How Do I Use the Numbers on Income Statements?

LEARNING OBJECTIVES

After completing this module you will be able to:

- Apply a hierarchical approach to assessing companies' financial performance using information on income statements, balance sheets, statements of changes in owners' equity, and other disclosures in companies' annual reports.
- Compare and contrast related ratios across companies and time.

Key take-aways:

- You can learn a great deal about a company's financial performance by analyzing its income statement hierarchically and by comparing its current performance to its past performance and its competitors' current and past performances.
- As you work your way deeper into the hierarchy, you will increasingly gain a deeper understanding of how well companies are performing. You will also discover information that can help you assess the extent to which items are transient or persistent. Transient items affect current performance and owners' equity, but they are not useful for predicting future performance.
- Start at level 1 by analyzing comprehensive income and computing ROE-CI to facilitate comparisons across companies of different sizes.
- At the second level of the analysis, divide comprehensive income into its major categories: other comprehensive income and net income. Other comprehensive income is transient, but it can have a significant impact on a company's financial positions. Still, most of your analysis will focus on net income and ROE.
- At the third level, divide net income into its major subcategories income before taxes and tax expense and operating and non-operating income. To facilitate comparisons across companies, analyze operating margins.
- Use the DuPont model to gain an understanding of the factors that drive ROE: profit margin, asset turnover, financial leverage, or taxes.
- At the fourth level of the analysis, use common size income statements to analyze line items. These are created by dividing the amounts reported by net revenues.
- When analyzing ratios, consider the amounts reported, not just the ratio percentages. For example, consider the amount invested in research and development, not just the ratio as a percent of revenues.

- To understand changes in ratios from year to year, study related management explanations. You will find these in the MD&A (management discussion and analysis) section of the annual report for US companies and typically in similar sections for non-US companies.
- Knowing entries helps you connect income statements to balance sheets and thus financial performance to financial position.
- Throughout this chapter, we have emphasized that current-period revenues can differ from current-period cash inflows from customers and current-period expenses can differ from current-period cash outflows to suppliers. This means income can differ from the cash from operating activities.
- In the next chapter, you will learn how to reconcile income measures to cash-flow measures and how investors can use both to gain a better understanding of a company's financial performance and financial position.

Key terms:

- **Comprehensive income** - Net income plus other comprehensive income. Broad performance measure that reflects the effects of all events and transactions that affect owners' equity, except those arising from transactions involving the owners and accounting changes and restatements.
- **Other comprehensive income (OCI)** - Comprehensive income standard setters decided not to include in net income. Typically arise from changes in market prices.

Key formulas:

- ROE-CI = comprehensive income / average owners' equity
- ROE (Return On Equity) = net profit / average owners' equity
- ROE-OCI = other comprehensive income / average owners' equity
- DuPont Model = profit margin x turnover x financial leverage x tax factor
  - Profit margin = pretax profit / revenues
  - Turnover = revenues / average assets
  - Financial leverage[1] = average assets / average owners' equity
  - Income tax factor = 1- (tax expense / pretax profit)
- EPS (earnings per share)[2] = net profit / average number of shares outstanding during period
- Gross margin = (revenues - cost of sales) / revenues
- Operating profit margin = operating profit / revenues
- Profit margin = pretax profit / revenues
- Net profit margin = net profit / revenues

1 In general, there's no universally accepted formula for financial leverage. However, the leverage formula in the DuPont Model is average assets / average owners' equity. Using this formula is critical to maintaining the integrity of the model so that the product of the factors equals return-on-equity (ROE).

2 Any preferred stock dividends are subtracted from net profits. Companies often disclose basic and diluted earnings per share. Diluted earnings per share is computed by dividing by the diluted average shares outstanding. This computation adjusts the denominator in the basic earnings per share computation for items such as outstanding stock options, convertible debt, or other financial instruments that could be converted to common stock, and thus, increasing the common shares outstanding and diluting (decreasing) earnings per share.

Figure 1 Hierarchical Analysis of Income Statements

This figure illustrates how income statements can be analyzed hierarchically.

BISCHOFF GLOBAL SPORTSWEAR
STATEMENT OF COMPREHENSIVE INCOME

For years ended December 31, 2012 and 2013

(In Millions)	2013	2012
Net revenues	**$505**	**$440**
Cost of goods sold	(253)	(220)
Gross profit	**252**	**220**
Selling, general, and administrative expenses	(124)	(111)
Other operating income and (expenses)	0	0
Operating profit	**128**	**109**
Other income and (expenses)	1	1
Profit before taxes	**129**	**110**
Income tax expense	(40)	(34)
Net profit (loss)	**89**	**76**
Other comprehensive income	**24**	**24**
Comprehensive income (loss)	**$113**	**$100**

Level 1
Comprehensive Income

Level 2
Major Categories

Level 3
Significant Subcategories

Level 4
Line Items (except totals)

Comprehensive Income $113

Net profit $89 + Other comprehensive Income $24

Profit before taxes $129 + Income tax expense ($40)

Operating profit $128 + Other income and (expense) $1

Revenues $505 + Cost of good sold ($253) + Selling, general, and administrative expense ($124) + Other operating income and (expenses) $0

Other income and (expense) $1

Income tax expense ($40)

Other comprehensive Income $24

Other comprehensive Income $24

Ratio	Ratios	Ratios	Ratio
ROE-CI	*ROE* *ROE-OCI*	*Profit margins* *DuPont model*	*Common size income statements*

Figure 2 Accounting is not a spectator sport — it's game time

This figure lists Scenic route menus for additional information.