Chapter 2

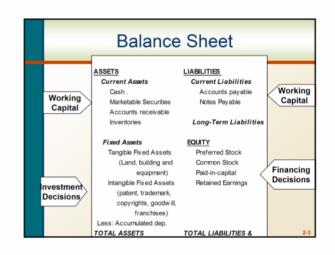
 Financial Statements, Taxes, and Cash Flows

Key Concepts and Skills

- Review the <u>Balance Sheet</u> and the <u>Income</u> <u>Statement</u>
- Know
 - the difference between <u>book value</u> and <u>market value</u>
 - the difference between <u>average</u> and <u>marginal tax</u> rates
- Prepare a firm's <u>Cash Flow Statement</u> from it's financial statements

Balance Sheet

- The balance sheet is a picture of the firm's assets and liabilities, and the differences between the two gives us the firms equity at a given point in time
- Balance Sheet Identity
 - Assets = Liabilities + Stockholders' Equity
 - Owners Equity = Assets Liabilities



Net Working Capital S-T financing decision Current Assets - Current Liabilities Usually positive in a healthy firm Managing cash, inventories and S-T borrowing and lending (Eg. Credit terms extended to customers) Investment Decision Whether to purchase or sale of any assets Enancing Decision Choice of whether to borrow money or to issue new ownership share

US Corporation Balance Sheet

U.S. CORPORATION 2004 and 2005 Balance Sheets (\$ in millions)					
Asset	8		Liabilities and Owners' Equity		
	2004	2005		2004	2005
Current assets			Current liabilities		
Cash	\$ 104	\$ 160	Accounts payable	\$ 232	\$ 260
Accounts receivable	455	688	Notes payable	196	123
Inventory	553	555	Total	\$ 428	\$ 38
Total	\$1,112	\$1,403			
Fixed assets					
Net plant and			Long-term debt	\$ 408	\$ 45
equipment	\$1,644	\$1,709			
			Owners' equity		
			Common stock and		
			paid-in surplus	600	640
			Retained earnings	1,320	1,62
			Total	\$1,920	\$2,265
			Total liabilities and		
Total assets	\$2,756	\$3,112	owners' equity	\$2,756	\$3,11
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Income Statement

- Measures performance over some period of time.
 - Report revenues first and then deduct any expenses for the period

Income Statement

Sales -COGS

Gross Profit

-<u>Operating Expenses</u> (selling exp., general & administrative exp., lease exp., depreciation exp.)

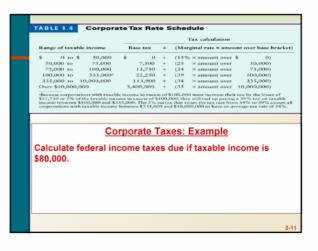
- Operating Profits (EBIT)
- <u>-Interest Expense</u>
 Net Profit Before Taxes
- -Taxes (rate:25%)
- Net Profit After Taxes (Net Income)
- -Preferred stock dividends
- Earning available for common stockholders

U	US Corporation Income Statement					
	U.S. CORPORATION 2005 Income Statement (\$ in millions)					
	Net sales		\$1,509			
	Cost of goods sold		750			
	Depreciation		65			
	Earnings before interest and taxes		\$ 694			
	Interest paid		70			
	Taxable income		\$ 624			
	Taxes		212			
	Net income		\$ 412			
	Dividends	\$103				
	Addition to retained earnings	309				

Net Income NI belongs to the owners, which can either be paid out in dividends or reinvested in the firm. When NI is reinvested in the firm it become additional equity investment and showed up in the retained earning account. NI is expressed on /share basis is called earning per share (EPS). EPS : Net Income / Total shares outstanding

Corporate Taxes

- Both individuals and businesses must pay taxes on income.
- The income of sole proprietorships and partnerships is taxed as the income of the individual owners, whereas corporate income is subject to corporate taxes. (See Table of tax rate schedule in effect of 2004)



Average and Marginal Taxes

- A firm's <u>marginal tax rate</u> represents the rate at which additional income is taxed.
- The <u>average tax rate</u> is the firm's taxes divided by taxable income.

Example

What is the marginal and average tax rate for the previous example?

Debt versus Equity

Companies gain and losses are changes as the company increases the amount of debt in the capital structure.

In calculating taxes, corporations may deduct operating expenses and interest expense but not dividends paid.

- The tax deductibility of interest and other certain expenses reduces their actual (after-tax) cost to the profitable firm.
- It is the non-deductibility of dividends paid that results in double taxation under the corporate form of organization.

•Example 2.1

• Two companies, Debt Co. and No Debt Co., both expect in the coming year to have EBIT of \$200,000 and tax rate is 40%. During the year, Debt Co. will have to pay \$30,000 in interest expenses. No Debt Co. has no debt and will not pay interest expenses.

Debt versus Equity Financing

	Debt Co.	No Debt Co.
Earnings before interest and taxes	\$200,000	\$200,000
Less: Interest expense	30,000	0
Earnings before taxes	\$170,000	\$200,000
Less: Taxes (40%) Earnings after taxes	68,000 \$102,000	80,000 \$120,000
Difference in earnings after taxes	\$18	,000
Tax Advantage:		
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Market vs. Book Value

Book Value

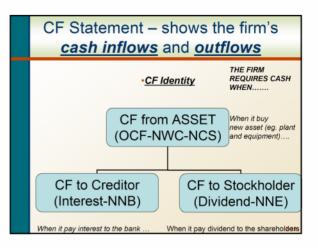
- The b/sheet provides the BV of the assets, liabilities and equity.
- Can be precisely measured
- Market Value
 - MV is the price at which the assets, liabilities or equity can actually be bought or sold.
 - Can be difficult to estimate and different analyst would come with different number
- Which is more important to the decisionmaking process?

Example 2.2 Klingon Corporation

	KLINGON CORPORATION				
		Balance	Sheets		
	Market	Value ve	rsus Boo	k Value	
	Book Market			Book	Market
Assets			Liabilities and Shareholders' Equity		
NWC	\$ 400	\$ 600	LTD	\$ 500	\$ 500
NFA	700	1,000	SE	600	1,100
	1,100	1,600		1,100	1,600

Statement of CF

- Financial manager can derive CF statement from <u>financial statements</u>.
- Statement of CF shows the firm's <u>cash</u> <u>receipt</u> and <u>cash payment</u> over a period of time.
- <u>Handling non-cash expense is important.</u>
 - Depreciation is a non cash expense.
 Depreciation reduced in B/Sheet : reflects adjustment made in asset BV.
 - However, it is not a cash outflow, therefore it is important to handle it in the CF statement.



	Cash Flow Summary Table
ī,	The cash flow identity
	Cash flow from assets = Cash flow to creditors (bondholders)
н	+ Cash flow to stockholders (owners) Cash flow from assets
	Cash flow from assets = Operating cash flow - Net capital spending - Change in net working capital (NWC) where: Operating cash flow = Earnings before interest and taxes (EBIT) + Depreciation - Taxes Net capital spending = Ending net fixed assets - Beginning net fixed assets + Depreciation Change in NWC = Ending NWC - Beginning NWC Cash flow to creditors (bondholders)
	Cash flow to creditors = Interest paid - Net new borrowing
	Cash flow to stockholders (owners)
	Cash flow to stockholders = Dividends paid - Net new equity raised

Self-Test Problem, Q.2.1, p/39 Mara Corp., 2004 & 2005 Balance Sheet (\$) 2004 2005 2004 2005 2,205 2,429 c/a's 2,205 2,429 c/l's 1,003 1,255

c/a's	2,205	2,429	c/l's	1,003	1,255
Net FA's	7,344	7,650	L-T debt	3,106	2,085
			Equity	<u>5,440</u>	<u>6,739</u>
ТА	9,549	10,079	Tot.Liab.&o/e	9,549	10,079
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Mara Corp. 2005 Inco (\$)	ome Statement
Sales - COGS - Depr. EBIT - Int. Paid Taxable Income - Taxes (35%) NI Dividends Addition to retained earnings	4,507 2,633 952 922 196 726 254 472 250 222
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