Chapter 13

After studying Chapter 13, you should be able to:

- Understand the concept of “CONTINUING” operations and the importance of a multiple-step income statement presentation.
- Explain the concept of comprehensive income.
- Interpret financial statements, including the use of ratio analysis.

KEEPIN’ IT REAL:

A strong analytic includes first developing an expectation.

Also, can we use financial statements to prove/disprove some of the “economics” you are learning?

- How’s the economy been doing?
  - What sort of effect do you suppose that may have on financial statements?
  - What economic principle is that?

Sustainable Income...

“CONTINUING OPERATIONS”

REMEMBER: FINANCIAL STATEMENTS TELL WHAT HAPPENED (PAST TENSE) TO USERS WHO WANT TO DEVELOP EXPECTATIONS ABOUT WHAT IS GOING TO HAPPEN. Thus a need for a MULTIPLE STEP INCOME STATEMENT, which:

- Segregates the continuing operations from two principle items which are NOT continuing:
  - Discontinued Operations and
  - Extraordinary Items

WHY DO POTENTIAL NEW INVESTORS AND CREDITORS CARE ABOUT WHAT ALREADY HAPPENED?

THE PAST IS A STRONG INDICATOR OF THE FUTURE.
Components of the MULTIPLE STEP Income Statement

- Revenue
- COGS
- Gross Profit
- Operating expenses
- Income before taxes
- Taxes
- Discontinued op's (Net of Tax!)
- Extraordinary items (Net of Tax!)
- Net Income

\[
\begin{align*}
\text{Revenue} & \quad X \\
\text{COGS} & \quad Y \\
\text{Gross Profit} & \quad X - Y = \text{GP} \\
\text{Operating expenses} & \quad A \\
\text{Income before taxes} & \quad \text{GP} - A = \text{IBT} \\
\text{Taxes} & \quad \text{Taxes} = \text{IBT} \times \text{Tax rate} \\
\text{Discontinued op's (Net of Tax!)} & \quad \text{Discontinued op's} = \text{IBT} \times (1 - \text{Tax rate}) \\
\text{Extraordinary items (Net of Tax!)} & \quad \text{Extraordinary items} = \text{IBT} \times (1 - \text{Tax rate}) \\
\text{Net Income} & \quad \text{Net Income} = \text{IBT} - \text{Discontinued op's} - \text{Extraordinary items}
\end{align*}
\]

Irregular Items

Two types of irregular items are reported -- (all net of taxes)
- discontinued operations
- extraordinary items

Discontinued Operations...

Refers to the disposal of a significant segment of a business...
- the elimination of a major class of customers or
- an entire activity.

Discontinued Operations

Rozek net income of $800,000 from continuing operations in 2007. During 2007 the company discontinued and sold its unprofitable chemical division. The loss in 2007 from chemical operations (net of $90,000 taxes) was $210,000. The tax rate is 30%.

<table>
<thead>
<tr>
<th>ROZK INC.</th>
<th>Income Statement (partial)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>For the Year Ended December 31, 2007</td>
</tr>
<tr>
<td>Income before income taxes</td>
<td>$800,000</td>
</tr>
<tr>
<td>Income tax expense</td>
<td>$240,000</td>
</tr>
<tr>
<td>Income before irregular items</td>
<td>$560,000</td>
</tr>
<tr>
<td>Discontinued operations</td>
<td></td>
</tr>
<tr>
<td>Loss from disposal of chemical division, net of $90,000 income tax savings</td>
<td>($19,000)</td>
</tr>
<tr>
<td>Net income</td>
<td>$350,000</td>
</tr>
</tbody>
</table>
**Extraordinary Items...**

Are events and transactions that meet two conditions:
- Unusual in nature
- Infrequent in occurrence

HELP FROM BOB: (1) Has not happened before (2) is not expected to happen again.

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**Presentation of Extraordinary Items...**

<table>
<thead>
<tr>
<th>ROZIK INC. Income Statement (partial) For the Year Ended December 31, 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income before income taxes</td>
</tr>
<tr>
<td>Income tax expense</td>
</tr>
<tr>
<td>Income before irregular items</td>
</tr>
<tr>
<td>Discontinued operations: Loss from disposal of chemical division, net of $90,000 income tax savings</td>
</tr>
<tr>
<td>Extraordinary item: Expropriation of investment, net of $21,000 income tax savings</td>
</tr>
<tr>
<td>Net income</td>
</tr>
</tbody>
</table>

---

**Extraordinary Items**

- In 2007 a revolutionary foreign government expropriated property held as an investment by Rozek Inc.
- The loss is $70,000 before applicable income taxes of $21,000, the income statement presentation will show a deduction of $49,000.
Estimating Sustainable Income

When evaluating a company, it generally makes sense to eliminate all irregular items in estimating future sustainable income.

Change in Accounting Principle

- I DON'T COVER, EVEN THOUGH IT IS IN YOUR TEXT.

Comprehensive Income

- Most revenues, expenses, gains, and losses recognized during the period are included in net income.
- Specific exceptions to this practice have developed - these items bypass income and are reported directly in stockholders’ equity as “other comprehensive income” (aka OCI).

Comprehensive Income

- The FASB now requires that, in addition to reporting net income, a company must also report comprehensive income.
Comprehensive Income

Includes all changes in stockholders’ equity during a period except those resulting from investments by stockholders and distributions to stockholders.

EASIER TO UNDERSTAND:
Comprehensive income = Net income + Other Comprehensive Income.

Complete Income Statement

FAC CORPORATION
Income Statement and
Statement of Comprehensive Income
For the Year Ended December 31, 2007

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net sales</td>
<td>$540,000</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>260,000</td>
</tr>
<tr>
<td>Gross profit</td>
<td>180,000</td>
</tr>
<tr>
<td>Operating expenses</td>
<td></td>
</tr>
<tr>
<td>Income from operations</td>
<td>70,000</td>
</tr>
<tr>
<td>Other revenues and gains</td>
<td>5,000</td>
</tr>
<tr>
<td>Other expenses and losses</td>
<td>(0,000)</td>
</tr>
<tr>
<td>Income before income taxes</td>
<td>65,000</td>
</tr>
<tr>
<td>Income tax expense (106,000 x 30%)</td>
<td>(31,800)</td>
</tr>
<tr>
<td>Income before extraordinary items</td>
<td>33,200</td>
</tr>
<tr>
<td>Extraordinary items: Tornado loss, net of income tax expense $18,000</td>
<td>Other revenue $18,000 x 30%)</td>
</tr>
<tr>
<td>Net income</td>
<td>45,200</td>
</tr>
<tr>
<td>Add: Unrealized gains on available-for-sale securities</td>
<td>10,000</td>
</tr>
<tr>
<td>Comprehensive income</td>
<td>55,200</td>
</tr>
</tbody>
</table>

Comparative Analysis

There are three types of comparisons to improve decision usefulness of financial information:

- Intracompany basis:
  - Compare a company to itself (usually over time)

- Intercompany basis
  - Compare a company to its competitors

- Industry averages
  - Compare a company to the average of the companies in its industry

Financial Statement Analysis

Three basic tools are used in financial statement analysis:

1. Horizontal analysis
   - Comparison over time
   - Expressed as a % of a base year

2. Vertical analysis
   - Relational analysis within a statement
     - Expressed as a % of:
       - Assets if analyzing the balance sheet;
       - Revenues if analyzing the income statement;

3. Ratio analysis
   - Relational analysis among statements;
   - Allows comparing various sized entities to one another (“right sizing”)
In horizontal analysis, each item is expressed as a percentage of the:

a. net income amount.
b. stockholders’ equity amount.
c. total assets amount.
d. base-year amount.
Review

In horizontal analysis, each item is expressed as a percentage of the:

a. net income amount.
b. stockholders’ equity amount.
c. total assets amount.
d. base-year amount.

Intercompany Comparison by Vertical Analysis

<table>
<thead>
<tr>
<th></th>
<th>Kellogg Company, Inc.</th>
<th>General Mills, Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amount</td>
<td>Percent</td>
</tr>
<tr>
<td>Net sales</td>
<td>$39,613.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>$5,298.7</td>
<td>13.8</td>
</tr>
<tr>
<td>Gross profit</td>
<td>$3,315.2</td>
<td>8.3</td>
</tr>
<tr>
<td>Selling and administrative expenses</td>
<td>$2,634.1</td>
<td>6.7</td>
</tr>
<tr>
<td>Nonrecurring changes</td>
<td>$0.0</td>
<td>—</td>
</tr>
<tr>
<td>Income from operations</td>
<td>$1,681.2</td>
<td>43.5</td>
</tr>
<tr>
<td>Other expenses and revenues (excluding income taxes)</td>
<td>$780.5</td>
<td>2.0</td>
</tr>
<tr>
<td>Net Income</td>
<td>$380.8</td>
<td>9.8</td>
</tr>
</tbody>
</table>

*Numbers have been rounded to total 100%.

Review

In vertical analysis, the base amount for depreciation expense is generally:

a. net sales.
b. depreciation expense in a previous year.
c. gross profit.
d. fixed assets.
Review

In vertical analysis, the base amount for depreciation expense is generally:

a. net sales.
b. depreciation expense in a previous year.
c. gross profit.
d. fixed assets.

Ratios

- Three types:
  - Liquidity ratios
  - Solvency ratios
  - Profitability ratios
- Can provide clues to underlying conditions that may not be apparent from an inspection of the individual components.
- Single ratio by itself is not very meaningful.

Liquidity Ratios

Measure the short-term ability of the enterprise to pay its maturing obligations and to meet unexpected needs for cash.

WHO CARES?
Short-term creditors such as bankers and suppliers
Liquidity Ratios

Solvency Ratios

Measure the ability of the enterprise to survive over a long period of time

WHO CARES?
Long-term creditors and stockholders—particularly with respect to ability to make principle and interest payments.

Profitability Ratios

Measure the income or operating success of an enterprise for a given period of time

WHO CARES? Everybody

WHY? A company's income affects:
- its ability to obtain debt and equity financing
- its liquidity position
- its ability to grow
PER SHARE
Why does it make sense to convert items on the statements to “per share” amounts?

Unless you own all the stock of a company, you would like to see activity converted to the basis at which you made your purchase.

What about a lender, would they be interested in net income per share or net income?

Profitability Ratios

<table>
<thead>
<tr>
<th>Profitability Ratios</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings per share</td>
</tr>
<tr>
<td>Price-earnings ratio</td>
</tr>
<tr>
<td>Gross profit rate</td>
</tr>
<tr>
<td>Profit margin ratio</td>
</tr>
<tr>
<td>Return on assets ratio</td>
</tr>
<tr>
<td>Asset turnover ratio</td>
</tr>
</tbody>
</table>

Price Earnings Ratio

The P/E ratio reflects the investors’ assessment of a company’s future earnings.

Earnings Per Share and Price Earnings Ratio

<table>
<thead>
<tr>
<th>Company</th>
<th>Earnings Per Share</th>
<th>Price-Earnings Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kellogg Company</td>
<td>$2.22</td>
<td>20.5</td>
</tr>
<tr>
<td>Google Inc.</td>
<td>3.41</td>
<td>86.6</td>
</tr>
<tr>
<td>United States Steel</td>
<td>1.14</td>
<td>3.9</td>
</tr>
<tr>
<td>eBay Inc.</td>
<td>0.68</td>
<td>62.4</td>
</tr>
<tr>
<td>Nike</td>
<td>19.5</td>
<td>4.31</td>
</tr>
</tbody>
</table>
Limitations Of Financial Analysis

- Horizontal, vertical, and ratio analysis are frequently used in making significant business decisions.
- One should be aware of the limitations of these tools and the financial statements.

Estimates

- Financial statements are based on estimates.
  - allowance for uncollectible accounts
  - depreciation
  - costs of warranties
  - contingent losses

To the extent that these estimates are inaccurate, the financial ratios and percentages are also inaccurate.

Quality of Earnings

A company that has a high quality of earnings provides full and transparent information that will not confuse or mislead users of the financial statements.

Pro Forma Income

A measure of the net income generated that usually excludes items that the company thinks are unusual or nonrecurring.
Improper Recognition

- Offering big discounts (channel stuffing) to companies to get them to buy early; Often leads to disaster in subsequent periods.
- Improper capitalization of operating expenses

LAST BUT CERTAINLY NOT LEAST

Financial statements display what happened (past tense)
- Will the past always repeat itself?