

FN 201 : Lecture Note 1

Introduction to corporate finance and financial statements

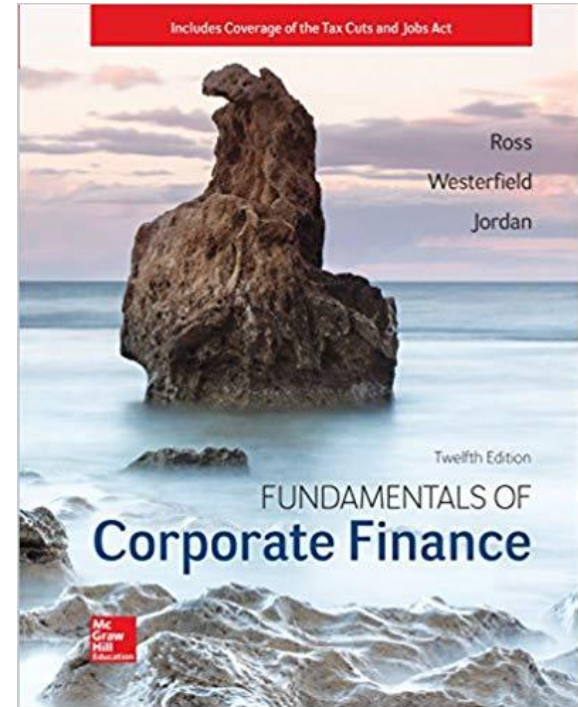
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READING

- Ross, S.A., Westerfield, R.W., Jordan, B.D., (2012). Fundamentals of Corporate Finance. 10th Edition. New York: McGraw-Hill/Irwin.

Chapter 1 and Chapter 2



OUTLINE

- 1. Introduction to corporate finance**
- 2. Financial statements, taxes, and cash flow**

1. Introduction to corporate finance

KEY CONCEPTS AND SKILLS

- Define the basic types of financial management decisions and financial manager
- the role of the
- Explain the goal of financial management
- Articulate the financial implications of the different forms of business organization
- Explain the conflicts of interest that can arise between managers and owners

CHAPTER OUTLINE

- Corporate Finance and the Financial Manager
- Forms of Business Organization
- The Goal of Financial Management
- The Agency Problem and Control of the Corporation

CORPORATE FINANCE

- Some important questions that are answered using finance:
 - What long-term investments should the firm take on?
 - Where will we get the long-term financing to pay for the investment?
 - How will we manage the everyday financial activities of the firm?

FINANCIAL MANAGER

- Financial managers try to answer some or all of these questions.
- The top financial manager within a firm is usually the Chief Financial Officer (CFO).
- Other financial managers include:
 - Treasurer – oversees cash management, credit management, capital expenditures, and financial planning
 - Controller – oversees taxes, cost accounting, financial accounting and data processing

FINANCIAL MANAGEMENT DECISIONS

- Capital budgeting
 - What long-term investments or projects should the business take on?
- Capital structure
 - How should we pay for our assets?
 - Should we use debt or equity?
- Working capital management
 - How do we manage the day-to-day finances of the firm?

FORMS OF BUSINESS ORGANIZATION

- Three major forms in the United States
 - Sole Proprietorship
 - Partnership
 - General
 - Limited
 - Corporation
 - Limited Liability Company

SOLE PROPRIETORSHIP

- Advantages
 - Easiest to start
 - Least regulated
 - Single owner keeps all the profits
 - Taxed once as personal income
- Disadvantages
 - Limited to life of owner
 - Equity capital limited to owner's personal wealth
 - Unlimited liability
 - Difficult to sell ownership interest

PARTNERSHIP

- Advantages

- Two or more owners
- More capital available
- Relatively easy to start
- Income taxed once as personal income

- Disadvantages

- Unlimited liability
 - General partnership
 - Limited partnership
- Partnership dissolves when one partner dies or wishes to sell
- Difficult to transfer ownership

CORPORATION

- Advantages
 - Limited liability
 - Unlimited life
 - Separation of ownership and management
 - Transfer of ownership is easy
 - Easier to raise capital
- Disadvantages
 - Double taxation (income taxed at the corporate rate and then dividends taxed at the personal rate)

GOAL OF FINANCIAL MANAGEMENT

- What should be the goal of a corporation?
 - Maximize profit?
 - Minimize costs?
 - Maximize market share?
 - Maximize the current value of the company's stock?
- Does this mean we should do anything and everything to maximize owner wealth?

THE AGENCY PROBLEM

- Agency relationship
 - Principal hires an agent to represent his/her interests
 - Stockholders (principals) hire managers (agents) to run the company
- Agency problem
 - Conflict of interest between principal and agent

MANAGING MANAGERS

- Managerial compensation
 - Incentives can be used to align management and stockholder interests.
 - The incentives need to be structured carefully to make sure that they achieve their goal.
- Corporate control
 - The threat of a takeover may result in better management.
- Other stakeholders

QUICK QUIZ

- What are the three types of financial management decisions and what questions are they designed to answer?
- What are the three major forms of business organization?
- What is the goal of financial management?
- What are agency problems and why do they exist within a corporation?



2. Financial statements, taxes, and cash flow

KEY CONCEPTS AND SKILLS

- Describe the difference between accounting value (or “book” value) and market value
- Describe the difference between accounting income and cash flow
- Describe the difference between average and marginal tax rates
- Determine a firm’s cash flow from its financial statements

CHAPTER OUTLINE

- The Balance Sheet
- The Income Statement
- Taxes
- Cash Flow

BALANCE SHEET

- The balance sheet is a snapshot of the firm's assets and liabilities at a given point in time.
- Assets are listed in order of decreasing liquidity.
 - Ease of conversion to cash
 - Without significant loss of value
- Balance Sheet Identity
 - $\text{Assets} = \text{Liabilities} + \text{Stockholders' Equity}$

THE BALANCE SHEET

FIGURE 2.1

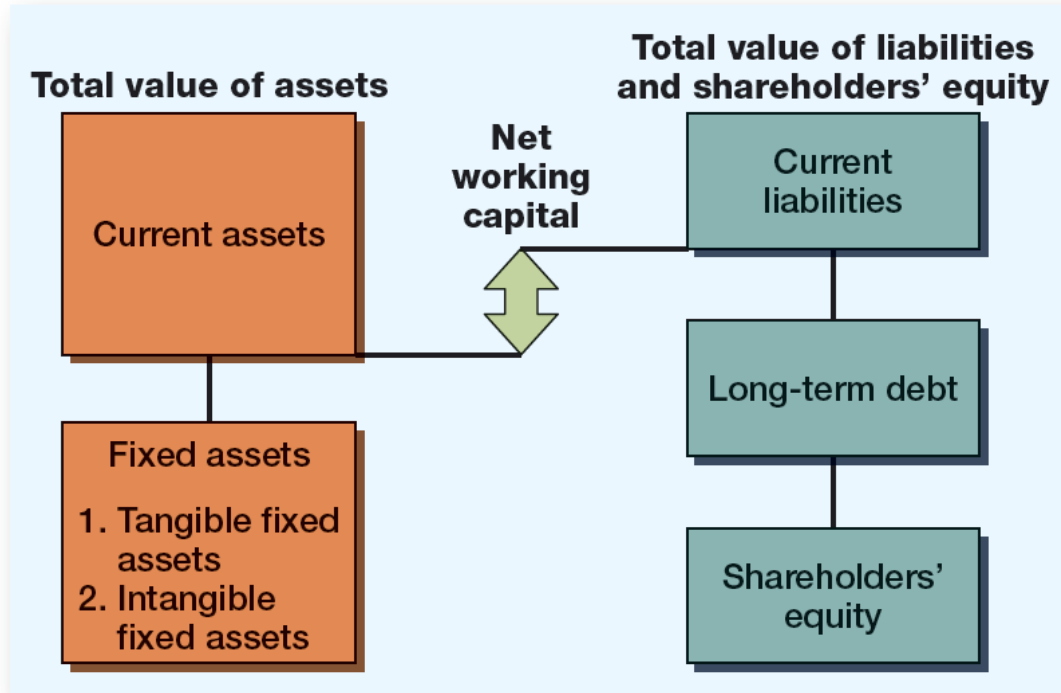


FIGURE 2.1

The Balance Sheet.
Left Side: Total Value of Assets.
Right Side: Total Value of Liabilities and Shareholders' Equity.

NET WORKING CAPITAL AND LIQUIDITY

- Net Working Capital
 - = Current Assets - Current Liabilities
 - Positive when the cash that will be received over the next 12 months exceeds the cash that will be paid out
 - Usually positive in a healthy firm
- Liquidity
 - Ability to convert to cash quickly without a significant loss in value
 - Liquid firms are less likely to experience financial distress.
 - But liquid assets typically earn a lower return.
 - Trade-off to find balance between liquid and illiquid assets

U.S. CORPORATION BALANCE SHEET

TABLE 2.1

U.S. CORPORATION 2017 and 2018 Balance Sheets (\$ In millions)					
Assets			Liabilities and Owners' Equity		
	2017	2018		2017	2018
Current assets			Current liabilities		
Cash	\$ 104	\$ 221	Accounts payable	\$ 232	\$ 266
Accounts receivable	455	688	Notes payable	196	123
Inventory	553	555	Total	\$ 428	\$ 389
Total	<u>\$1,112</u>	<u>\$1,464</u>			
Fixed assets			Long-term debt		
Net plant and equipment	\$1,644	\$1,709		\$ 408	\$ 454
			Owners' equity		
			Common stock and paid-in surplus		
				600	640
			Retained earnings		
				1,320	1,690
			Total	\$1,920	\$2,330
Total assets	<u>\$2,756</u>	<u>\$3,173</u>	Total liabilities and owners' equity	<u>\$2,756</u>	<u>\$3,173</u>

TABLE 2.1
Balance Sheets

MARKET VALUE VS. BOOK VALUE

- The balance sheet provides the book value of the assets, liabilities, and equity.
- Market value is the price at which the assets, liabilities, or equity can actually be bought or sold.
- Market value and book value are often very different. Why?

Which is more important to the decision-making process?

EXAMPLE 2.2

KLINGON CORPORATION

KLINGON CORPORATION					
Balance Sheets					
Market Value versus Book Value					
Assets			Liabilities and Shareholders' Equity		
	Book	Market		Book	Market
Net working capital	\$ 400	\$ 600	Long-term debt	\$ 500	\$ 500
Net fixed assets	<u>700</u>	<u>1,000</u>	Shareholders' equity	<u>600</u>	<u>1,100</u>
	<u><u>\$1,100</u></u>	<u><u>\$1,600</u></u>		<u><u>\$1,100</u></u>	<u><u>\$1,600</u></u>

EXAMPLE

- 11. Market Values and Book Values [LO1]** Klingon Widgets, Inc., purchased new cloaking machinery three years ago for \$6 million. The machinery can be sold to the Romulans today for \$5.1 million. Klingon's current balance sheet shows net fixed assets of \$3.4 million, current liabilities of \$895,000, and net working capital of \$235,000. If the current assets and current liabilities were liquidated today, the company would receive a total of \$1.15 million cash. What is the book value of Klingon's total assets today? What is the sum of the market value of NWC and the market value of fixed assets?

INCOME STATEMENT

- The income statement is more like a video of the firm's operations for a specified period of time.
- You generally report revenues first and then deduct any expenses for the period.
- Matching principle – GAAP says to show revenue when it accrues and match the expenses required to generate the revenue

U.S. CORPORATION INCOME STATEMENT - TABLE 2.2

TABLE 2.2
Income Statement

U.S. CORPORATION	
2018 Income Statement	
(\$ in millions)	
Net sales	\$1,509
Cost of goods sold	750
Depreciation	<u>65</u>
Earnings before interest and taxes	\$ 694
Interest paid	<u>70</u>
Taxable income	\$ 624
Taxes (21%)	<u>131</u>
Net income	<u><u>\$ 493</u></u>
Dividends	\$123
Addition to retained earnings	370

TAXES

- Marginal vs. average tax rates
 - Marginal tax rate – the percentage paid on the next dollar earned
 - Average tax rate – the tax bill / taxable income
 - Average tax rates vary widely across different companies and industries

EXAMPLE: MARGINAL VS. AVERAGE RATES

Taxable Income		Tax Rate
\$	0– 50,000	15%
	50,001– 75,000	25
	75,001– 100,000	34
	100,001– 335,000	39
	335,001–10,000,000	34
	10,000,001–15,000,000	35
	15,000,001–18,333,333	38
	18,333,334+	35

THE CONCEPT OF CASH FLOW

- Cash flow is one of the most important pieces of information that a financial manager can derive from financial statements.
- The statement of cash flows does not provide us with the same information that we are looking at here.
- We will look at how cash is generated from utilizing assets and how it is paid to those that finance the purchase of the assets.

CASH FLOW SUMMARY - TABLE 2.6

I. The cash flow identity

$$\begin{aligned}\text{Cash flow from assets} &= \text{Cash flow to creditors (bondholders)} \\ &+ \text{Cash flow to stockholders (owners)}\end{aligned}$$

II. Cash flow from assets

$$\begin{aligned}\text{Cash flow from assets} &= \text{Operating cash flow} \\ &- \text{Net capital spending} \\ &- \text{Change in net working capital (NWC)}\end{aligned}$$

where:

$$\begin{aligned}\text{Operating cash flow} &= \text{Earnings before interest and taxes (EBIT)} \\ &+ \text{Depreciation} - \text{Taxes}\end{aligned}$$

$$\begin{aligned}\text{Net capital spending} &= \text{Ending net fixed assets} - \text{Beginning net fixed assets} \\ &+ \text{Depreciation}\end{aligned}$$

$$\text{Change in NWC} = \text{Ending NWC} - \text{Beginning NWC}$$

III. Cash flow to creditors (bondholders)

$$\text{Cash flow to creditors} = \text{Interest paid} - \text{Net new borrowing}$$

IV. Cash flow to stockholders (owners)


$$\text{Cash flow to stockholders} = \text{Dividends paid} - \text{Net new equity raised}$$

CASH FLOW FROM ASSETS

- Cash Flow From Assets (CFFA)
 - = Cash Flow to Creditors
 - + Cash Flow to Stockholders

- Cash Flow From Assets
 - = Operating Cash Flow
 - Net Capital Spending
 - Changes in NWC

EXAMPLE

- 12.**  **Calculating Total Cash Flows [LO4]** Square Hammer Corp. shows the following information on its 2018 income statement: Sales = \$305,000; Costs = \$176,000; Other expenses = \$8,900; Depreciation expense = \$18,700; Interest expense = \$12,900; Taxes = \$23,345; Dividends = \$19,500. In addition, you're told that the firm issued \$6,400 in new equity during 2018 and redeemed \$4,900 in outstanding long-term debt.
- What is the 2018 operating cash flow?
 - What is the 2018 cash flow to creditors?
 - What is the 2018 cash flow to stockholders?
 - If net fixed assets increased by \$46,000 during the year, what was the addition to NWC?

EXAMPLE

- 18. Calculating Cash Flows [LO2]** Cardinal Industries had the following operating results for 2018: Sales = \$33,106; Cost of goods sold = \$23,624; Depreciation expense = \$5,877; Interest expense = \$2,650; Dividends paid = \$1,888. At the beginning of the year, net fixed assets were \$19,820, current assets were \$6,970, and current liabilities were \$3,920. At the end of the year, net fixed assets were \$24,394, current assets were \$8,612, and current liabilities were \$4,575. The tax rate for 2018 was 22 percent.
- What is net income for 2018?
 - What is the operating cash flow for 2018?
 - What is the cash flow from assets for 2018? Is this possible? Explain.
 - If no new debt was issued during the year, what is the cash flow to creditors? What is the cash flow to stockholders? Explain and interpret the positive and negative signs of your answers in (a) through (d).

19. **Calculating Cash Flows [LO4]** Consider the following abbreviated financial statements for Parrothead Enterprises:

PARROTHEAD ENTERPRISES 2017 and 2018 Partial Balance Sheets					
Assets			Liabilities and Owners' Equity		
	2017	2018		2017	2018
Current assets	\$1,206	\$1,307	Current liabilities	\$ 482	\$ 541
Net fixed assets	4,973	5,988	Long-term debt	2,628	2,795

PARROTHEAD ENTERPRISES 2018 Income Statement	
Sales	\$15,301
Costs	7,135
Depreciation	1,363
Interest paid	388

- What is owners' equity for 2017 and 2018?
- What is the change in net working capital for 2018?
- In 2018, Parrothead Enterprises purchased \$2,496 in new fixed assets. How much in fixed assets did Parrothead Enterprises sell? What is the cash flow from assets for the year? The tax rate is 21 percent.
- During 2018, Parrothead Enterprises raised \$504 in new long-term debt. How much long-term debt must Parrothead Enterprises have paid off during the year? What is the cash flow to creditors?



Question?