Fundamentals of Corporate Finance 11th edition Ross Solutions Manual

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Chapter 2
FINANCIAL STATEMENTS, TAXES, AND CASH FLOW

CHAPTER WEB SITES

Section	*Web Address*
2.1	finance.yahoo.com money.cnn.com finance.google.com disney.go.com www.sec.gov www.fasb.org
2.3	www.irs.gov

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ANNOTATED CHAPTER OUTLINE

2.1. The Balance Sheet

A. Assets: The Left Side

Assets are divided into several categories. Make sure that students recall the difference between current and fixed assets, as well as tangible and intangible assets.

B. Liabilities and Owners' Equity: The Right Side

The right-hand side is categorized by the firm's debt and ownership. Make sure that students recall the difference between current and long-term liabilities.

Recall the balance sheet identity:
assets = liabilities + owners' equity

Lecture Tip: *Students sometimes find it difficult to see the relationship between the decisions made by financial managers and the values that subsequently appear on the firm's balance sheet. One way to help them see the "big picture" is to emphasize that all finance decisions are either investment decisions or financing decisions. Investment decisions involve the purchase and sale of any assets (not just financial assets). Investment decisions show up on the left-hand side of the balance sheet. Financing decisions involve the choice of whether to borrow money to buy the assets or to issue new ownership shares. Financing decisions show up on the right-hand side of the balance sheet.*

Lecture Tip: *You may find it useful at this point to spend a few minutes reinforcing the concepts of owners' equity and retained earnings. The students should recall that owners' equity consists of the common stock account, paid-in surplus, and treasury stock. It is important to remind students that the firm's net income belongs to the owners. It can either be paid out in dividends or reinvested in the firm. When it is reinvested in the firm, it becomes additional equity investment and shows up in the retained earnings account.*

C. Net Working Capital

The difference between a firm's current assets and its current liabilities.

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Assets are listed on a balance sheet in order of how long it takes to convert them to cash. Liability order reflects time to maturity.

D. Liquidity

It is important to point out to students that liquidity has two components: how long it takes to convert to cash and the value that must be relinquished to convert to cash quickly. Any asset can be converted to cash quickly if you are willing to lower the price enough.

It is also important to point out that more-liquid assets also provide lower returns. Consequently, too much liquidity can be just as detrimental to shareholder wealth maximization as too little liquidity.

Lecture Tip: *Some students get a little confused when they try to understand that excessive cash holdings can be undesirable. Occasionally, they leave an accounting principles class with the belief that a large current ratio is, in and of itself, a good thing. Short-term creditors like a company to have a large current ratio, but that doesn't mean that excess cash is good for the firm.*

You may wish to mention that a cash balance is a use of funds and, therefore, has an opportunity cost. Ask what a company could do with cash if it were not sitting idle. It could be paid to stockholders, invested in productive assets, or used to reduce debt. Students need to understand that a change in a firm's cash account is not the same as cash flow, regardless of what the "Statement of Cash Flows" may imply.

E. Debt versus Equity

Interest and principal payments on debt have to be paid before cash may be paid to stockholders. The company's gains and losses are magnified as the company increases the amount of debt in the capital structure. This is why we call the use of debt "financial leverage."

The balance sheet identity can be rewritten to illustrate that owners' equity is just what's left after all debts are paid.

owners' equity = assets - liabilities

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F. Market Value versus Book Value

Book values are generally not all that useful for making decisions about the future because of the historical nature of the numbers. Also, some of the most important assets and liabilities don't show up on the balance sheet. For example, the people that work for a firm can be very valuable assets, but they aren't included on the balance sheet. This is especially true in service industries.

Lecture Tip: *Accounting, or historical costs, are not very important to financial managers, while market values are. Some students have difficulty recognizing that the passage of time and changing circumstances will almost always mean that the price an asset would fetch if sold today is quite different from its book value. Sometimes an example or two of familiar instances are enough to make the point. For example, pointing out the differences between market values and historical costs of used cars and houses may help.*

Some students recognize the difference between book values and market values, but do not understand why market values are the more important numbers for decision-making. The simplest answer is that market value represents the cash price people are willing and able to pay. After all, it is cash that must ultimately be paid or received for investments, interest, principal, dividends, and so forth.

Lecture Tip: *The above example also provides a rationale for the accounting practice of "marking-to-market." Firm value is better reflected in the financial statements. However, students should be reminded that this occurs with only a portion of the firm's assets – primarily marketable securities, inventory, and derivatives positions. As such, it is unlikely that the aggregate balance sheet values provided by the firm will accurately reflect market values, even when prepared by the most scrupulous of accountants.*

Lecture Tip: *Finance practitioners (and professors) throw around terms like "mid-cap," "small-cap," etc. But what is the generally accepted definition of a "mid-cap" firm? According to CFO magazine, "small-caps" are firms with market capitalization less than $1 billion, "mid-caps" fall in the $1 billion to $5 billion range, and "large-caps" have total market value of equity in excess of $5 billion.*

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2.2. The Income Statement

Lecture Tip: *Previously, it was noted that investment decisions are reflected on the left-hand side of the balance sheet and financing decisions are reflected on the right-hand side of the balance sheet. You could also point out that the income statement reflects investment decisions in the "top half," from sales to EBIT. Financing decisions are reflected in the "bottom half," from EBIT to net income and earnings per share.*

A. GAAP and the Income Statement

Remember that GAAP requires that we recognize revenue when it is earned, not when the cash is received and we match costs to revenues. This introduces noncash deductions such as depreciation and amortization. Consequently, net income is NOT the same as cash flow.

Lecture Tip: *In March 2004, Global Crossing reported record quarterly earnings of $24.88* ***billion*** *on revenues of $719* ***million****. These earnings came about because of GAAP rules regarding non-cash items related to the firm's emergence from bankruptcy. According to The Wall Street Journal Online (Global Crossing Scores A Bankruptcy Bonanza, March 11, 2004), $8 billion of the profit came from the ability to eliminate the liabilities associated with contracts with equipment vendors that were renegotiated during bankruptcy. Another $16 billion came from eliminating common and preferred shares that previously existed. The remainder of the "profit" came from the liabilities associated with contracts between Global Crossing and other phone companies that were eliminated during the bankruptcy proceedings. If these non-cash "revenues" were eliminated from the calculations, then the firm would have had a net loss of approximately $3 million. Clearly, GAAP will not always provide a clear view of a firm's earnings.*

Ethics Note: *Publicly traded firms have to file audited annual reports, but that doesn't mean that "accounting irregularities" never slip by the auditors. Companies that deliberately manipulate financial statements may benefit in the short run, but it eventually comes back to haunt them. Cendant Corporation is a good example. Cendant was created when CUC International and HFS, Inc. merged in late 1997. The combined company owns businesses in the real estate and travel industries. In April 1998, the combined company announced that accounting irregularities had been found in the CUC financial statements and earnings would need to be*

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restated for 1997 and possibly 1995 and 1996 as well. Cendant's stock price dropped 47 percent the day after the announcement was made (it was announced after the market closed). The problems haunted Cendant throughout 1998. In July, it was announced that the problem was much worse than originally expected and the stock price plummeted again. By the end of July 1998, the stock price had dropped more than 60 percent below the price before the original announcement. The company also had to take a $76.4 million charge in the third quarter of 1998 for the costs of investigating the accounting irregularities. Criminal charges were filed against several former executives of CUC International and several class action lawsuits were filed against Cendant. The stock was trading around $41 per share prior to the announcement and dropped to as low as $7.50 per share in October 1998. The price finally started to rebound toward the end of 2003, but the price as of November 4, 2004 ($22.10) was still only about 54% of what it had been prior to the announcement.

Other companies, such as Enron, WorldCom, etc., and their investors have fared much worse. There were a string of accounting problems at the start of this century, and these, along with the terrorist attacks, aided the market decline during the early 2000s.

B. Noncash Items

The largest noncash deduction for most firms is depreciation. It reduces a firm's taxes and its net income. Noncash deductions are part of the reason that net income is not equivalent to cash flow.

Lecture Tip: *Students sometimes fail to grasp the distinction between the economic life of an asset, the useful life of an asset for accounting purposes, and the useful life of an asset for tax purposes. "Economic life" refers to the period of time that the asset is expected to generate cash flows and must be considered when capital budgeting decisions are made. "Useful life" for accounting purposes is largely determined by the firm's accountants, with guidance from GAAP, and it affects the depreciation expense on the balance sheets and income statements that are used for business purposes. Useful life for tax purposes is determined by the Internal Revenue Service and is based on different asset categories. This is also important for capital budgeting because it determines the tax consequences of depreciation, which affects cash flow.*

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C. Time and Costs

We need to plan for both short-run cash flows and long-run cash flows. In the short-run, some costs are fixed regardless of output and other costs are variable. In the long run, all costs are variable. It is important to identify these costs when doing a capital budgeting analysis.

Lecture Tip: *Distinguishing between fixed and variable costs can have important implications for estimating cash flows. It is sometimes helpful to remind students that variable costs are cash outflows that vary with the level of output, while fixed costs do not. Another important thing to point out is that the definition of short run and long run varies for different types of businesses.*

2.3. Taxes

Lecture Tip: *The text notes the ever-changing nature of the tax code. This can be illustrated by the changes in the Investment Tax Credit (ITC) between 1962 and 1986.*
1962 – Seven percent ITC created to stimulate capital investment
1966 – ITC suspended
1967 – Seven percent ITC reinstated
1969 – ITC eliminated
1971 – Seven percent ITC reinstated
1975 – Credit increased to 10 percent
1986 – ITC eliminated

A. Corporate Tax Rates

It's important to point out to students that corporations (and individuals) do not pay a flat rate on their income, but corporate rates are not strictly increasing either.

B. Average versus Marginal Tax Rates

The average rate rises to the marginal rate at $50 million of taxable income. The "surcharges" at 39% and 38% offset the initial lower marginal rates.

Lecture Tip: *It is useful to stress the situations in which marginal tax rates are relevant and those in which average tax rates are relevant. For purposes of computing a company's total tax liability, the average tax rate is the correct rate to apply to before tax profits. However, in evaluating the cash flows that would be generated from a new investment, the marginal tax rate is the*

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appropriate rate to use. This is because the new investment will generate cash flows that will be taxed above the company's existing profit.

Lecture Tip: *The op-ed page of the March 11, 1998, issue of The Wall Street Journal contains an article guaranteed to generate class discussion. In "Abolish the Corporate Income Tax," the author provides a quick overview of the situation that brought the current income tax into being in the early 1900s, and contends that the corporate and personal income tax systems began life as "two separate and completely uncoordinated tax systems." With the passage of time, the tax code has, of course, become extremely complex and the author illustrates this by noting that "Chrysler Corporation's tax returns comprise stacks of paper six feet high, prepared by more than 50 accountants who do nothing else." And, he points out, "the Internal Revenue Service, meanwhile, has a team of auditors who do nothing but monitor Chrysler's returns." Given the complexity and wasted effort, the author suggests that the rational thing to do is to abolish the corporate income tax. Do you agree?*

2.4. Cash Flow

A. Cash Flow from Assets (CFFA)

The cash flow identity is similar to the balance sheet identity:

Cash Flow from Assets = Cash Flow to Creditors + Cash Flow to Stockholders

CFFA = Operating cash flow – net capital spending – changes in net working capital

Operating cash flow (OCF) = EBIT + depreciation – taxes

Net capital spending (NCS) = ending fixed assets – beginning fixed assets + depreciation

Changes in NWC = ending NWC – beginning NWC

B. Cash Flow to Creditors and Stockholders

Cash flow to creditors = interest paid – net new borrowing = interest paid – (ending long-term debt – beginning long-term debt)

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Cash flow to stockholders = dividends paid – net new equity raised
= dividends paid – (ending common stock, APIC, & Treasury stock – beginning common stock, APIC, & Treasury stock)

It is important to point out that changes in retained earnings are not included in "net new equity raised." The effect of this increase is captured in changes in net working capital and net capital spending.

C. An Example: Cash Flows for Dole Cola

Lecture Tip: *Textbooks make financial statement analysis seem reasonably straightforward. However, it is not always as easy to classify the numbers that appear on the consolidated financial statements of an actual corporation. Consider the 2010 McGraw-Hill Annual Report.*

You can go to the McGraw-Hill web site (http://www.mcgraw-hill.com) and look under investor relations to get the most recent annual report available.

The following questions may arise from looking at the financial statements:

1. How do you account for "prepublication costs," "investments and other assets" and "goodwill and other intangible assets?" Are they included in net capital spending or are they accounting numbers with no real impact on cash flows?
2. How should the "other liabilities" be accounted for? Again, which accounts truly provide changes in cash flows and which accounts are just used for accounting purposes without an actual change in cash flows.
3. How do "accumulated other comprehensive income" and "unearned compensation on restricted stock" affect cash flows?

The cash flow identity does not appear to hold when applied in a reasonable fashion based on the information provided. It is important to point out that financial managers have a lot more information available to them than what is provided in the consolidated statements of an annual report. The manager will have the information available to compute cash flow from assets and, if it is done carefully, the cash flow identity will hold.

2.5. Summary and Conclusions

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