFAC 6, Statement of Financial Accounting Concepts, "Elements of Financial Statements of Business Enterprise", ¶ 49 defines stockholders' equity as the **residual** interest in the assets of an entity after deducting its liabilities
- A major objective of the accounting for stockholders' equity is the **adequate disclosure** of the sources from which the capital was derived

Components of Stockholders' Equity

- Capital stock
- Preferred stock
- Additional paid-in capital (paid-in capital in excess of par value); also known as “capital surplus”
- Dividends
- Retained earnings (or deficit); also known as “undivided profits”
- Treasury stock
- Accumulated other comprehensive income

Balance Sheet Classification

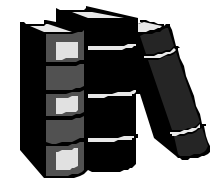
$$\text{Stockholders' Equity} = \text{Assets} - \text{Liabilities}$$

Stockholders' Equity

Debit
decreases



Credit
increases



Changes in Stockholders' Equity (SE)

Increases in SE ↑

- 1) Investment by stockholders
- 2) Earnings from operations

Revenues increase SE; revenues are recorded by a **credit**

Decrease in SE ↓

- 1) Distribution of cash or assets to stockholders
- 2) Losses from operations

Expenses decrease SE; expenses are recorded by a **debit**

Stockholders' Equity on the Balance Sheet

For a Bank

Stockholders' equity

Capital stock, \$10 par value, 6,000 shares issued

and outstanding..... \$ 60,000

Paid-in capital in excess of par value..... 30,000

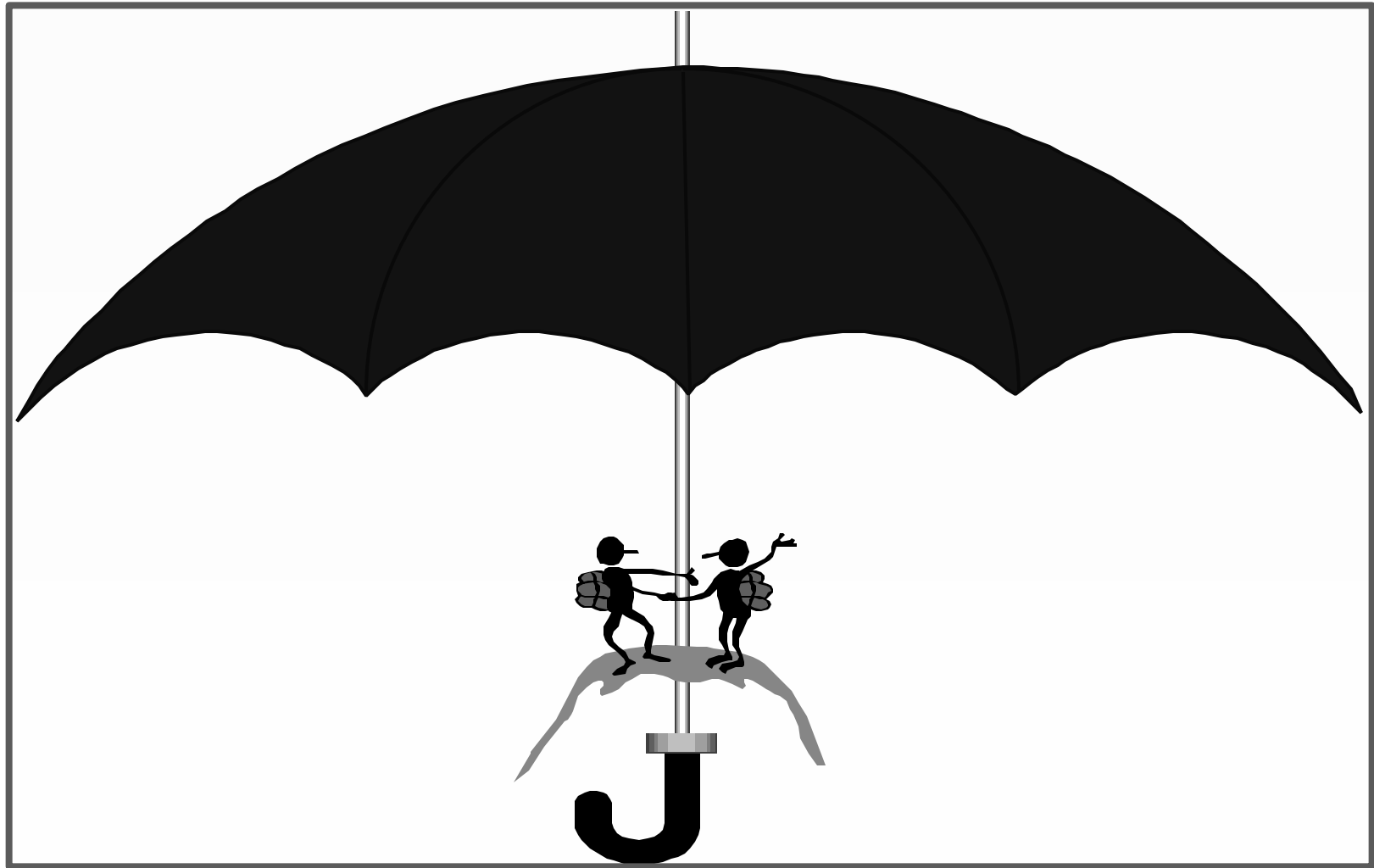
Total paid-in capital 90,000

Retained earnings..... 10,000

Accumulated and other comprehensive income 0

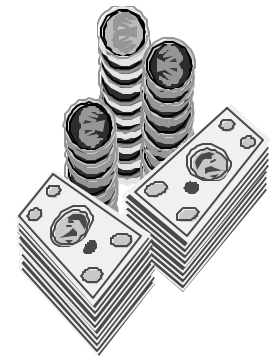
Total stockholders' equity..... \$100,000

What is Capital?



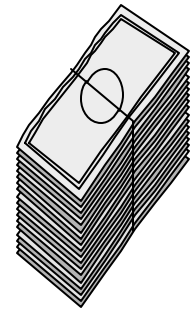
What is Capital Stock?

- Represents the amount of money invested by the owners of the institution
- Owners of the institution are termed stockholders



Issuance of Capital Stock

- The **number of shares** and the **par value** a bank is authorized to issue is specified in the articles of incorporation
- Capital stock may be issued at a price which differs from its par value



Par Value

- Represents the **legal capital** per share or the amount below which stockholders' equity cannot be reduced except by
 - Losses
 - Legal action taken by a majority vote of stockholders
 - A minimum cushion of capital for the protection of creditors

Capital Stock

A bank sells 100,000 shares of \$5 par common stock for \$8 per share **for cash**.

Cash	\$800,000
Common stock - Par	\$500,000 (a)
Additional Paid - in capital	\$300,000 (b)

Total Paid-in Capital = 800,000 (a) + (b)

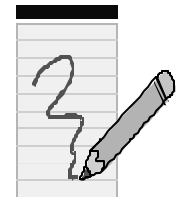
Legal capital = 500,000 (a)

Additional Paid-in capital = 300,000 (b)

(a) Generally not subject to withdrawal

No-Par Value Stock

- Legislature was enacted permitting corporations to issue stock without par value (differs by state)
- **All or part** of the amount received by the corporation for its no-par shares as stated capital **not subject to withdrawal**



Preferred and Common Stock

- Two basic types of stock issued by a bank
 - Common stock
 - Voting rights
 - Potential to significantly appreciate or depreciate in value
 - Preferred stock
 - No voting power
 - Preferred as to dividends and as to assets in event of the liquidation of the company

Accounting for Issuance of Capital Stock

With Par Value

A corporation sells 100,000 shares of \$5 par common stock for \$8 per share **for cash**.

Cash	\$800,000	
Common stock - Par		\$500,000
Additional Paid-in capital		\$300,000

With No -Par Value

A corporation sells 100,000 shares of no par common stock for \$8 per share **for cash**.

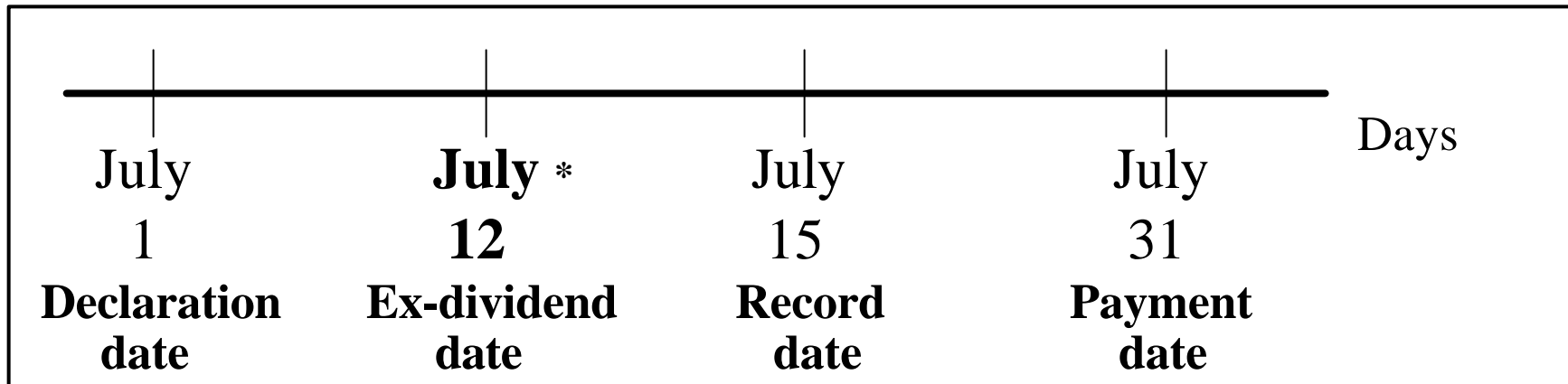
Cash	\$800,000	
Common stock - No-Par		\$800,000

Dividends

- Payment to stockholders as a return on investment
 - Paid when approved by the Board of Directors
 - Maximum for dividends = total net income
- Dividends may be in the form of:
 - Cash
 - Stock
 - Property
 - Liquidating



Dividend Dates



Declaration Date: BOD declares a payment of dividends.

Ex-dividend Date: Shares are traded ex-dividend *three business days* before the record date.

Record Date: To receive the dividend, person must be listed as the owner of the stock on the date of record

Payment Date: The dividend checks are mailed to shareholders of record.

* **Note:** Buyer will receive dividend payment if purchases shares before July 12.

Accounting for Dividends

Cash Dividend

To record declaration of a cash dividend of \$1 per share on the 100,000 shares of common stock outstanding.

July 1 “*date of declaration*”

Dividends	\$100,000	
	Dividends Payable	\$100,000

To record payment of \$1 per share dividend declared.

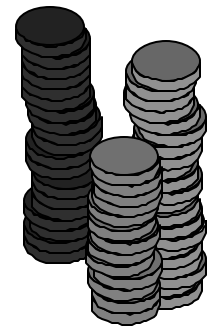
July 31 “*date of payment*”

Dividends Payable	\$100,000	
	Cash	\$100,000



Retained Earnings

- Portion of stockholders' equity derived from operations
- Represents the accumulated earnings minus dividends declared from the date of incorporation to the present
- Major entries to the retained earnings
 - Transfer of net income (loss)
 - Debit entries for dividends



Prior Period Adjustments

- Material errors reported in prior periods are corrected by adjusting retained earnings
- These adjustments are termed “prior period adjustments”
- FASB Statement No. 16, “Prior Period Adjustments” limits prior period adjustments to the correction of errors in prior years financial statements



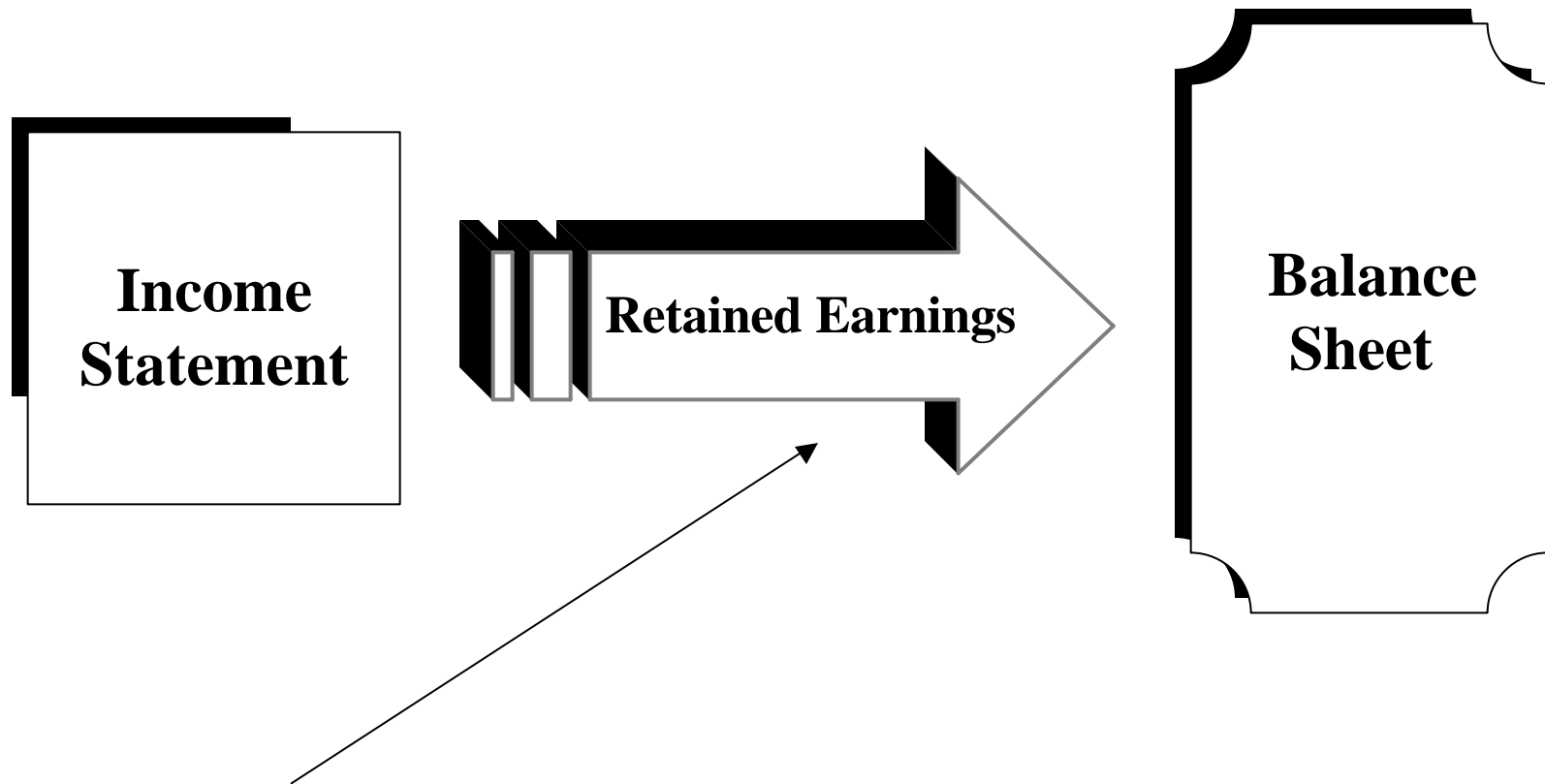
Statement of Retained Earnings

XYZ Bank
Statement of Retained Earnings
For Years Ended June 30

	Year 2	Year 1
Retained earnings at beginning of year		
As originally reported.....	\$810	\$780
Prior period adjustment	<u>(60)</u>	<u>(60)</u>
As restated.....	750	720
Net income	<u>360</u>	<u>210</u>
Subtotal.....	<u>1,110</u>	<u>930</u>
Less: Cash dividends on common stock:		
\$2.40 per share in Year 2.....	(240)	
\$1.80 per share in Year 1.....	_____	<u>(180)</u>
Retained earnings at end of year	<u>\$870</u>	<u>\$750</u>

Retained Earnings

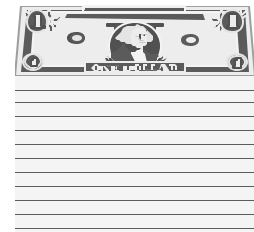
“Internally Generated Capital”



A “Link” between the Income Statement and the Balance Sheet

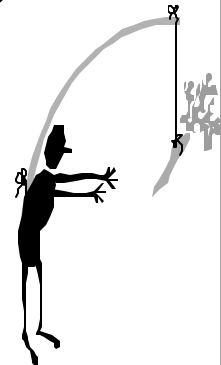
Treasury Stock

- Previously issued shares of stock repurchased and held by the issuer
- Treasury stock is deducted from bank's stockholders' equity



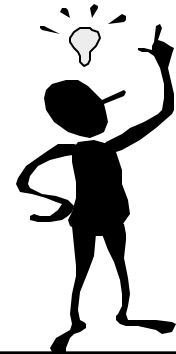
Treasury Stock

- The **effect** is to reduce the assets of the bank and stockholder's equity by the same amount
 - To have stock available to reissue to employees under the bonus plan
 - Desire to increase earnings per share (EPS) to support the market price of the stock
 - To have shares available for the acquisition of other companies



Characteristics of Treasury Stock

- Not an asset
- “Returning of capital to stockholders”
- Appears on the balance sheet as a deduction in the stockholder’s equity section
- No gain on treasury stock transactions can be recognized

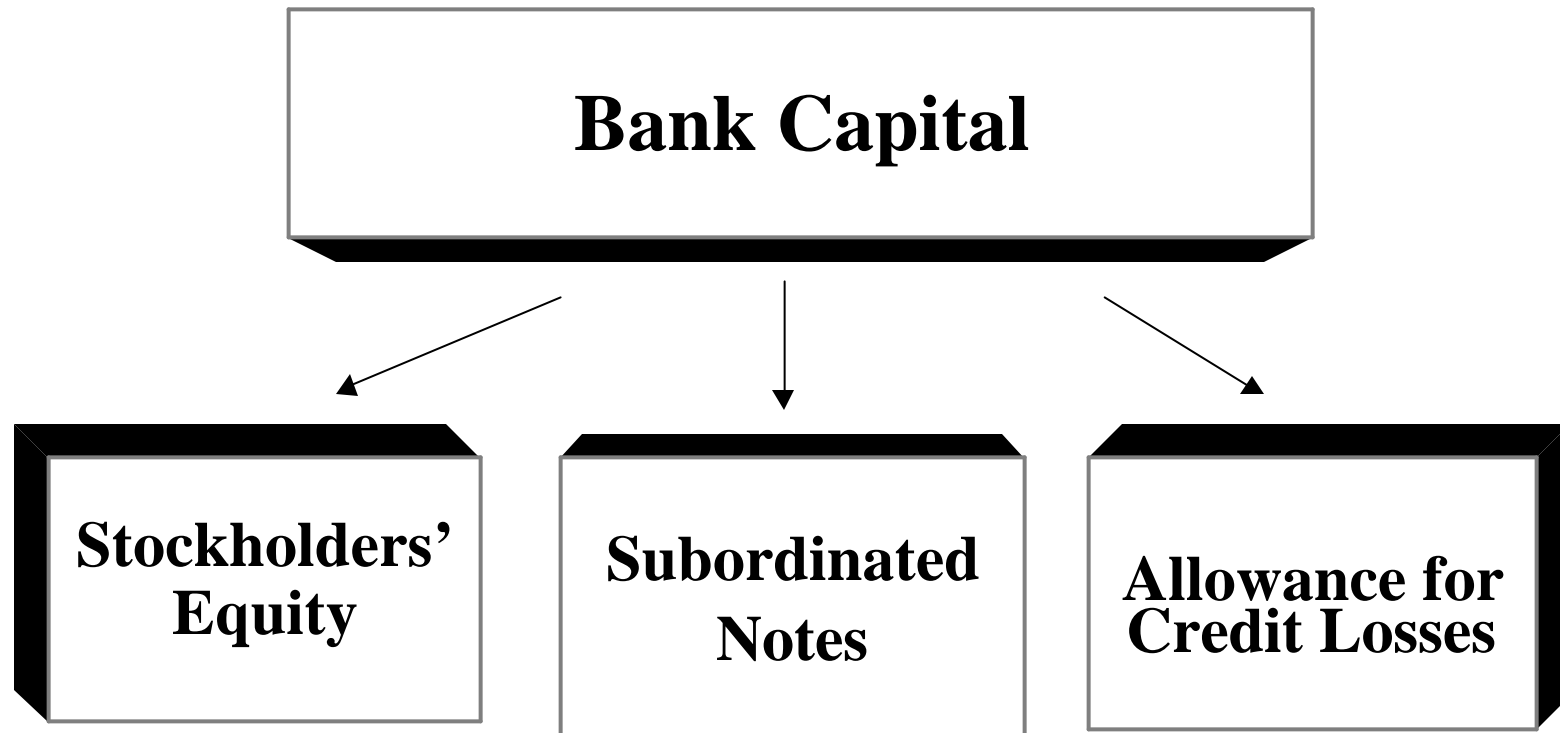


Accumulated Other Comprehensive Income

- FASB Statement No. 130, “Reporting Comprehensive Income” requires the accumulated balance of other comprehensive income to be disclosed separately from retained earnings and paid-in capital
- Other comprehensive income includes:
 - Foreign currency translation adjustments
 - Unrealized holding gains (losses) on the available-for-sale securities
 - Mark-to-market gains (losses) from FV hedges

Regulatory Capital

- Regulators (Federal Reserve System, OCC, FDIC) have a broader definition of bank capital



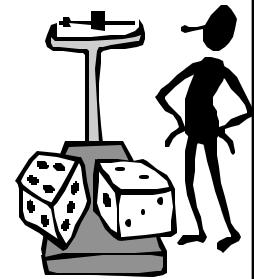
Function of Bank Capital

- To reduce the risk of bank failure capital
 - Provides cushion to absorb losses
 - Assists banks in accessing capital markets
 - Is permanent (or long-term)



Minimum Capital Requirements

- Bank's capital must equal a minimum *percentage* of its assets, which are weighted for risk
- A minimum risk-based capital ratio of *8 percent* is required



Minimum Capital Requirements

Example:

1) Bank ABC issued a \$500 thousand unsecured loan to a corporation

$$\begin{aligned}\text{Capital required} &= \$500,000 \times 8\% \times \mathbf{100\%} \\ &= \mathbf{\$40,000}\end{aligned}$$

2) Bank ABC issued a \$500,000 loan secured by real estate

$$\begin{aligned}\text{Capital required} &= \$500,000 \times 8\% \times \mathbf{50\%} \\ &= \mathbf{\$20,000}\end{aligned}$$

3) Bank ABC purchased \$500,000 U.S. Treasury security

$$\begin{aligned}\text{Capital required} &= \$500,000 \times 8\% \times \mathbf{0\%} \\ &= \mathbf{\text{No capital is required}}\end{aligned}$$

Risk-Based Capital

The ratio is calculated using the following **key components**

Numerator

Tier 1 Capital - Common Stockholders' Equity
- Non-cumulative perpetual preferred stock

Tier 2 Capital - Perpetual preferred stock
- Allowance for credit losses (cannot exceed 1.25% of gross risk weighted assets)
- Certain subordinated notes
- Miscellaneous

Tier 3 Capital - Market risk equivalent assets



Risk-Based Capital

Denominator

The denominator is made up of several categories of assets and off-balance sheet items, each weighted by a factor ranging from 0 to 100%

Example:

Category 1 - 0% Cash and U.S. Treasury securities

Category 2 - 20% Balances at domestic banks

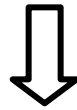
Category 3 - 50% Real estate loans

Category 4 - 100% Loans to corporations

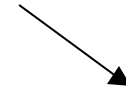
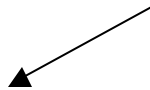
Credit equivalent amounts of off-balance sheet items

Risk-Based Capital

Numerator



Total Risk-based Capital



Tier 1

Tier 2

Tier 3

Risk-Based Capital

Denominator



Risk-Weighted Assets

(The aggregate dollar amount x risk weight)

Credit equivalent
amounts of
off-balance sheet items

Total Risk-Based Capital Ratio

$$\frac{\text{Tier 1 Capital} + \text{Tier 2 Capital} + \text{Tier 3 Capital}}{\text{RWA} + \text{Credit Equivalent Amounts of Off-balance Sheet Items}}$$

Well capitalized = **10.0%**; Adequately capitalized = **8.0%**
Under capitalized < **8.0%**

Tier 1 Risk-Based Capital Ratio

Tier 1 Capital
Net Risk Weighted Assets

Well capitalized = **6.0%**; Adequately capitalized = **4.0%**
Under capitalized < **4.0%**

Leverage Ratio

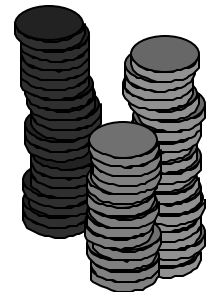
Tier 1 Capital
Average Total Assets

Well capitalized = **5.0%**; Adequately capitalized = **4.0%**
Under capitalized < **4.0%**

Key Financial Ratios

Based on Stockholders' Equity

- **Purpose** - to measure bank's performance and financial position so that internal and industry-wide comparisons can be made on a consistent basis
 - Solvency
 - Profitability



Key Financial Ratios Based on Stockholders' Equity

- **Ratio analysis** - an indication of bank's financial strengths and weaknesses
 - **Long - term solvency** = Ability to meet interest payments and preferred dividends

$$\text{Debt to Equity} = \frac{\text{Total Liabilities}}{\text{Stockholders' Equity}}$$

Key Financial Ratios Based on Stockholders' Equity

- Earnings Per Share = Ability to pay dividend to common stockholders

$$\text{EPS} = \frac{\text{Net Income} - \text{Preferred Dividend}}{\text{Average Number of Common Shares Outstanding}}$$

- Price - Earnings Ratio = Measure of whether a stock is relatively cheap or expensive

$$\text{PER} = \frac{\text{Market Price Per Common Share}}{\text{Earnings Per Common Share}}$$

Appendix

Additional Accounting Information

Resale Agreements

Resale agreements are similar to federal funds transactions except these are secured. Generally, the collateral for resale agreements is U.S. government or agency security.

Also, the market value of the security used as collateral is greater than the amount of the loan.

Example: The borrower pledges U.S. government security with a market value of \$4,100,000 to borrow \$4,000,000. The \$100,000 protects the lender from a decrease in market value of the security should the security have to be sold to cover the loan.

Resale Agreements

- A transaction involving the purchase of assets by one party from another, subject to an agreement by the purchaser to resell the assets at a specified date or in specified circumstances
- Accounting for resale agreements is governed by FASB Statement No. 140 (FAS 140) “Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities”

Resale Agreements

- The agreement is accounted for as a secured borrowing (loan) and not a sale if:
 - (1) The assets to be repurchased are substantially the same as those transferred
 - (2) The transferor is able to repurchase the asset on the agreed terms, even in the event of default
 - (3) The agreement to repurchase is entered into at the time of the transfer

Resale Agreements

Accounting for Collateral

- The debtor (transferor) shall reclassify the asset as “pledged assets” if the secured party has the right to sell or pledge the collateral
- The secured party does not recognize the collateral on its financial statements

Accounting for Resale Agreements

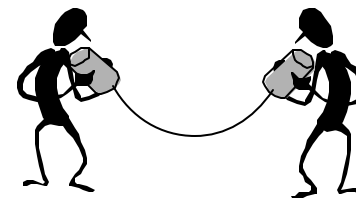
Resale Agreements

Recognize secured loan (Asset)

Resale Agreement	XX	
Cash		XX

Maturity

Cash	XX	
Resale Agreement		XX



Fees on Loans

A fee is a charge in addition to interest. Most fees are of two types:

- Commitment fees
- Origination fees (e.g., points)

FASB Statement No. 91 (FAS 91) “Accounting for the Nonrefundable Fees and Costs Associated with Originating or Acquiring Loans and Initial Direct Costs of Leases”, requires loan origination fees be deferred and amortized over the life of the related loan.

Fees on Loans

Example: On September 30, xx, a bank issued a loan for \$20,000 and charged a nonrefundable loan origination fee of \$340. The bank incurred cost of \$100 to make the loan. The loan would be repaid in 12 months. Interest on the loan is 12%.

September 30, xx

Loan	\$20,000	
Deferred Net Loan Fee		\$240*
Cash		\$19,760

To record origination of \$20,000 loan.

* Reported on the balance sheet as part of the loan account balance.

Accounting for Fees on Loans

Using the straight line method and recognizing interest monthly, interest income is increased by \$20 per month ($340 - 100/12$). The following entries are made at the end of each month.

Accrued Interest Receivable	\$200	
Interest Income		\$200

To record monthly interest income on loan.

Deferred Net Loan Fee	\$20	
Interest income		\$20

To record amortization fee on loan.

Foreclosures

When an agreement for a restructuring cannot be reached, the bank may resort to foreclosure. Foreclosure occurs when the bank takes title to real estate held as collateral.

Real estate obtained through foreclosure is carried in the account “Other Real Estate Owned”.

Accounting for Foreclosures

Example: A bank had a mortgage on a building as collateral for a loan with carrying amount of \$250,000. When the borrower defaulted on the loan, the bank foreclosed on the office building with a fair market value (FMV) of \$200,000.

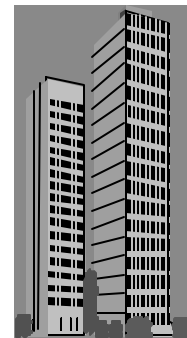
Allowance for loan losses	\$50,000	
Loans		\$50,000

To record write-down of a loan to FMV.

Other real estate owned (OREO)*	\$200,00	
Loans		\$200,000

To record reclassification of loan to foreclosed property.

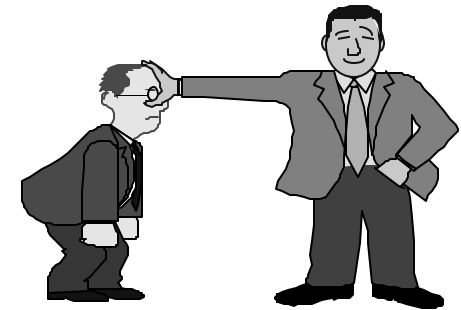
* OREO must be disposed of as the bank can recover its original investment or within five years.



Service Fees from Deposits

Types of deposit services that may trigger fees

- Automated teller machine (ATM)
- Money orders
- Early withdrawal penalty
- Returned check
- Checking plus

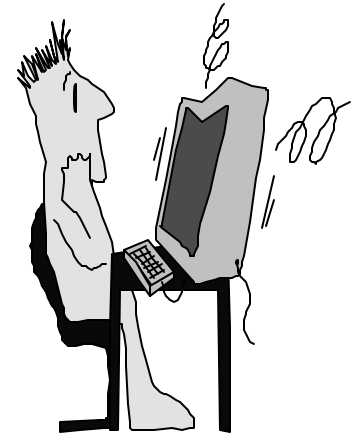


Repurchase Agreements

- Repurchase agreements are considered **secured borrowings** if the selling institution maintains control over the future economic benefits of the underlying asset and if:
 - Assets to be repurchased are same or substantially the same as those transferred
 - Transferor is able to repurchase assets even in default by transferee

Repurchase Agreements

- Agreement to repurchase asset is before maturity at fixed or determinable price, and
- Agreement to repurchase is entered into concurrently with transfer



Accounting for Repurchase Agreements

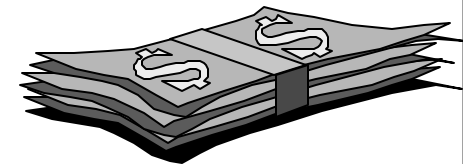
Repurchase Agreements*

Due from Federal Reserve Bank	xx	
Securities Sold under Repurchase Agreement		xx

Maturity

Securities sold under Repurchase Agreement	xx	
Interest Expense - Repurchase Agreements	xx	
Due from Federal Reserve Bank		xx

* Resale agreements are defined in the Asset section.



Accounting for Short Sales

Cash or Due from Banks	xx	
Trading Account - Short Sales		xx

To record short sale at fair market value.

Trading Account - Short Sales	xx	
Trading account profit/loss		xx

To mark-to-market short sales.

Subordinated Notes and Debentures

- A bank may issue notes or debentures with various due dates
 - For example, on June 30, xx, a bank may issue \$700,000 face value of 10% debentures with interest payable every six months. A total of \$100,000 would mature each year beginning June 30, xx.

Accounting for Subordinated Notes and Debentures

Bank issues \$100,000 note at 10%, maturing in 10 years. Interest is paid semiannually. **Issued at par**

Cash	\$100,000	
Notes Payable		\$100,000

To record note issue at par.

Note - Interest Expense	\$833	
Accrued Interest Payable		\$833

To record monthly accrual of interest.

Accrued Interest Payable	\$5,000	
Cash		\$5,000

To record payment of interest (semiannually.)

Accounting for Subordinated Notes and Debentures

Bank issues \$100,000 note (at premium \$114,000) at 12%, maturing in 10 years. Interest is paid semiannually. (Assume market interest rate is 10%.)

Issued at a Premium

Cash	\$114,000	
Notes Payable		\$100,000
Notes Payable - Premium		\$14,000

To record issue of 12%, 10-year note at premium.

Accounting for Subordinated Notes and Debentures

Note - Interest Expense	\$1,000	
Accrued Interest Payable		\$1,000

To record monthly accrual of interest.

Accrued Interest Payable	\$6,000	
Cash		\$6,000

To record payment of interest (semiannually.)

Accounting for Subordinated Notes and Debentures

Bonds Payable - Premium	\$116*	
Bond - Interest Expense		\$116

To amortize \$14,000 bond premium as a decrease to interest expense, since at maturity the bank will repay par to the lender.

* $\$14,000 \text{ premium} / 120 \text{ months} = \116 (using straight-line method)

Accounting for Subordinated Notes and Debentures

- Because the bond pays 12% interest rate (when market interest rate is 10%) the investors are willing to pay premium (\$14,000) for the bond
- The result is that the investors earn only 10% rather than the “nominal” 12%
- The bank spreads the \$14,000 premium evenly over the life of the bond (offset to cash and interest expense)

Accounting for Treasury Stock

Cost Method*

To record the acquisition of treasury shares

Bank buys 2,000 shares of its own \$20 par common stock in the market for \$50 per share

Treasury Stock - Cost	\$100,000	
Cash		\$100,000

To record reissue of treasury shares

2000 shares are reissued for cash at their purchase price of \$50 per share

Cash	\$100,000	
Treasury Stock - Cost		\$100,000

* Treasury stock is customarily recorded at cost regardless of whether it is par value stock or no-par value stock.

Accounting for Treasury Stock

Cost Method

To record reissue of treasury shares

2000 shares are reissued for cash at their purchase price of **\$70** per share

Cash	\$140,000	
Treasury Stock - Cost		\$100,000
Paid-in Capital - Treasury stock		\$40,000

Note: No operating gain is recognized when treasury shares are reissued above cost.

Accounting for Treasury Stock

Cost Method

To record reissue of treasury shares

2000 shares are reissued for cash at their purchase price of **\$30** per share

Cash	\$60,000	
Retained Earnings	\$40,000	
Treasury Stock - Cost		\$100,000

Note: Loss is recognized when treasury stock is reissued at less than cost.