Chapter 3

Accounting and Finance

Topics Covered

- **C**The Balance Sheet
- **C**The Income Statement
- The Statement of Cash Flows
- Accounting Practice & Malpractice
- **D**Taxes
- * Accounting is not the same as finance, but if you don't understand the basics of accounting, you won't understand finance either

The Balance Sheet

Definition

Financial statements that show the value of the firm's assets and liabilities at a particular point in time

The Balance Sheet



Market Value vs. Book Value

Book Values are determined by GAAP (generally accepted accounting principles)
→ They are the past cost of the assets
→ They are backward-looking measures of value

Market Values are determined by current values → They are forward-looking

The "Market Values" of equities are usually higher than their "Book Values"

Market Value vs. Book Value

Example

According to GAAP, your firm has equity worth \$6 billion, debt worth \$4 billion, assets worth \$10 billion. The market values your firm's 100 million shares at \$75 per share and the debt at \$4 billion.
Q: What is the market value of your assets?

A: Since (Assets=Liabilities + Equity), your assets must have a market value of \$11.5 billion.

Market Value vs. Book Value

Example (continued)



The Income Statement

Definition

Financial statement that shows the revenues, expenses, and net income of a firm over a period of time

The Income Statement

Earnings Before Income & Taxes (EBIT)

EBIT = total Revenues

- costs

- deprecation

The Income Statement

PEPSICO Income Statement (2004) (p.55 Table 3-2)

Net Sales	29,261
Cost of goods sold	12,142
Selling, G&A expenses	10,142
Depreciation expense	<u>1,264</u>
EBIT	5,713
Net interest expense	167
Taxable Income	5,546
Income Taxes	<u>1,334</u>
Net Income	4,212

Profits vs. Cash Flows

Differences

- **C**"Profits" subtract depreciation (a non-cash expense)
- Profits" ignore cash expenditures on new capital (the expense is capitalized)
- *Cash profit = Accrual profit + Depreciation New Capital Equipment Expense
- "Profits" record income and expenses at the time of sales, not when the cash exchanges actually occur
- *Cash Inflow = Sales (Increment of Receivables) (p.56 point 2)
- **C**" "Profits" do not consider changes in working capital
- *Cash Outflow = Cost of Goods Sold + (Increment of Inventories) (p.56 point 3)

The Statement of Cash Flows

Definition

Financial statement that shows the firm's cash receipts and cash payments over a period of time

The Statement of Cash Flows

PEPSICO Statement of Cash Flows (2004) (p. 58 Table 3-3)

Net Income	4,212	
Non-cash expenses		
Depreciation	854	
Changes in working capital		
A/R=169, Inv=129, other C/A=951		
A/P=(619), S/D=463, other C/L=493	(912)	← -169-129-951-619+463+493
Cash Flow from operations	4,154	
Cash Flow from investments	(1,805)	
Cash provided by financing	(1,889)	
Net Change in Cash Position	460	

Accounting Practice

- Stock options (do not show up as an expense, but Financial Accounting Standard Board (FASB) decided to require firms to treat stock options as an expense starting in 2005)
- Adjust the reserves about the receivables and payables (cookie-jar reserves)
- ●Off-balance-sheet assets and liabilities (答應別 家公司要還之債,但並未記在資產負債表中)
- Revenue recognition (record a sale immediately, but do not recognized the return from the customers until very lately)

Taxes have a major impact on financial decisions

Marginal Tax Rate is the tax that the individual pays on each extra dollar of income.

<u>Average Tax Rate</u> is the total tax bill divided by total income.

<u>Example</u> - Taxes and Cash Flows can be changed by the use of debt. Firm A pays part of its profits as debt interest. Firm B does not.

	Firm A	Firm B
EBIT	100	100
Interest	(40)	(0)
Pretax Income	60	100
Taxes (35%)	(21)	(35)
Net Income	39	65

<u>FOOD FOR THOUGHT</u> - If you were both the debt and equity holders of the firm, which would generate more cash flow to you? (assume Net Income = Cash Flow)

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	Firm A	Firm B
Net Income	39	65
+ Interest	40	0
Net Cash Flow	79	65

Corporate Tax Rates (2005)

Taxable Income (\$)	Tax Rate (%)
0-50,000	15
50,001-75,000	25
75,001-100,000	34
100,001-18,333,333	34-39
over 18,333,333	35

Personal Tax Rates (2005)

Single Taxable	Married Taxable	
Income (\$)	Income (\$)	Tax Rate (%)
0-7,300	0-14,000	10
7,300-29,700	14,600-59,400	15
29,700-71,950	59,400-119,950	25
71,950-150,150	119,950-182,800	28
150,150-623,450	182,800-326,450	33
over 326,450	over 326,450	35