Chapter 15

Accounting & Financial Analysis

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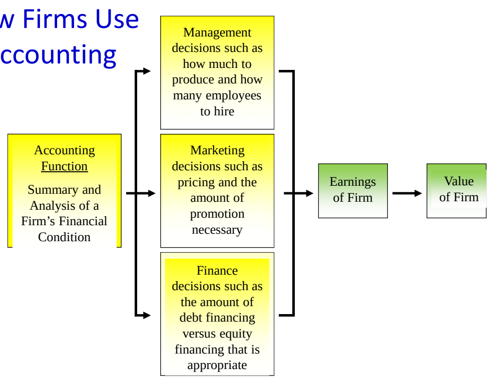
MGG 150: Introduction to Business
November 12, 2013

Chapter Outline

- How Firms Use Accounting
- Responsible Financial Reporting
- Interpreting Financial Statements
- Ratio Analysis

How Firms Use Accounting



How Firms Use Accounting

Information for **External** Users:

- Investors (Shareholders) & Potential Investors
- Creditors--Banks
- Government Regulatory Agencies--SEC
- Taxing Authorities--IRS

How Firms Use Accounting

Information for **Internal** Users (management):

- Prepare Budgets & Projections
- Evaluate Efficiency of Departments/Divisions
- Expansion Decisions
- Product-line Decisions
- Bonus Decisions

Responsible Financial Reporting

Audit: a formal evaluation of the records used to prepare a firm's financial statements

Internal Auditors: **Employees** who analyze and evaluate the company

External Auditors: **Public accountants** who work for an independent accounting firm

Responsible Financial Reporting

- The Role of the Board of Directors
- The Role of the Sarbanes-Oxley Act
  - The CFO and other managers of the firm must file an internal control report along with each annual report
  - The CEO and CFO must certify that the audited statements fairly represent the operations and financial conditions of the firm
  - Major fines or prison terms are imposed on employees who mislead investors or hide evidence

Interpreting Financial Statements

Income Statement

Indicates the revenue, costs, and earnings of a firm **over a period of time**

Balance Sheet

Reports the book value of assets, liabilities, and owner's equity of a firm **at a given point in time**

Interpreting Financial Statements

- Income Statement
  - Net sales: total sales adjusted for any discounts or refunds
  - Cost of goods sold: the cost of materials used to produce the goods that were sold (or cost of goods purchased in a finished state)
  - Gross profit (or gross margin): net sales minus the cost of goods sold
  - Operating expenses: composed of selling expenses and general and administrative expenses

Interpreting Financial Statements

- Income Statement cont'd
  - Earnings before interest and taxes (EBIT): gross profit minus operating expenses
  - Earnings before taxes: earnings before interest and taxes minus interest expenses
  - Net income (earnings after taxes): earnings before taxes minus taxes

Tootsie Roll Industries, Inc. Financial Statements 2012

Tootsie Roll Industries, Inc. Income Statements (in 000's)

	2012	2011
Net sales revenue	$549,870	$532,505
Costs of goods sold	366,549	366,263
Gross profit	$183,321	$166,242
Selling, gen'l & admin expenses	113,842	108,155
Other operating (income)/expenses	(4,822)	(2,946)
Total operating expenses	$109,020	$105,209
Earnings before interest & income taxes	$ 74,301	$ 61,033
Interest expense	137	121
Earnings before income taxes	$ 74,164	$ 60,912
Income taxes (≈30%)	22,160	16,974
Net income	$ 52,004	$ 43,938
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Interpreting Financial Statements

- Balance Sheet

  Basic accounting equation:

  Assets = Liabilities + Owners' Equity (ALOE)

  – Asset: anything owned by a firm.
  – Liability: anything owed by a firm.
  – Owners' Equity: what's left for the owners

Interpreting Financial Statements

- Balance Sheet cont'd

  – Current assets: assets that will be converted into cash within one year
  – Fixed assets: assets that will be used by a firm for more than one year
  – Depreciation: a reduction in the value of fixed assets to reflect deterioration in the assets over time

Interpreting Financial Statements

- Balance Sheet cont'd

  – Accounts payable: money owed by a firm for the purchase of materials
  – Notes payable: short-term loans to a firm made by creditors such as banks
  – Owners' equity: includes the par (or stated) value of all common stock issued, additional paid-in capital, and retained earnings

Tootsie Roll Industries, Inc. Balance Sheets (in 000's)

Assets	**2012**	**2011**
Current assets		
Cash & cash equivalents	$ 63,862	$78,612
Marketable securities (Investments)	18,746	10,895
Accounts receivable & other receivables	47,636	45,286
Inventories	62,383	71,760
Other current assets	4,614	5,648
Total current assets	$197,241	$212,201
Fixed assets		
Land	$ 21,687	$21,939
Buildings, machinery & equipment	442,040	433,158
Less: accumulated depreciation	262,437	242,935
Net fixed assets	$ 201,290	$212,162
Other assets	448,206	433,493
Total assets	$ 846,737	$857,856
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Liabilities & Owner's Equity		
Current liabilities		
Accounts payable	$ 8,942	$10,683
Dividends, notes, & taxes payable	51,823	48,246
Total current liabilities	$ 60,765	$58,929
Long-term debt	136,157	132,992
Common stockholder's equity		
Common stock	$ 586,052	$571,619
Retained earnings	63,763	94,316
Total owner's equity	$ 649,815	$665,935
Total liabilities and owner's equity	$ 846,737	$857,856
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Ratio Analysis

An evaluation of the relationships between financial statement variables.

- Liquidity
- Efficiency
- Profitability
- Leverage

Liquidity Ratios

Measures a firm's ability to meet its short-term obligations

- Current ratio
  measures the amount of current assets the company has to satisfy each $ of current liability

$$\frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Acid-Test ratio or Quick ratio

$$\frac{\text{Cash + Marketable Securities + Accounts Receivable}}{\text{Current Liabilities}}$$

Efficiency Ratios

Measures how well the firm is managing its assets

- Inventory Turnover ratio
  measures the speed of converting inventory into sales

$$\frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

- Asset Turnover ratio
  measures the amount of sales generated by every $ invested in assets

$$\frac{\text{Net Sales}}{\text{Average Total Assets}}$$

Profitability Ratios

Measures a firm's ability to generate revenue in excess of expenses

- Return on Assets
  measures the amount of net income generated by every $ invested in assets

$$\frac{\text{Net Income}}{\text{Average Total Assets}}$$

Profitability Ratios

- Return on Sales (Net Profit Margin)
  measures how much profit was earned for each sales $

$$\frac{\text{Net Income}}{\text{Net Sales}}$$

- Return on Equity
  measures how much profit was earned for each $ invested by owners

$$\frac{\text{Net Income}}{\text{Average Owners' Equity}}$$

Financial Leverage Ratio

An important indicator of a firm's financial strength

- Debt-to-Equity

  measures the degree to which a firm relies on borrowed funds vs. from owners

  $$\frac{\text{Total Liabilities}}{\text{Total Owners' Equity}}$$

Ratio Analysis

- Compare ratios with prior periods, competitors, and industry averages
- Limitations of Ratio Analysis
  - Comparing some firms with an industry average can be difficult because the firms operate in more than one industry
  - Accounting practices vary among firms
  - Firms with seasonal swings in sales may show large deviations from the norm at certain times but not at others