

Financial Information and Accounting Concepts

BA291



Learning Objectives

1. Define *accounting* and describe the roles of private and public accountants
2. Explain the impact of accounting standards such as GAAP and the Sarbanes-Oxley Act on corporate accounting
3. Describe the *accounting equation* and explain the purpose of *double-entry bookkeeping* and the *matching principle*
4. Identify the major financial statements and explain how to read a balance sheet
5. Explain the purpose of the income statement and the statement of cash flows
6. Explain the purpose of ratio analysis and list the four main categories of financial ratios

Understanding Accounting

Accounting

Measuring, interpreting, and communicating financial information to support internal and external decision-making

Internal



- Shareholders (current owners)
- Management
- Operational team

Managerial Accounting

The area of accounting concerned with preparing data for use by managers within the organization

External



- New investors
- Creditors
- Business partners

Financial Accounting

The area of accounting concerned with preparing financial information for users outside the organization

Accountants

Private Accountants

- In-house accountants employed by organizations and businesses other than a public accounting firm
- Also called *corporate accountants*
- **Controller**
 - The highest-ranking accountant in a company, responsible for overseeing all accounting functions
- **Certified Public Accountants (CPAs)**
 - Professionally licensed accountants who meet certain requirements for education and experience and who pass a comprehensive examination

Public Accountants

- Professionals who provide accounting services to other businesses and individuals for a fee

Audit

- Formal evaluation of the fairness and reliability of a client's financial statements. Performed by Auditors.

External Auditors

- Independent accounting firms that provide auditing services for public companies



The Rules of Accounting

- **GAAP (Generally Accepted Accounting Practices)**
 - Standards and practices used by publicly held corporations in the United States and a few other countries in the preparation of financial statements; on course to converge with IFRS

- **International Financial Reporting Standards (IFRS)**
 - Accounting standards and practices used in many countries outside the United States

Sarbanes-Oxley

- **Sarbanes-Oxley**

- The informal name of comprehensive legislation designed to improve integrity and accountability of financial information



The Accounting Equation and Principle

- **Accounting Equation**

- The basic accounting equation, stating that assets equal liabilities plus owners' equity

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

- **Double-Entry Bookkeeping**

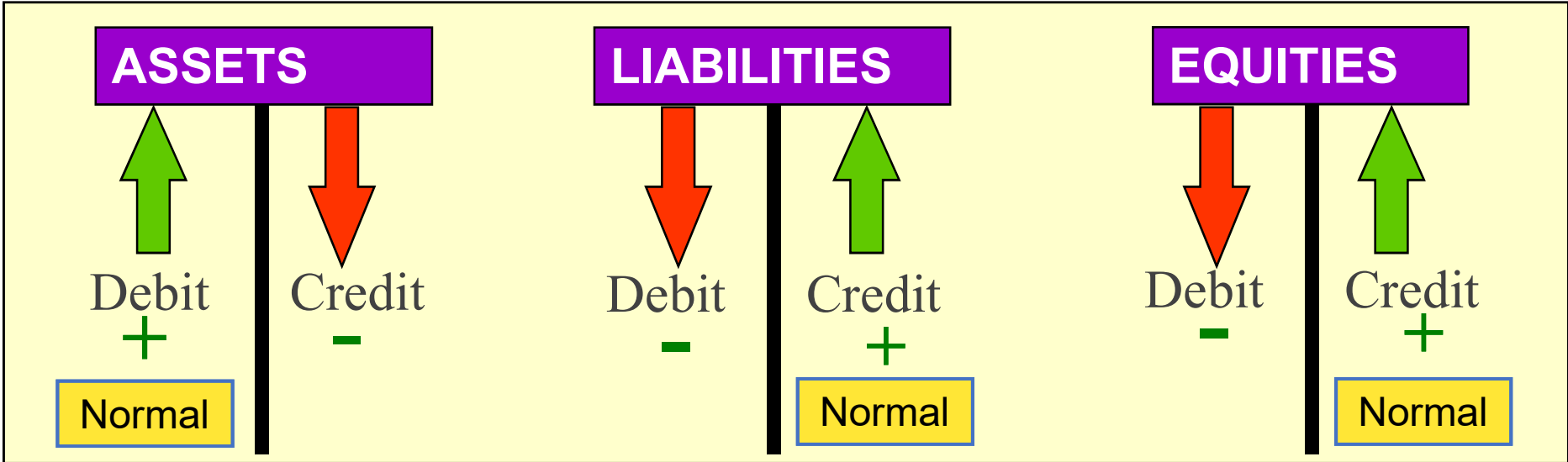
- A method of recording financial transactions that requires a debit entry and credit entry for each transaction to ensure that the accounting equation is always kept in balance

- **Matching Principle**

- The fundamental principle requiring that expenses incurred in producing revenue be deducted from the revenues they generate during an accounting period

Double Entry System

Assets = **Liabilities** + **Equity**



'PALER' Rule

↑	Cr	Dr	Cr	Dr	Cr
	P	A	L	E	R
↓	Dr	Cr	Dr	Cr	Dr

- P = Proprietorship or Owners Equity
- For nature of account balances refer to “increasing” rules

The Accounting Equation and Principle

- **Accrual basis**

- ↳ An accounting method in which revenue is recorded when a sale is made and an expense is recorded when it is incurred

- **Cash basis**

- ↳ An accounting method in which revenue is recorded when payment is received and an expense is recorded when cash is paid

Depreciation

An accounting procedure for systematically spreading the cost of a tangible asset over its estimated useful life

The Key Financial Statements

- **Balance Sheet:** $\text{Assets} = \text{Liabilities} + \text{Equity}$
 - Snapshot of the Org's finances at a specific point in time.

- **Income Statement:** $\text{Net Income} = \text{Revenue} - \text{Expenses}$
 - Org's financial activity over a defined period of time.

- **Cash Flow Statement:** $\text{Net In/Out Flow} = \text{Cash In} - \text{Cash Out}$
 - Cash used by the Org over a defined period of time.
 - Assesses the amount, timing, & predictability of cash-inflows & outflows, & are used as the basis for budgeting and business-planning
 - One of the most important areas of finances for any organization is cash flow

Balance sheet

- Report the financial position of an accounting entity at a particular point in time

1. Assets - What it owns

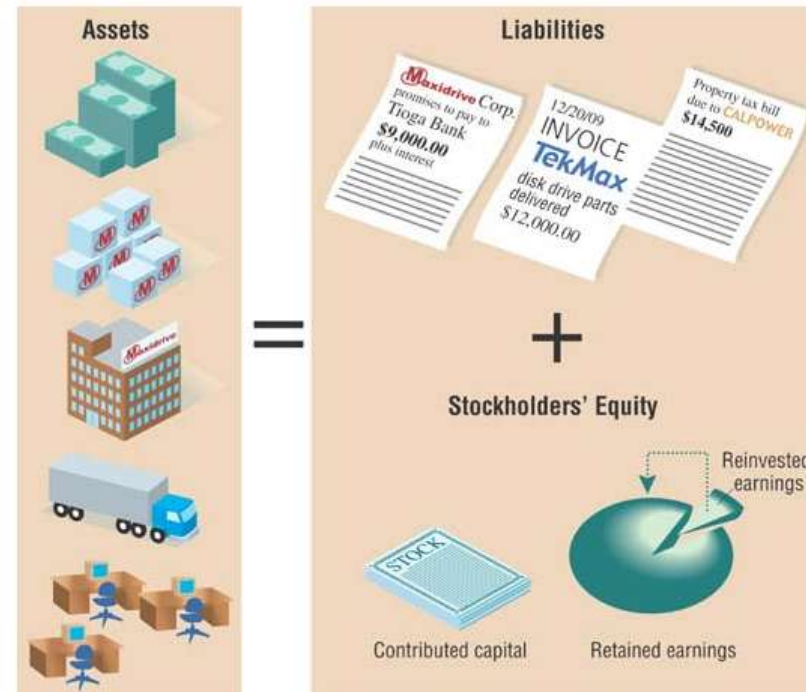
- Any things of value owned or leased by a business

2. Liabilities - What it owes

- Claims against a firm's assets by creditors

3. Owner's Equity - Its net worth (assets - liabilities)

- The portion of a company's assets that belongs to the owners after obligations to all creditors have been met



Assets

- Things that a company owns that have value
- This typically means they can either be sold or used by the company to make products or provide services that can be sold
- Assets include physical property, such as plants, trucks, equipment and inventory. It also includes things that can't be touched but nevertheless exist and have value, such as trademarks and patents. And cash itself is an asset. So are investments a company makes.
- Current assets vs. fixed assets
 - ✓ **Current assets:** cash, short-term investment, accounts receivable, inventories
 - ✓ **Fixed assets:** property, land, equipment, long-term investment, intangible assets (goodwill)

Liabilities

- Amount of money that a company owes to others
- This includes all kinds of obligations, like money borrowed from a bank to launch a new product, rent for use of a building, money owed to suppliers for materials, payroll a company owes to its employees, environmental cleanup costs, or taxes owed to the government. Liabilities also include obligations to provide goods or services to customers in the future
- Current liabilities vs. long-term liabilities
 - ✓ **Current liabilities:** short-term loan, accounts payable, advance received
 - ✓ **Long-term liabilities:** long-term loan, lease obligation, due to subsidiary / shareholders

Shareholder's Equity (Owner's Equity)

- Also call capital or net worth
- Money that would be left if a company sold all of its assets and paid off all of its liabilities. This leftover money belongs to the shareholders, or the owners, of the company
- Elements:
 - ✓ **Capital:** common equity and preferred equity
 - ✓ **Retained earning:** portion of net income of a corporation that is retained by the corporation rather than distributed to shareholders as dividend

Kraft Foods Group, Inc. Consolidated Balance Sheet (\$ in millions of dollars)

	December 31 2011	December 31 2012		December 31 2011	December 31 2012
ASSETS					
Cash And Equivalents	\$4,623	\$3,897	Long-Term Debt	-	2,000
Accounts Receivable	903	1,089	Capital Leases	27	-
Inventory	1,943	1,928	Pension & Other Post-Retire. Benefits	117	123
Deferred Tax Assets, Curr.	232	420	Def. Tax Liability, Non-Curr.	1,594	288
Other Current Assets	194	131	Other Non-Current Liabilities	641	405
Total Current Assets	7,895	7,465	Total Long-Term Liabilities	2,379	2,816
Net Property, Plant & Equipment	4,278	4,204	Total Liabilities	4,951	6,422
Goodwill	11,316	11,346	Common Stock	16,713	16,713
Other Intangibles	2,630	2,631	Retained Earnings	5,073	3,298
Other Long-Term Assets	43	325	Treasury Stock	-	(2)
Total Fixed Assets	18,267	18,506	Comprehensive Inc. and Other	(125)	(460)
Total Assets	26,162	25,971	Total Equity	21,661	19,549
LIABILITIES					
Accounts Payable	1,447	1,556	Total Liabilities And Equity	26,612	25,971
Accrued Exp.	817	1,194			
Curr. Port. of LT Debt	25	5			
Curr. Port. of Cap. Leases	8	-			
Other Current Liabilities	275	851			
Total Current Liabilities	2,572	3,606			

Income Statement

- The income statement measure of performance of a business, revenues less expenses during the accounting period
 - Also known as a profit and loss statement

1. Revenue
2. Expenses
3. Net income (revenues - expense:



Elements of Income Statement

- **Revenue:** topline, sales

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- **Cost of Goods Sold:** the cost of producing or acquiring a company's products for sale during a given period

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- **Gross Profit:** the amount remaining when the cost of goods sold is deducted from net sales

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- **Operating expenses:** all costs of operation that are not included under cost of goods sold.

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- **Net Income:** profit earned or loss incurred by a firm, determined by subtracting expenses from revenues

Kraft Foods Group, Inc.
Consolidated Income Statement
(\$ in millions of dollars)

	December 31 2011	December 31 2012
Revenue	\$18,655	\$18,339
Cost Of Goods Sold	12,813	12,499
Gross profit	5,842	5,840
Selling General & Admin Exp.	2,818	2,820
R & D Exp.	198	178
Total Operating Expenses	3,016	2,998
Operating Income	2,826	2,842
Interest Expense	47	8
Other Non-Operating Inc. (Exp.)	52	21
Restructuring Charges	2	360
Income Tax Expense	950	811
Net income	1,775	1,642

(? in THB)

	2016A	2016A
	A	B
Pizza sold per day	1,000	500
days in a year	365	365
Pizza sold per year	365,000	182,500
Pizza sold (Total)	365,000	182,500
Price per plate	? 100	? 200
Revenue	<input type="text"/>	<input type="text"/>
Pizza sold (Total)	365,000	182,500
COGS per plate	30	30
COGS	<input type="text"/>	<input type="text"/>
Gross Profit	<input type="text"/>	<input type="text"/>
<i>Gross Margin</i>	<input type="text"/>	<input type="text"/>
SG&A*	? 2,340,000	? 1,020,000
Operating Profit	<input type="text"/>	<input type="text"/>
<i>Operating Profit Margin (%)</i>	<input type="text"/>	<input type="text"/>
Tax	6,963,000	9,001,500
Net Income	<input type="text"/>	<input type="text"/>
<i>Net Profit Margin (%)</i>	<input type="text"/>	<input type="text"/>

* assumes SGA is fixed cost (i.e. not vary with production scale)

(฿ in THB)

	2012A	2012A
	A	B
Variable Cost	<input type="text"/>	<input type="text"/>
Fixed Cost	<input type="text"/>	<input type="text"/>
Total Cost	<input type="text"/>	<input type="text"/>
Cost per plate	<input type="text"/>	<input type="text"/>

If the owner of A invested THB 1,000,000, what is ROI of his investment in 2016?

If the owner of B invested THB 1,000,000, what is ROI of his investment in 2016?

Statement of cash flow

- Showing how much company generate during a specific time period
- Statement of cash flows divides cash inflows and outflows (receipts and payments) into the 3 primary categories of cash flows

+/- Cash Flows from Operating Activities (CFO)

+/- Cash Flows from Investing Activities (CFI)

+/- Cash Flows from Financing Activities (CFF)

Change in Cash

Statement of Cash Flows

Computer Central Services		
Statement of Cash Flows		
Year ended December 31, 2014		
(\$ thousands)		
Cash Flows from Operating Activities*		
Net Income	\$ 60,000	
Adjustments to Reconcile Net Income to		
Net Cash Provided by Operating Activities	<u>-40,000</u>	
<i>Net Cash Provided by or Used in Operating Activities</i>		\$20,000
Cash Flows from Investing Activities		
Purchase of Property and Equipment	-30,000	
Purchase of Securities	-115,000	
Redemption of Securities	<u>125,000</u>	
<i>Net Cash Provided by or Used in Operating Activities</i>		-20,000
Cash Flows from Financing Activities		
Loan Proceeds	15,000	
Payment of Long-Term Debt	<u>-10,000</u>	
<i>Net Cash Provided by or Used in Operating Activities</i>		5,000
Net (Decrease) Increase in Cash		<u>5,000</u>
Cash and Cash Equivalents at Beginning of Year		\$18,000
Cash and Cash Equivalents at End of Year		<u>\$23,000</u>

Most companies start with net income and make adjustments for various inflows and outflows throughout the year

Cash from buying or selling property and securities

Cash from borrowing or repaying existing debts

The company had positive cash flow in two of the three cash flow categories

The company experienced a net increase in cash of \$5 million over the course of the year

As a result of the \$5 million cash inflow, the company ended the year with \$23 million in cash

*Numbers preceded by minus sign indicate cash outflows.

Profitability

$$\text{Profit} = \text{Revenue} - \text{Cost}$$

$$\text{Profit Margin (\%)} = \text{Profit} / \text{Revenue}$$

- Gross Profit = Revenue – Cost of Goods Sold (COGS)
- Gross Profit Margin = Gross Profit / Revenue

- Operating Profit = EBIT = Gross Profit – Operating Expenses
- Operating Profit Margin = Operating Profit / Revenue

- Net Profit = Net Income = Operating Profit – Interest Expenses – Tax
- Net Profit Margin = Net Profit / Revenue

Profit margin vs. Return on Investment

- Profit margin
 - ✓ Profit = revenue – Cost
 - ✓ Cost = variable cost + fixed cost
 - ✓ Profit Margin = Net Income/ revenue
- Return on Investment (ROI)
 - ✓ Investment = capital invested
 - Equity investment only
 - ✓ ROI = Net Income/ Investment

Standard ROI calculations do not account for debt and can give a false impression of business health.

Liquidity Ratios

- **Working Capital**

- Current assets minus current liabilities

- **Current Ratio**

- A measure of a firm's short-term liquidity, calculated by dividing current assets by current liabilities

- **Quick Ratio**

- A measure of a firm's short-term liquidity, calculated by adding cash, marketable securities, and receivables, then dividing that sum by current liabilities
- Also known as the *acid-test ratio*

Activity Ratios

- **Inventory Turnover Ratio**

- A measure of the time a company takes to turn its inventory into sales, calculated by dividing cost of goods sold by the average value of inventory for a period

- **Accounts Receivable Turnover Ratio**

- A measure of the time a company takes to turn its accounts receivable into cash, calculated by dividing sales by the average value of accounts receivable for a period

Leverage or Debt Ratios

- **Debt-to-Equity Ratio**

- A measure of the extent to which a business is financed by debt as opposed to invested capital, calculated by dividing the company's total liabilities by owners' equity

- **Debt-to-Assets Ratio**

- A measure of a firm's ability to carry long-term debt, calculated by dividing total liabilities by total assets

Exercise: the following items were Widget Manufacturing Company's Balance Sheet items. Use these items to create a balance sheet.

Items	\$
cash	2,550
marketable securities	2,000
account receivables	16,675
Inventories	26,470
Plant & Equipment	41,000
Accounts payable	9,500
Short-term loan	11,375
Long-term debt	24,000
Common shares	25,000
Retained earnings	7,820

Depreciation is \$11,000