

Chapter 3: Accounting and Finance**INTRODUCTION**

Accounting Function: Gathering, processing, and reporting data.

End result is a set of four financial statements

1- Balance sheet

2-Income statement

3-Statement of retained earnings

4-Statement of cash flow

Annual Report includes:

- Financial highlights: include key figures such as sales, net income, and EPS.
- Letter to stockholders from CEO: assessment of the firm performance and future plan.
- Management Discussion & Analysis
- Financial performance : Summary of financial ratios, Balance sheet, Income statement, Statement of retained earnings, Statement of cash flows, Report from the independent auditor
- Members of the management team and board of directors

BALANCE SHEET

Provides a snapshot of a firm's financial condition as of a particular date.

Table 3.2 Major Components of the Balance Sheet			
Assets		Liabilities and Stockholders' Equity	
Current assets	\$	Current liabilities	\$
		Long-term liabilities	\$
Fixed assets	\$	Stockholders' equity	\$
Total Assets	\$	Total Liabilities, Stockholders' Equity	\$

Major Components of the Balance Sheet

Total assets = Current assets + Fixed assets

Total liabilities = Current liabilities + Long term liabilities

Total Stockholders' equity = Preferred and Common stocks at par value + paid in Capital + retained earnings + Accumulated other comprehensive income – treasury stocks at cost.

Total assets = Total liabilities + Total Stockholders' equity

Current Assets: includes,

Cash

Cash equivalents: T-bills, commercial paper, and other

Accounts receivable

Inventory: FIFO vs. LIFO. In inflationary setting firms use LIFO for tax purposes.

Prepaid expenses

Other current assets: for example, deferred income taxes

- Deferred income tax asset happen when income reported to stockholders is less than the income reported to tax authority.
- Deferred income tax liability happen when income reported to stockholders is more than the income reported to tax authority.

The difference between the two reported incomes occur for many reasons, but one major source is the use of accelerated depreciation methods for tax purposes and straight-line method for reporting purposes.

Fixed Assets: includes

Property, plant, and equipment – accumulated depreciation

Straight-line depreciation Expenses = (cost – salvage value) / economic life of assets

Straight-line or Accelerated depreciation: firms use accelerated dep. To reduce taxes in early years.

Asset	Straight-Line Method			Accelerated Method		
	Year 1	Year2	Year3	Year1	Year2	Year3
Original Cost	\$300	\$300	\$300	\$300	\$300	\$300
Depreciation Expenses	\$100	\$100	\$100	\$150	\$100	\$50
Accumulated Depreciation	\$100	\$200	\$300	\$150	\$250	\$300
Net Book Value	\$200	\$100	\$0	\$150	\$50	\$0

Intangible and Other Assets

Intangible: examples: Trademarks, Patents, Goodwill.

Other Assets: Long-term assets that do not fit into other categories

Current liabilities: includes Accounts payable, Notes payable, and Accrued liabilities, current portion due from long term debt.

Long-term liabilities: includes long term bank loan, Mortgage bonds, Debentures, pension liabilities, and deferred taxes owed to the government.

- Accrued liabilities happen because of accrual basis of accounting. This means that revenue and expenses are recognized when they are incurred rather than when cash is received or paid. Usually, wages payable and tax payable.

Total Stockholders' equity = Preferred and Common stocks at par value + paid in Capital + retained earnings + Accumulated other comprehensive income – treasury stocks at cost.

* Accumulated other comprehensive income includes currency translation gains or losses, deficit or surplus in pension fund liability, hedging transactions losses and gains.

INCOME STATEMENT

Captures the operating results of the firm over a period of time .Details the earnings generated by the firm after all expenses have been subtracted from the revenues.

Components of the Income Statement

Sales

- **Cost of sales:** direct cost of producing the merchandize (raw materials and labor)

= Gross profit margin

- **Operating expenses:**

Selling, general, and administrative expenses: marketing expenses, managers' salary.
Depreciation expenses, R & D expenses

= Operating profit or Earning before Interest and tax (EBIT)

- **Non-operating expenses:** interest expenses and other expenses

= Earnings before income tax and extraordinary items

- **Income tax**

- **Extraordinary items:** nonrecurring items

= Earnings after taxes (EAT)

- **Preferred stock dividends**

= Earnings available to common stockholders (Net Income)

Book Values and Market Values

- Assets and liabilities are usually “booked” at their historical or original cost value. Shareholders and managers are concerned about the market value of their stock, so their focus is on a market value driven balance sheet. While book values are oriented to original cost, market value is oriented to value in use or economic value: the ability to generate future cash flows.
- The market value of assets minus the market value of liabilities is the market value of shareholders' equity.

Profits versus Cash Flow

- * Shareholders and managers are concerned about maximizing shareholder value, which is oriented toward estimating and generating cash flows.
- * Certain non-cash expenses, such as depreciation and amortization, are allocated to a specific period to measure accounting profit. These non-cash expenses cause profit to be less than what operating cash flow actually is and thus non-

cash expenses (non-cash revenues) must be added back to (subtracted from) profit to estimate cash flow in a period. In addition capital expenditures, which are capitalized and depreciated or expensed over future periods, incur cash outlays when purchased.

- Another reason why profits and cash flow differ is explained by comparing cash accounting versus accrual accounting. Accrual accounting emphasizes profit measurement in a period: the revenue earned in the period; the expenses incurred in the period. Cash flow is oriented to cash collected versus disbursed in a period. Adjusting entries, accruals, receivable, prepaid expenses, and payable liabilities cause accounting profits measured in a period to differ from cash flow in the same period.

Example: Cash flow versus profit

Suppose a firm pays \$100 to produce some goods. It sells those goods in year 2 for \$150 but did not collect it is money until year 3. Ignoring interest and taxes and other operating expenses, its income and cash flow will be as follows:

	Year 1	Year 2	Year 3
Sales	0	150	0
-COGS	0	100	0
Net Income	0	50	0
-Change in AR	0	150	-150
-Change in Inventory	100	-100	0
Net Operating Cash Flow	-100	0	150

How much is the Net income over the 3 years?

How much is the Operating cash flow over the 3 years?

STATEMENT OF CASH FLOWS

Purpose is to provide relevant information about a company's cash receipts and cash payments during a particular accounting period.

It is different from the net income statement because it involves only cash based activities.

Shows the affects of a company's operating, investing, and financing activities on its cash balance

Table 3.8 Format of Statement of Cash Flows	
Cash flows from operating activities	\$
Cash flows from investing activities	\$
Cash flows from financing activities	\$

Net increase (decrease) in cash	\$
Cash at beginning of period	\$

Cash at end of period	\$

Cash flows from Operating Activities

The cash inflow and outflow from direct operation like sales, payments for raw materials and labor, interest paid or received, and taxes paid.

Two methods: 1- Direct and 2-Indirect

Direct method

➤ **Firm reports cash flows and cash out flows from operating activities**

Table 3.9 Illustrative Format for Direct Method of Determining Cash Flow from Operations	
Cash flows from operating activities:	
Cash received from customers	\$10,000
Cash paid to suppliers and employees	(8,400)
Interest received on marketable securities account	450
Interest paid on loans	(215)
Income taxes paid	(1,250)
Net cash provided by (used in) operating activities	\$585

Indirect method

- **Convert net income to cash flow from operating activities**
- **Adjust for transactions that affect income but did not affect the cash balance**

OCF = Net Income

Add **Depreciation expense**

Subtract **Change in Account receivable, inventory, prepaid expenses**

Add **Change in account payable, accrued liabilities, net deferred tax liabilities**

Cash flows from Investing Activities

Refer to the cash received or paid when the firm tries to buy or sell long term fixed assets.

Cash flows from financing Activities

Refer to the issuance and the retirement of stocks and bonds, payment of dividends. Interest expenses paid are not included here. Interest expenses are considered part of the operating activities.

Example1:

The Ragin Cajun had an operating income (EBIT) of \$260,000 last year.

The firm had \$18,000 in depreciation expenses, \$15,000 in interest expenses, and \$60,000 in selling, general, and administrative expenses.

If the Cajun has a marginal tax rate of 40 percent, what was its after-tax cash flow for last year?

$$\text{EBT} = \$260,000 - \$15,000 = \$245,000$$

$$\text{EAT} = \$245,000(1 - 0.40) = \$147,000$$

$$\text{ATCF} = \$147,000 + \$18,000 = \$165,000$$

Example2:

Triangle Systems had earnings after tax of \$1,000,000 last year.

Included in its expenses were \$50,000 of interest, \$100,000 of prepaid expenses, and \$150,000 of depreciation. In addition, the company paid dividends of \$200,000 to its stockholders last year.

What was Triangle's after-tax cash flow last year?

$$\text{ATCF} = \$1,000,000 + \$150,000 - \$100,000 = \$1,050,000$$