

# Interpretations and Implementations of Various Accounting Standards

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# Abstract

## Hannah Claire Farmer: Interpretations and Implementations of Various Accounting Standards

This thesis examines how to interpret and implement a variety of accounting standards. By using a variety of accounting cases, I have researched the issue at hand to determine the proper accounting standard that provides guidance on the way the issue must be treated. In some of these cases, such as the tax case, the guidance regarding the treatment of the tax percentages is very loose. In instances such as these, there may be several answers to the problem at hand. However, in many other cases, the guidance that accompanies the standards relating to the case are very straight-forward and results in the case having one and only one answer. These case results are meant to help others understand how the guidance that accompanies accounting standards can result in various applications of standards.

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# Case One

## **Home Heaters: Financial Statements Analyses**

A comparison between Glenwood Heating, Inc. and Eads Heaters, Inc. to determine which company to invest in.

## Analysis

Glenwood Heating, Inc. and Eads Heater, Inc., both companies selling home heating units, started operations in the same year. The companies are not only similar in industry, but they also share fifteen identical transactions—found in Part A of Figures A.1 and A.2 of Appendix A. Although they have many comparable characteristics, between these companies, I would choose to invest in Glenwood Heating, Inc. I reached this conclusion by analyzing the financial statements and financial ratios. Since many of the operations of the companies are alike, the comparisons made will focus on the three categories of financial ratios—long-term solvency, profitability, and liquidity—shown in Figure 1.1 as well as the contrasting end-of-year managerial decisions found in Part B of Figures A.1 and A.2 of Appendix A.

**Figure 1.1: Financial Ratios Comparisor**

|                                   | Glenwood Heating, Inc. | Eads Heater, Inc. |
|-----------------------------------|------------------------|-------------------|
| <b>Liquidity Ratios:</b>          |                        |                   |
| Current ratio                     | 3.04                   | 2.46              |
| Acid-test (quick) ratio           | 1.86                   | 1.64              |
| Accounts receivable turnover      | 4.05                   | 4.22              |
| Days to collect receivables       | 90.13                  | 86.49             |
| Inventory turnover                | 2.82                   | 3.70              |
| Days to sell inventory            | 129.50                 | 98.60             |
| Operating Cycle                   | 219.64                 | 185.09            |
| <b>Profitability Ratios:</b>      |                        |                   |
| Gross profit margin               | 55.58%                 | 52.62%            |
| Profit margin                     | 23.27%                 | 17.70%            |
| Return on assets (ROA)            | 14.43%                 | 10.02%            |
| Return on owners' equity (ROE)    | 40.40%                 | 34.01%            |
| Earnings per share                | \$28.98                | \$22.04           |
| <b>Long-Term Solvency Ratios:</b> |                        |                   |
| Debt ratio                        | 64.28%                 | 70.54%            |
| Times interest earned             | 5.47                   | 3.69              |

## Long-Term Solvency

Since management's main focus should be to maximize shareholder wealth in the long run, the long-term solvency ratios are a good place to begin the analysis. These long-term ratios reveal much about the company. According to the debt ratio, Eads finances its company using a greater amount of debt than Glenwood. As stockholders prefer a higher debt ratio in case the company fails, Eads may seem more appealing. However, Eads' slim debt ratio advantage of 6 percent may not be a great enough difference to account for its low times interest earned ratio. Eads's TIE ratio is roughly two-thirds that of Glenwood. The underlying cause of the large gap between the TIE ratios comes from the treatment of operating expenses such as depreciation expense.

Glenwood's manager chose to use the straight-line depreciation method on both the building and delivery equipment. Eads's manager, on the other hand, chose the straight-line depreciation method for the building and the double-declining balance method for the delivery equipment. The decision by Eads's manager produced an extra \$11,000 depreciation expense on Transaction 15<sup>1</sup>. Eads also has an extra \$11,500 depreciation expense in Transaction 16 from a lease agreement that will be discussed presently. Due to these decisions that increased operating expenses and decreased the TIE ratio, Eads could face difficulties borrowing money in the future as its lower margin of safety establishes it as a higher risk than Glenwood.

## Profitability

Moving up the ratio chart, the next step in analyzing the company deals with profitability ratios. A similar gross profit margin shows that both companies control production costs to about the same degree. However, control of debt and expenses can explain Glenwood's ratio being slightly higher. First, as stated previously, Eads uses more debt, thus creating higher interest charges. This, in turn, lowers Eads' profit margin as these interest charges also contribute to the firm's expenses. Therefore, Eads's overall expenses are higher than Glenwood's, and Eads's operating expenses surpass Glenwood's by more than \$26,000. Figures of both the debt and expense factors can be found in the comparison of income statements below in Figure 1.2.

**Figure 1.2: Income Statement Comparison**

| <b>GLENWOOD HEATING, INC.<br/>Income Statement<br/>For Year Ended December 31, 20X1</b> |                         | <b>EADS HEATER, INC.<br/>Income Statement<br/>For Year Ended December 31, 20X1</b> |                         |
|---|-------------------------|--|-------------------------|
| Sales revenue   | \$ 398,500              | Sales revenue  | \$ 398,500              |
| Cost of goods sold  | <u>(177,000)</u>        | Cost of goods sold   | <u>(188,800)</u>        |
| Gross profit  | 221,500                 | Gross profit   | 209,700                 |
| Operating expenses  |                         | Operating expenses   |                         |
| Bad debt expense  | \$ (994)                | Bad debt expense   | \$ (4,970)              |
| Depreciation expense  | (19,000)                | Depreciation expense   | (41,500)                |
| Rent expense  | (16,000)                | Rent expense   | -                       |
| Other operating expense   | <u>(34,200)</u>         | Other operating expense  | <u>(34,200)</u>         |
| Total operating expenses  | <u>(70,194)</u>         | Total operating expenses   | <u>(80,670)</u>         |
| Operating income  | 151,306                 | Operating income   | 129,030                 |
| Non-operating expenses  |                         | Non-operating expenses   |                         |
| Interest expense  | <u>\$(27,650)</u>       | Interest expense   | <u>\$(35,010)</u>       |
| Total non-operating expenses  | <u>(27,650)</u>         | Total non-operating expenses   | <u>(35,010)</u>         |
| Income before tax   | 123,656                 | Income before tax  | 94,020                  |
| Tax expense   | (30,914)                | Tax expense  | (23,505)                |
| <b>Net income</b>   | <b><u>\$ 92,742</u></b> | <b>Net income</b>  | <b><u>\$ 70,515</u></b> |

Expense and debt decisions not only affect the profit margin, but also affect the return on total assets, return on common equity, and earnings per share—all of

which are higher for Glenwood. These are affected since net income increases when a firm efficiently manages its various expenses. As a result of this efficiency, the higher net income of Glenwood leads to a greater increase in total stockholders' equity as seen below in Figure 1.3.

**Figure 1.3: Stockholders' Equity Comparison**

| <b>GLENWOOD HEATING, INC.</b>            |                         |   |                              |                                       |
|--|-------------------------|---|------------------------------|---------------------------------------|
| <b>Statement of Stockholders' Equity</b> |                         |   |                              |                                       |
| <b>For Year Ended December 31, 20X1</b>  |                         |   |                              |                                       |
|  | <b>Common<br/>Stock</b> | <b>Paid-in Capital<br/>in Excess of Par</b> | <b>Retained<br/>Earnings</b> | <b>Total Stockholders'<br/>Equity</b> |
| <b>Balance on January 1</b>              | \$ -                    | \$ -  | \$ -                         | \$ -                                  |
| <b>Issues shares for cash</b>            | 160,000                 | -   | -                            | 160,000                               |
| <b>Net income</b>                        | -                       | -   | 92,742                       | 92,742                                |
| <b>Cash dividends</b>                    | -                       | -   | (23,200)                     | (23,200)                              |
| <b>Balance on December 31</b>            | <b>\$ 160,000</b>       | <b>\$ -</b>                                 | <b>\$ 69,542</b>             | <b>\$ 229,542</b>                     |

| <b>EADS HEATER, INC.</b>                 |                         |   |                              |                                       |
|--|-------------------------|---|------------------------------|---------------------------------------|
| <b>Statement of Stockholders' Equity</b> |                         |   |                              |                                       |
| <b>For Year Ended December 31, 20X1</b>  |                         |   |                              |                                       |
|  | <b>Common<br/>Stock</b> | <b>Paid-in Capital<br/>in Excess of Par</b> | <b>Retained<br/>Earnings</b> | <b>Total Stockholders'<br/>Equity</b> |
| <b>Balance on January 1</b>              | \$ -                    | \$ -  | \$ -                         | \$ -                                  |
| <b>Issues shares for cash</b>            | 160,000                 | -   | -                            | 160,000                               |
| <b>Net income</b>                        | -                       | -   | 70,515                       | 70,515                                |
| <b>Cash dividends</b>                    | -                       | -   | (23,200)                     | (23,200)                              |
| <b>Balance on December 31</b>            | <b>\$ 160,000</b>       | <b>\$ -</b>                                 | <b>\$ 47,315</b>             | <b>\$ 207,315</b>                     |

Other contributing elements to the profitability ratios can be found on the balance sheet comparison in Figure 1.4. For example, the asset accounts and balances help demonstrate why the return on assets is higher for Glenwood. One reason for the differences in assets is the companies' negotiations of operating equipment. Glenwood negotiated operating leases, including one fulfilled on December 31, 20X1. Thus, this contract valued at \$16,000 was added to books on the completion date and. Eads negotiated a capital lease valued at \$92,000 where the first year's principle and interest were \$8,640 and \$7,360 respectively. Hence,



the capital lease forced Eads to include the full amount of the contracted equipment on the balance sheet, whereas the operating lease does not require this of Glenwood. An overall increase in Eads' assets without the company producing a higher net income consequentially lowers its return on total assets.

Figure 1.4: Balance Sheet Comparison

| <b>GLENWOOD HEATING, INC.</b>            |                   |                                     |                   |
|--|-------------------|-------------------------------------|-------------------|
| <b>Balance Sheet</b>                     |                   |                                     |                   |
| <b>December 31, 20X1</b>                 |                   |                                     |                   |
| <b>ASSETS</b>                            |                   | <b>LIABILITIES</b>                  |                   |
| Current Assets                           |                   | Current Liabilities                 |                   |
| Cash                                     | \$ 426            | Accounts Payable                    | \$ 26,440         |
| Accounts receivable                      | 99,400            | Interest Payable                    | 6,650             |
| Less Allowance for bad debts             | (994)             | Note Payable                        | 20,000            |
| Inventory                                | 62,800            | Total Current Liabilities           | \$ 53,090         |
| Total Current Assets                     | \$ 161,632        | Long-term liabilities               |                   |
| Property, plant & equipment              |                   | Note payable                        | \$ 360,000        |
| Land                                     | \$ 70,000         | Total Long-term liabilities         | <u>360,000</u>    |
| Building                                 | 350,000           | Total Liabilities                   | 413,090           |
| Less Accumulated depreciation, building  | (10,000)          |                                     |                   |
| Equipment                                | 80,000            | <b>STOCKHOLDERS' EQUITY</b>         |                   |
| Less Accumulated depreciation, equipment | (9,000)           | Common stock                        | \$ 160,000        |
| Total Property, plant & equipment        | 481,000           | Retained earnings                   | 69,542            |
| <b>Total Assets</b>                      | <b>\$ 642,632</b> | Total Stockholders' Equity          | 229,542           |
|  |                   | <b>Total Liabilities and Equity</b> | <b>\$ 642,632</b> |

| <b>EADS HEATER, INC.</b>                     |                   |                                     |                   |
|--|-------------------|-------------------------------------|-------------------|
| <b>Balance Sheet</b>                         |                   |                                     |                   |
| <b>December 31, 20X1</b>                     |                   |                                     |                   |
| <b>ASSETS</b>                                |                   | <b>LIABILITIES</b>                  |                   |
| Current Assets                               |                   | Current Liabilities                 |                   |
| Cash   | \$ 7,835          | Accounts Payable                    | \$ 26,440         |
| Accounts receivable                          | 99,400            | Interest Payable                    | 6,650             |
| Less Allowance for bad debts                 | (4,970)           | Note Payable                        | 20,000            |
| Inventory                                    | 51,000            | Lease Payable                       | 9,330             |
| Total Current Assets                         | \$ 153,265        | Total Current Liabilities           | \$ 62,420         |
| Property, plant & equipment                  |                   | Long-term liabilities               |                   |
| Land   | \$ 70,000         | Note payable                        | \$ 360,000        |
| Building                                     | 350,000           | Lease Payable                       | 74,030            |
| Less Accumulated depreciation, building      | (10,000)          | Total Long-term Liabilities         | <u>434,030</u>    |
| Equipment                                    | 80,000            | Total Liabilities                   | 496,450           |
| Less Accumulated depreciation, equipment     | (20,000)          |                                     |                   |
| Leased Equipment                             | 92,000            | <b>STOCKHOLDERS' EQUITY</b>         |                   |
| Less Accumulated depreciation, leased equipm | (11,500)          | Common stock                        | \$ 160,000        |
| Total Property, plant & equipment            | 550,500           | Retained earnings                   | 47,315            |
| <b>Total Assets</b>                          | <b>\$ 703,765</b> | Total Stockholders' Equity          | 207,315           |
|  |                   | <b>Total Liabilities and Equity</b> | <b>\$ 703,765</b> |

## Short-Term Liquidity

The last section of ratios to compare is the liquidity ratios. Glenwood has a slightly higher current ratio than Eads, but higher current ratios do not necessarily mean that Glenwood fares better than Eads. The acid-test ratio reveals Eads has a slight edge over Glenwood. This is due to Eads treatment of inventory. The difference in inventory can be explained by a managerial decision made in Transaction 14 that relates to cost of goods sold. Managers determined cost of goods sold from units sold in Transaction 6. Glenwood valued cost of goods sold and ending inventory using the FIFO method. Eads valued cost of goods sold and ending inventory using the LIFO method. Both calculations are completed in Figure 1.5.

**Figure 1.5: FIFO & LIFO Cost of Goods Sold**

| FIFO       |               |                   | LIFO       |               |                   |
|------------|---------------|-------------------|------------|---------------|-------------------|
| Units      | Cost Per Unit | Total Cost        | Units      | Cost Per Unit | Total Cost        |
| 40         | \$ 1,000      | \$ 40,000         | 28         | \$ 1,300      | \$ 36,400         |
| 60         | 1,100         | 66,000            | 62         | 1,200         | 74,400            |
| 20         | 1,150         | 23,000            | 20         | 1,150         | 23,000            |
| 40         | 1,200         | 48,000            | 50         | 1,100         | 55,000            |
| <b>160</b> |               | <b>\$ 177,000</b> | <b>160</b> |               | <b>\$ 188,800</b> |

As you can see, the beginning inventory was identical, but the varying methods accounts for the differences in both cost of goods sold and ending inventory. The LIFO method gives Eads a higher cost of goods sold, thus giving it a higher inventory turnover and lower days to sell inventory ratios as well.

The account receivables are also influenced in this same manner. For allowance for bad debts, Glenwood's manager estimates one percent of their ending account receivables will be uncollectible, whereas Ead's manager estimates five percent of

their ending accounts receivable will be uncollectible. Both companies had the same account receivables amount, and the amounts can be found on Transaction 13. Therefore, the higher percentage that Eads allowed for bad debt increases accounts receivable turnover and decreases days to collect receivables.

Both the treatment of cost of goods sold and the treatment of allowance of bad debt explains the variation in the operating cycle of each company and allows Eads to produce higher liquidity ratios. In addition, these two treatments, along with previously discussed managers' decisions, influence each company's cash, the most liquid asset. The ending cash balances of both firms are seen on the next page in Figure 1.6.

## **Conclusion**

Even though Eads fares better in the short-run, Glenwood's decisions better prepare the company for the long run as shown in analyzing the profitability and solvency ratios. As most stockholders' and consumers in this industry are interested in the long run life of the firm, its position, and current and future profitability of the company, all three categories of ratios must be considered. Thus, in respect of this, Glenwood clearly possesses an advantage over Eads.

Figure 1.6: Statement of Cash Flows Comparison

| <b>GLENWOOD HEATING, INC.</b>                    |                 |                  |
|--|-----------------|------------------|
| <b>Statement of Cash Flows</b>                   |                 |                  |
| <b>For Year Ended December 31, 20X1</b>          |                 |                  |
| <b>Cash flows from operating activities:</b>     |                 |                  |
| Net income                                       |                 | \$ 92,742        |
| Add (deduct) noncash effects on operating income |                 |                  |
| Depreciation expense                             | \$ 19,000       |                  |
| Bad debt expense                                 | 994             |                  |
| Increase in accounts receivable                  | (99,400)        |                  |
| Increase in inventory                            | (62,800)        |                  |
| Increase in accounts payable                     | 26,440          |                  |
| Increase in interest payable                     | <u>6,650</u>    | <u>(109,116)</u> |
| Net cash provided by operating activities        |                 | (16,374)         |
| <b>Cash flows from investing activities:</b>     |                 |                  |
| Purchase of land                                 | \$ (70,000)     |                  |
| Purchase of building                             | (350,000)       |                  |
| Purchase of equipment                            | <u>(80,000)</u> |                  |
| Net cash provided by investing activities        |                 | (500,000)        |
| <b>Cash flows from financing activities:</b>     |                 |                  |
| Proceeds from issuing stock                      | \$ 160,000      |                  |
| Payment of dividends                             | (23,200)        |                  |
| Increase in notes payable                        | 400,000         |                  |
| Repayment of notes payable                       | <u>(20,000)</u> |                  |
| Net cash provided by financing activities        |                 | <u>516,800</u>   |
| <b>Net increase (decrease) in cash</b>           |                 | <b>\$ 426</b>    |
| <b>Cash balance at December 31, 20X1</b>         |                 | <b>\$ 426</b>    |

| <b>EADS HEATER, INC.</b>                         |                 |                 |
|--|-----------------|-----------------|
| <b>Statement of Cash Flows</b>                   |                 |                 |
| <b>For Year Ended December 31, 20X1</b>          |                 |                 |
| <b>Cash flows from operating activities:</b>     |                 |                 |
| Net income                                       |                 | \$ 70,515       |
| Add (deduct) noncash effects on operating income |                 |                 |
| Depreciation expense                             | \$ 41,500       |                 |
| Bad debt expense                                 | 4,970           |                 |
| Increase in accounts receivable                  | (99,400)        |                 |
| Increase in inventory                            | (51,000)        |                 |
| Increase in accounts payable                     | 26,440          |                 |
| Increase in interest payable                     | <u>6,650</u>    | <u>(70,840)</u> |
| Net cash provided by operating activities        |                 | (325)           |
| <b>Cash flows from investing activities:</b>     |                 |                 |
| Purchase of land                                 | \$ (70,000)     |                 |
| Purchase of building                             | (350,000)       |                 |
| Purchase of equipment                            | (80,000)        |                 |
| Lease of equipment                               | <u>(8,640)</u>  |                 |
| Net cash provided by investing activities        |                 | (508,640)       |
| <b>Cash flows from financing activities:</b>     |                 |                 |
| Proceeds from issuing stock                      | \$ 160,000      |                 |
| Payment of dividends                             | (23,200)        |                 |
| Increase in notes payable                        | 400,000         |                 |
| Repayment of notes payable                       | <u>(20,000)</u> |                 |
| Net cash provided by financing activities        |                 | <u>516,800</u>  |
| <b>Net increase (decrease) in cash</b>           |                 | <b>\$ 7,835</b> |
| <b>Cash balance at December 31, 20X1</b>         |                 | <b>\$ 7,835</b> |

# Case Two

## **Molson Coors: Profitability and Earnings Persistence**

A look at Molson Coors' financial statements to determine profitability and earnings persistence for investment related purposes.

## Analysis

As an investor, analyzing Molson Coors' financial statements can require many assumptions. Such assumptions relate to the recurring and non-recurring items of the income statement as well as to the determination of operating and non-operating assets and liabilities on the balance sheet. Investors are more interested in persistent income statement items due to their recurring nature. A recurring income item allows users to better understand future cash flows in order to determine stock price and whether or not to invest in Molson Coors. Operating assets are important as well, because Molson Coors should be profiting from their central system of operations. The determination of these factors allows us to calculate both the persistent earnings and the profitability of Molson Coors Brewing Company.

## Recurring vs. Non-Recurring

To simplify the income statements, I split the items into four categories: recurring and operating, recurring and non-operating, non-recurring and operating, and non-recurring and non-operating. These items can be seen at the top of the next page in Figure 2.1 and will be used in upcoming calculations.

Of the items in Figure 2.1, there are three income statement items that I have labeled as non-recurring. The first, special items, includes infrequent or unusual items, impairments or losses, restructuring charges, and fees on

disposals. They are not indicative of the core operations of brewing and selling beer. Second, other income, deals with non-operating assets, currency swaps, and stock swaps. Lastly is income from discontinued operations. Even though these three items are listed as non-recurring, they may recur in the future at potentially varying amounts. Thus, they are not actually considered recurring items.

**Figure 2.1: Classification of Income Statement Items**

| <b>Molson Coors Brewing Company<br/>Income Statement Classifications</b> |  |   |
|--|--|---|
|  | <b>Operating</b>   | <b>Non-Operating</b>  |
| <b>Recurring</b>   | <ul style="list-style-type: none"> <li>•Sales</li> <li>•Excise taxes</li> <li>•Net sales</li> <li>•Cost of goods sold</li> <li>•Marketing, general and administrative expenses</li> <li>•Equity income in MillersCoors</li> <li>•Operating income</li> </ul> | <ul style="list-style-type: none"> <li>•Interest expense</li> <li>•Interest income</li> <li>•Total other income, net</li> <li>•Income from continuing operations before income taxes</li> <li>•Net loss attributable to noncontrolling interests</li> </ul> |
| <b>Non-Recurring</b>   | <ul style="list-style-type: none"> <li>•Special items, net</li> </ul>  | <ul style="list-style-type: none"> <li>•Other income, net</li> <li>•Income from discontinued operations</li> </ul>  |

The next item examined was the effective tax rate. In 2011, 2012, and 2013, the effective tax rates were 12.8 percent, 26.1 percent, and 12.8 percent respectively. However, these amounts differ from the estimated persistent effective tax rate. The calculation for the persistent effective tax rate is shown at the top of the next page in Figure 2.2.

Figure 2.2: Persistent Effective Tax Rate Calculation

| <b>Molson Coors Brewing Company<br/>Effective Tax Rate Reconciliation</b> |                          |                          |                          |                                |
|---|--------------------------|--------------------------|--------------------------|--------------------------------|
|   | <b>2011 Tax<br/>Rate</b> | <b>2012 Tax<br/>Rate</b> | <b>2013 Tax<br/>Rate</b> | <b>Persistent Tax<br/>Rate</b> |
| Statutory Federal income tax rate   | 35.0%                    | 35.0%                    | 35.0%                    | 35.0%                          |
| State income taxes, net of federal benefits                               | 1.6%                     | 1.4%                     | 1.3%                     | 1.3%                           |
| Effect of foreign tax rates   | -21.4%                   | -24.5%                   | -27.4%                   | -21.4%                         |
| Effect of foreign tax law and rate changes                                | -0.4%                    | 6.8%                     | 0.5%                     | 0.0%                           |
| Effect of unrecognized tax benefits                                       | -1.1%                    | -0.7%                    | 3.3%                     | 0.0%                           |
| Change in valuation allowance   | 0.0%                     | 6.0%                     | -1.5%                    | 0.0%                           |
| Other, net  | -0.9%                    | 2.1%                     | 1.6%                     | 0.0%                           |
| <b>Effective tax rate</b>   | <b>12.8%</b>             | <b>26.1%</b>             | <b>12.8%</b>             | <b>14.9%</b>                   |

To come to the persistent tax rate of 14.9 percent, I reconciled the 2013 rate with the notes given about the income taxes. I determined that the effect of foreign tax law and rate changes, the effect of unrecognized tax benefits, the change in valuation allowance, and the other taxes are not persistent nor are they reasonably estimable. For this reason, they have not been included in the tax rate. For the effect of foreign rate taxes, the changes proceeded from foreign operations. In 2012, Molson Coors discontinued its joint venture located in China. As the notes do not disclose any tax benefit from this discontinuation or effect of restructuring to determine foreign tax rates that might affect the rates in 2012 and 2013, I assume a foreign tax rate in the upcoming years will be similar to the 2011 rate of -21.4 percent. As the case says we should, I expect the statutory federal rate to continue. I also expect the state income tax rate from 2013 to persist, since the amount is relatively stable. Thus, I found the persistent effective tax rate using these assumptions to be 14.9 percent. Once I calculated the persistent tax rate, I could calculate



the persistent net income as well. I have shown the persistent net income calculation in the lower portion of Figure 2.3.

**Figure 2.3: 2013 and Persistent Net Income Comparison**

| <b>Molson Coors Brewing Company<br/>Income Statement<br/>For Year Ended December 31, 2013</b> |                  |
|---|------------------|
| Sales   | \$5,999.6        |
| Excise taxes  | <u>(1,793.5)</u> |
| Net sales   | 4,206.1          |
| COGS  | <u>(2,545.6)</u> |
| Gross profit  | 1,660.5          |
| Marketing, general and administrative expenses  | (1,193.8)        |
| Special items, net  | (200.0)          |
| Equity income in MillerCoors  | <u>539.0</u>     |
| Operating income (loss)   | 805.7            |
| Other income (expense), net   |                  |
| Interest expense  | (183.8)          |
| Interest income   | 13.7             |
| Other income (expense), net   | <u>18.9</u>      |
| Total other income (expense), net   | <u>(151.2)</u>   |
| Income (loss) from continuing operations before income taxes                                  | 654.5            |
| Income tax benefit (expense)  | <u>(84.0)</u>    |
| Net income (loss) from continuing operations  | 570.5            |
| Income (loss) from discontinued operations, net of tax  | <u>2.0</u>       |
| Net income (loss) including noncontrolling interests  | 572.5            |
| Less: Net (income) loss attributable to noncontrolling interests                              | (5.2)            |
| <b>Net income attributable to Molson Coors Brewing Company</b>                                | <b>\$ 567.3</b>  |

| <b>Molson Coors Brewing Company<br/>Persistent Income Statement</b> |                  |
|---|------------------|
| Sales   | \$5,999.6        |
| Excise taxes  | <u>(1,793.5)</u> |
| Net sales   | 4,206.1          |
| COGS  | <u>(2,545.6)</u> |
| Gross profit  | 1,660.5          |
| Marketing, general and administrative expenses                      | (1,193.8)        |
| Special items, net  | -                |
| Equity income in MillerCoors  | <u>539.0</u>     |
| Operating income (loss)   | 1,005.7          |
| Other income (expense), net   |                  |
| Interest expense  | (183.8)          |
| Interest income   | 13.7             |
| Other income (expense), net   | <u>-</u>         |
| Total other income (expense), net                                   | <u>(170.1)</u>   |
| Income (loss) from continuing operations before income taxes        | 835.6            |
| Income tax benefit (expense)  | <u>(124.5)</u>   |
| Net income (loss) from continuing operations                        | 711.1            |
| Income (loss) from discontinued operations, net of tax              | <u>-</u>         |
| Net income (loss) including noncontrolling interests                | 711.1            |
| Less: Net (income) loss attributable to noncontrolling interests    | (5.2)            |
| <b>Net income attributable to Molson Coors Brewing Company</b>      | <b>\$ 705.9</b>  |

Finding the persistent income required the use of the recurring income statement items that are listed in Figure 2.1. I reconciled the 2013 income statement in order to find what was persistent. As you can see in Table 3, only the recurring items remain. The only other difference in these two statements comes from income tax expense. The income tax expense used on the persistent income statement came from the previously discussed persistent tax rate in Figure 2.2. Using this information, I obtained a persistent net income that is 138.6 million greater than the net income of 2013.

## **Operating vs. Non-Operating**

Next are the categories of operating and non-operating. These apply to both the income statement items and the balance sheet items. Each income statement item is classified in Figure 2.1; however, the non-operating balance sheet items are shown in Figure 2.4.

Current and long-term notes receivables are non-operating assets, because they derive from Molson Coors loaning money. Loaning money is not a central operation. As for liabilities, current and long term derivative hedging instruments are used to try to decrease risk, which is a non-operating liability for Molson Coors. Long-term debt is non-operating because long-term debt does not usually deal with central operations. Central operations create more short-term liabilities than anything. Lastly,

discontinued operations are no longer considered a central operation of the company.

**Figure 2.4: Non-Operating Balance Sheet Items**

| <b>Molson Coors Brewing Company<br/>Balance Sheet Classifications</b> |   |
|---|---|
| <b>Non-Operating</b>  |   |
| <b>Assets</b>   | <ul style="list-style-type: none"> <li>•Current notes receivable and other receivables, less allowance for doubtful accounts</li> <li>•Long-term notes receivables, less allowance for doubtful accounts</li> </ul>   |
| <b>Liabilities</b>  | <ul style="list-style-type: none"> <li>•Current derivative hedging instruments</li> <li>•Current portion of long-term debt and short-term borrowings</li> <li>•Current Discontinued operations</li> <li>•Long-term debt</li> <li>•Long-term derivative hedging instruments</li> <li>•Long-term Discontinued operations</li> </ul> |

Classification of operating and non-operating items is especially important for two figures—net operating profit after tax and net operating assets. First, net operating profit after tax is found using operating and non-operating revenues and expenses.

**Figure 2.5: After Tax Non-Operating Items Calculation**

| <b>Molson Coors Brewing Company</b>        |                |                |                   |
|--|----------------|----------------|-------------------|
| <b>After Tax Non-operating Items</b>       |                |                |                   |
|  | <b>2012</b>    | <b>2013</b>    | <b>Persistent</b> |
| Interest expense                           | (196.3)        | (183.8)        | (183.8)           |
| Interest income                            | 11.3           | 13.7           | 13.7              |
| Other income (expense), net                | (90.3)         | 18.9           | -                 |
| Non-operating items                        | (275.3)        | (151.2)        | (170.1)           |
| Marginal Taxes (12%)                       | (33.0)         | (18.1)         | (20.4)            |
| Non-operating items after tax              | (242.3)        | (133.1)        | (149.7)           |
| Discontinued operations                    | 1.5            | 2.0            | -                 |
| Noncontrolling interest                    | 3.9            | (5.2)          | (5.2)             |
| <b>Total non-operating items after tax</b> | <b>(236.9)</b> | <b>(136.3)</b> | <b>(154.9)</b>    |

After finding which expenses are non-operating, you must find these expenses after tax is deducted. Some of these items may be reported on the income statement net of tax; however, for items reported before tax, the marginal rate of 12% must be deducted. Figure 2.5, above, projects this figure.

Finding the after tax non-operating items makes finding net operating profit after tax much easier, since net operating profit after tax can be found by adding the after tax non-operating items back into net income. NOPAT calculation for years 2012 and 2013 as well as the persistent NOPAT calculation can be found in Figure 2.6.

**Figure 2.6: NOPAT Calculation**

| <b>Molson Coors Brewing Company</b>   |              |              |                   |
|---------------------------------------|--------------|--------------|-------------------|
| <b>Net Operating Profit After Tax</b> |              |              |                   |
|                                       | <b>2012</b>  | <b>2013</b>  | <b>Persistent</b> |
| Net income                            | 443.0        | 567.3        | 705.9             |
| Net non-operating items after tax     | 236.9        | 136.3        | 154.9             |
| <b>NOPAT</b>                          | <b>679.9</b> | <b>703.6</b> | <b>860.8</b>      |

Another figure we can evaluate is net operating assets. To find NOA, we must first find total operating assets and total operating liabilities. As we have already classified the non-operating assets and liabilities, all we do is subtract them from total assets and liabilities. Net operating assets is then found by subtracting the total operating liabilities from the total operating assets, as shown in Figure 2.7.

**Figure 2.7: Net Operating Assets Calculation**

| <b>Molson Coors Brewing Company</b> |                    |                    |
|-------------------------------------|--------------------|--------------------|
| <b>Operating Assets</b>             |                    |                    |
|                                     | <b>2012</b>        | <b>2013</b>        |
| Total assets                        | \$ 16,212.2        | \$ 15,580.1        |
| Less: Non-operating assets          |                    |                    |
| Current non-operating assets:       |                    |                    |
| Current notes receivable            | 92.9               | 124.4              |
| Notes receivable                    | <u>26.3</u>        | <u>23.6</u>        |
| Total non-operating assets          | 119.2              | 148.0              |
| <b>Total operating assets</b>       | <b>\$ 16,093.0</b> | <b>\$ 15,432.1</b> |

| <b>Molson Coors Brewing Company</b>    |                   |                   |
|--|-------------------|-------------------|
| <b>Operating Liabilities</b>           |                   |                   |
|  | <b>2012</b>       | <b>2013</b>       |
| Total liabilities                      | \$ 8,220.6        | \$ 6,916.3        |
| Less: Non-operating liabilities        |                   |                   |
| Current non-operating liabilities:     |                   |                   |
| Derivative hedging instruments         | 6.0               | 73.9              |
| Short-term borrowings and current debt | 1,245.6           | 586.9             |
| Discontinued operations                | 7.9               | 6.8               |
| Long-term debt                         | 3,422.5           | 3,213.0           |
| Derivative hedging instruments         | 222.2             | 3.0               |
| Discontinued operations                | <u>20.0</u>       | <u>17.3</u>       |
| Total non-operating liabilities        | 4,924.2           | 3,900.9           |
| <b>Total operating liabilities</b>     | <b>\$ 3,296.4</b> | <b>\$ 3,015.4</b> |

| <b>Molson Coors Brewing Company</b> |                    |                    |
|-------------------------------------|--------------------|--------------------|
| <b>Net Operating Assets</b>         |                    |                    |
|                                     | <b>2012</b>        | <b>2013</b>        |
| Total operating assets              | 16,093.0           | 15,432.1           |
| Less: Total operating liabilities   | 3,296.4            | 3,015.4            |
| <b>Net operating assets</b>         | <b>\$ 12,796.6</b> | <b>\$ 12,416.7</b> |

## RNOA and Conclusion

After all previous computations are made, we can then look at Molson Coors profitability. One key ratio to do this is RNOA. RNOA stands for return on net operating assets, and it isolates the assets attributable to Molson Coors' central operations. There are two ratios that compose RNOA—operating profit margin and net operating asset turnover. These ratios are found below in Figure 2.8.

**Figure 2.8: RNOA Calculation**

| <b>Molson Coors Brewing Company</b> |             |             |                   |
|-------------------------------------|-------------|-------------|-------------------|
|                                     | <b>2012</b> | <b>2013</b> | <b>Persistent</b> |
| <b>Operating profit margin</b>      | 12.1%       | 11.7%       | 14.3%             |
| <b>Net operating asset turnover</b> | 0.44        | 0.48        | 0.48              |
| <b>RNOA</b>                         | <b>5.3%</b> | <b>5.7%</b> | <b>6.9%</b>       |

As you can see, the operating margin in 2012 is greater than that of 2013. Therefore, more income came from operations in 2012 than in 2013. However, isolating the persistent income shows that the operating profit margin is at least 2 percent higher than 2012. So, a greater amount of income will be earned recurrently from operations than either of these two years shows.

The next ratio is net operating asset turnover. Molson Coors restructuring in 2013 obviously made the company much more efficient in its use of assets as the 2013 net operating asset turnover ratio is higher than the 2012 ratio. The persistent ratio is the same as the 2013 ratio due to the fact

that both net operating assets as well as sales were identical, as seen previously in Figures 2.3 and 2.7.

So, both of these ratios go into the production of RNOA. Of the three RNOA's shown above, the best predictor of the future is the RNOA using the persistent numbers. This is because, as mentioned before, persistent or recurring income allows users to better understand future cash flows in order to determine stock price. So, the investor is much more interested in this persistent figure than in the simple net income figure. Persistent RNOA shows that the net operating assets are being used to produce a persistent income much more efficiently than net income in 2013. In conclusion, as RNOA for the persistent number shows Molson Coors is actually more profitable than the financial statements would lead most users to believe, investors would be wise to choose this company. Additional information regarding this case may be found in the questions in Appendix B.

# Case Three

## **Golden Enterprises, Inc.: Statement of Cash Flows**

An explanation of the creation of the statement of cash flows and a comparison to the income statement.



## Overview and Concepts

The statement of cash flows is one of the main financial statements that a company reports on its 10-K. Other financial statements reported on the 10-K include the income statement, the balance sheet, and the statement of retained earnings. The statement of cash flows provides information on cash receipts and cash payments over a certain period of time. The key factor being that all transactions included on the statement of cash flows are on a cash basis. This differs from the income statement for most companies, as the income statement contains information about the revenues, expenses, gains, and losses of a certain period that may or may not be on a cash basis. These items may not be on a cash basis since many companies use accrual basis accounting, which is an important factor to recognize when preparing the cash flows statement.

In the cash flows statement, there are three sections—operating, investing, and financing. The operating section deals with changes in current assets and current liabilities, otherwise known as the central, day-to-day operations of the company or what would normally be included in net income. It includes accounts payable, accounts receivable, unearned revenues, and prepaid expenses. The investment section deals with changes in property, plant, and equipment and other long-term investments. Lastly, the financing section deals with long-term liabilities (bonds payable and long-term notes payable) as well as stock, dividends, and retained earnings.

With this in mind, the company must then choose the method for its statement. There are two methods possible for a statement of cash flows—indirect and direct. The difference between the direct and indirect method lies in the treatment of operating section items. The direct method uses cash receipts from sales and expenses within the operating section. These would come from the income statement that would have been created on a cash basis. In contrast, the indirect method begins the operating section with net income on an accrual basis and reconciles this figure to the equivalent cash basis amount. Golden Enterprises uses the indirect method.

As a result, Golden Enterprises' statement of cash flows allows us to explain the change in the "Cash and cash equivalents" account on the balance sheet. While many people understand cash, not many people easily understand cash equivalents. Simply put, cash equivalents are current assets that will be converted to cash within ninety days—for example, short-term bonds. When using the indirect method, one final concept to understand is the apparent inconsistency faced in the use of net income, which was determined on an accrual basis. First, many companies tend to use the indirect method, as sometimes statements do not provide enough information in order for the company to use the direct method. Secondly, the direct method is simply not the most efficient method to use. Lastly, the reconciliation from net income to cash from operations can provide much needed information about the company's decision-making.

## Reconciliation

For the statement of cash flows for this company for 2013, we begin by reconciling net income to a cash basis. Since much of this comes from changes in the balance sheet accounts, we must find the changes in these accounts. This is done using T-charts found below in Figure 3.1.

**Figure 3.1: T-accounts for Balance Sheet Accounts**

|   |           |  |           |   |            |
|---|-----------|--|-----------|---|------------|
| <b>Accounts receivable, net</b>                         |           | <b>Inventories</b>                             |           | <b>Prepaid expenses</b>                                   |            |
| 10,566,073  |           | 5,156,798                                      |           | 1,754,874   |            |
|   | 106,367   |  | 200,985   |   | 200,137    |
| 10,459,706  |           | 4,955,813                                      |           | 1,554,737   |            |
| <b>Accrued income taxes, net (combined)</b>             |           | <b>Property, plant and equipment, gross</b>    |           | <b>Accumulated depreciation</b>                           |            |
| 59,894  |           | 89,285,723                                     |           |   | 62,788,133 |
|   | 113,169   | 3,736,720                                      |           |   | 3,139,256  |
|   | 53,275    | 93,022,443                                     |           |   | 65,927,389 |
| <b>Cash surrender value of life insurance</b>           |           | <b>Other assets</b>                            |           |   |            |
| 758,667   |           | 1,450,732                                      |           |   |            |
|   | 62,906    | 191,298  |           |   |            |
| 695,761   |           | 1,642,030                                      |           |   |            |
| <b>Checks outstanding in excess of bank balances</b>    |           | <b>Accounts payable</b>                        |           | <b>Other accrued expenses</b>                             |            |
|   | 1,710,417 |  | 6,025,465 |   | 4,472,079  |
| 267,502   |           | 1,216,399                                      |           |   | 954,938    |
|   | 1,442,915 |  | 4,809,066 |   | 5,427,017  |
| <b>Salary continuation plan (current and long-term)</b> |           | <b>Notes payable and long term debt, total</b> |           | <b>Deferred income taxes, net (current and long-term)</b> |            |
|   | 1,279,233 |  | 7,358,681 |   | 2,894,123  |
| 49,774  |           |  | 73,671    | 185,939   |            |
|   | 1,229,459 |  | 7,432,352 |   | 2,708,184  |
| <b>Common stock</b>                                     |           | <b>Additional paid-in capital</b>              |           | <b>Retained earnings</b>                                  |            |
|   | 9,219,195 |  | 6,497,954 |   | 19,607,056 |
|   | -         |  | -         | 333,842   |            |
|   | 9,219,195 |  | 6,497,954 |   | 19,273,214 |
| <b>Treasury shares</b>                                  |           |  |           |   |            |
| 10,925,759  |           |  |           |   |            |
|   | 6,860     |  |           |   |            |
| 10,932,619  |           |  |           |   |            |

Figure 3.1, as stated before, shows the changes in the accounts that can be found on the balance sheet. The first line of the T-account shows the previous year's ending balance, which is also this year's beginning balance. The bottom line of the T-accounts shows the ending balance listed for this year. Therefore, to find the changes in these accounts, we find the debit or credit amount differences. These amounts are located on the second line of the accounts (the left-hand side being a debit amount and the right-hand side being a credit amount). The changes in these accounts are necessary in the completion of the statement of cash flows and especially the operating section reconciliation. Now, after finding these changes, we can reconcile the operating section of the statement of cash flows, as found in Figure 3.2. As you can see, the first line of the operating section is "Net income," so Golden Enterprises consistently uses the indirect method.

**Figure 3.2: Operating Activities Reconciliation**

| <b>GOLDEN ENTERPRISES, INC. AND SUBSIDIARY<br/>CONSOLIDATED STATEMENTS OF CASHFLOWS<br/>For Fiscal Years Ended May 31, 2013 and June 1, 2012</b> |                     |                     |
|--|---------------------|---------------------|
| <b>RECONCILIATION OF NET INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES</b>   |                     |                     |
|  | <b>2013</b>         | <b>2012</b>         |
| Net income   | \$ 1,134,037        | \$ 2,207,623        |
| Adjustments to reconcile net income to net cash provided by operating activities:  |                     |                     |
| Depreciation   | 3,538,740           | 3,303,353           |
| Deferred income taxes  | (185,939)           | 557,576             |
| Gain on sale of property and equipment   | (61,040)            | (162,876)           |
| Change in receivables - net  | 106,367             | (345,853)           |
| Change in inventories  | 200,985             | (161,169)           |
| Change in prepaid expenses   | 200,137             | 48,956              |
| Change in cash surrender value of insurance  | 62,906              | 176,177             |
| Change in other assets - other   | (191,298)           | (151,239)           |
| Change in accounts payable   | (1,216,399)         | (297,983)           |
| Change in accrued expenses   | 954,938             | (132,524)           |
| Change in salary continuation plan   | (49,774)            | (100,324)           |
| Change in accrued income taxes   | 113,369             | 805,573             |
| <b>Net cash provided by operating activities</b>   | <b>\$ 4,607,029</b> | <b>\$ 5,747,290</b> |

Next, we identify the operating activities. These include the following: depreciation, income tax, gains or losses on sales of plant, property and equipment, account receivables, inventories, prepaid expenses, insurance policy surrenders, other assets, accounts payable, accrued expenses, salary continuation plans, and accrued income taxes. These activities are all necessary or contingent upon the companies central and ongoing operations.

After identifying these accounts, the last step is to determine whether their changes should be added or subtracted from net income to give cash from operations. First, depreciation is added back into net income. We add this expense back because, even though it does not generate cash for the company, it was never a cash expense. Next, the change in deferred income taxes is subtracted because the company paid that amount of deferred taxes during the year rather than accumulating them. The gain on the sale property and equipment is subtracted for a similar rationale to depreciation expense. The gain is not a cash gain. Instead, it is a gain from the assets' book values. This gain can be found in two ways. One, it is listed on the income statement. Two, you can find the difference in the cost of property disposed and the related depreciation, then compare this amount to the cash received from the disposal. The actual cash collected is revenue, thus any noncash excess should be removed.

Finally, the remaining accounts from the operating section can be treated on a rule-like basis. Any current asset account increase is subtracted

from net income, and any current asset account decrease is added. This is true in the converse form as well. Whether an account is a current asset or a current liability is found on the balance sheet. After the changes are made, the operating section totals \$4,607,029.

## Statement of Cash Flows

Once we change net income to net cash provided by operating activities, we can create the 2013 statement of cash flows for Golden Enterprises. The only other information we require is the changes in the accounts that would be included within the investing and financing sections. To better explain this information, the statement of cash flows for 2013 can be seen below in Figure 3.3.

**Figure 3.3: Statement of Cash Flows**

| <b>GOLDEN ENTERPRISES, INC. AND SUBSIDIARY<br/>CONSOLIDATED STATEMENTS OF CASH FLOWS<br/>For Fiscal Years Ended May 31, 2013 and June 1, 2012</b> |                   |                     |
|---|-------------------|---------------------|
|   | <b>2013</b>       | <b>2012</b>         |
| <b>CASH FLOWS FROM OPERATING ACTIVITIES</b>   | \$ 4,607,029      | \$ 5,747,290        |
| [Details found in reconciliation of operating activities]   |                   |                     |
| <b>CASH FLOWS FROM INVESTING ACTIVITIES</b>   |                   |                     |
| Purchase of property, plant and equipment   | (4,149,678)       | (5,214,408)         |
| Proceeds from sale of property, plant and equipment   | 74,514            | 222,755             |
| Net cash used in investing activities   | (4,075,164)       | (4,991,653)         |
| <b>CASH FLOWS FROM FINANCING ACTIVITIES</b>   |                   |                     |
| Debt proceeds   | 38,361,200        | 36,639,753          |
| Debt repayments   | (38,287,529)      | (37,468,412)        |
| Change in checks outstanding in excess of bank balances   | (267,502)         | 712,031             |
| Purchases of treasure shares  | (6,860)           | -                   |
| Cash dividends paid   | (1,467,879)       | (1,466,831)         |
| Net cash (used in) provided by financing activities   | (1,668,570)       | (1,583,459)         |
| <b>NET DECREASE IN CASH AND CASH EQUIVALENTS</b>  | (1,136,705)       | (827,822)           |
| <b>CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR</b>   | 1,893,816         | 2,721,638           |
| <b>CASH AND CASH EQUIVALENTS AT END OF YEAR</b>   | <b>\$ 757,111</b> | <b>\$ 1,893,816</b> |

Similarly to the reconciliation for the operating activities section, we must determine which accounts and amounts would be included in the investing and financing sections. As stated in "Overview and Concepts," the investing section deals with accounts such as long-term investments or property, plant and equipment. The only transactions that occurred within the period for Golden Enterprises were the purchases and disposals of property and equipment. The information on these amounts is listed on the information provided in item 1 on page 2 of the case. Since the purchase required the use of cash, this item is shown as a negative. The cash received for the sale of equipment is shown as a positive. These two amounts result in a net cash flow provided by investing activities of (\$4,075,164).

The last section of the cash flows statement is the financing section. The case states the amounts of debt issued and debt repaid in item 3 of page 2. Other accounts include the change in checks outstanding, purchase of treasury shares, and dividends paid. All of these amounts deal with investors and creditors. Therefore, these items fall under the financing section. Since we were given the amounts for debt issued and repaid, we must look at the T-accounts to determine the changes in the remaining three accounts. Seeing that the balance of checks outstanding decreased, we can only assume these checks were cashed. This would lead to a decrease in cash, so we subtract this amount on the statement. Repurchasing treasury stock (an increase in the treasury stock account) also means a cash decrease, so this amount is subtracted as well. Last is the cash dividends paid. This amount is shown on

the statement of changes in stockholders' equity. Once again, a cash decrease means a subtraction on the statement of cash flows. These transactions give a total of net cash provided by financing activities of (\$1,668,570).

To finish the statement of cash flows, the last step is to add the cash and cash equivalents available at the beginning of the year. The resulting amount is the net cash and cash equivalents at the end of the year. To check this figure, we can look at the amount listed on the balance sheet. As we can see, both the balance sheet figure and the figure found on the statement of cash flows is \$757,111.

## **Analysis and Conclusion**

As the reconciliation in the operating section shows, there are many differences between net income and cash from operations in both 2012 and 2013. The net income in 2012 was \$2,207,623, and the cash from operations was \$5,747,290. Meanwhile, net income in 2013 was \$1,134,037, and the cash from operations was \$4,607,029. The difference in the cash from operations between the two years can be accounted for by several items, including the deferral of taxes in 2012 as opposed to paying them in 2013, receiving more cash from customers in 2012 than 2013, and paying much fewer accounts payables in 2012 than 2013. The difference in incomes can be accounted for by the increase in selling, general and administrative expenses from 2012 to 2013. Had the company better managed these expenses, it



could have been more profitable in 2013. However, the company did decrease inventories in 2013 (as shown by the increase on the cash flows statement), therefore this could be a sign that the company is making an effort to reduce these costs in the upcoming years.

Not only is the company's decision more forward-looking in this area but also is forward-looking in the decision to purchase large amounts of property, plant, and equipment in the past several years. This decision allowed Golden Enterprises to expand its productive capacity in the past three years. However, just because Golden Enterprises has expanded its capacity does not mean it is using this capacity to the fullest. This should be taken into account when examining the profitability of the company. Both the cash flow statement and the income statement give a basic understanding of this profitability, which can also be understood by the sources of cash used to increase the levels of investment in property and equipment.

As the cash flows statement shows, both the investing and the financing section amounts are negative for both 2012 and 2013. Therefore, Golden Enterprises continued to invest without raising funds through extreme amounts of debt or issuing any stock. Instead, the more likely source of this cash came from Golden Enterprises operating activities (the only positive section of the cash flows statement). This shows that Golden Enterprises is successful in its central activities, as a company should be. If a company needed to raise cash through large amounts of debt, this could be a

sign that its operations are either relatively new or are not flourishing as they ought to be. In conclusion, an analysis of both the income statement and the statement of cash flows allows us to determine that Golden Enterprises is indeed a profitable with adeptness in producing cash through its major operations.

# Case Four

## **Pearson plc: Accounts Receivable**

An in depth explanation of accounts receivables and relating contra-asset accounts.

## Overview

Pearson plc has numerous accounts composing its balance sheet. One account in particular is especially important to the company's operation—accounts receivable. An account receivable is an oral agreement from a customer to an entity that states the customer will repay the company for the amount of goods purchased or services rendered. Other names for receivables include trade and nontrade receivables. Trade receivables arise from the company's normal operations, whereas nontrade receivables arise from transactions that fall outside of normal operations. Pearson's account receivables are trade receivables, since they arose from normal operations.

Also, account receivables differ from notes receivable. First, account receivables are oral promises, whereas note receivables are written promissory notes. Second, account receivables are usually short-term, but notes receivables are either long-term or short-term (depending on their due date), arising from the company lending a customer or other entity a certain amount of money and usually include interest on the amount borrowed (the principal).

Sometimes, the balance sheet will contain accounts that offset the account receivables account. These accounts are called contra asset accounts and have a normal credit balance. . The two associated with Pearson are provisions for bad and doubtful debts and anticipated future sales returns. The provision for bad and doubtful debts is associated with customers failing

to pay for the goods or services. Anticipated future sales returns are an estimate of the amount of goods that customers will return to the company. For the first account, managers may consider using a percentage-of-sales approach, a percentage-of-gross-receivables approach, or an aging balance approach. For the second account, they could use the percentage-of sales along with other underlying factors such as product issues and historical data to help better estimate this account.

If a company has account receivables, it must keep in mind that not all receivables will be collected. So, this uncollectible amount must be estimated. Two common approaches used to estimate uncollectible receivables are the percentage-of-sales procedure and the aging-of-accounts procedure. For percentage-of-sales, the company multiplies net credit sales by a certain percentage that the company finds from past data, etc. and this amount is the provision given for uncollectible accounts. This procedure is also called the income statement procedure. Aging of accounts uses a certain percentage for accounts of different ages. Usually, the older the account receivable, the higher the percentage used to estimate uncollectible accounts receivable. Under the first approach, managers need to know the net sales as well as the single percentage that will be used. Under the second approach, the managers need to know the age of all accounts receivables, the age group divisions, and the percentages used for each age group. The aging-of-accounts procedure provides a more accurate estimate since it provides

better information about the receivables over time rather than at a single point.

So, the provision for bad and doubtful debts is necessary when the company has trade receivables. The company cannot simply deny credit to every person that has a chance of not paying. A company can never be absolutely certain which accounts will be uncollectible. Also, withholding credit creates poor relationships with potential customers, who could then entice other customers to avoid your store. Other risks to consider would not only be the loss of customers but also a loss associated with bad debt. Lastly, the company should consider sales that are returned before money has been collected.

## **Provisions and Total Receivables**

As stated, the company has certain provision accounts that must be estimated or accounted for in the journals as well as on the income statement and balance sheet. The first account is the provision for bad and doubtful debts. To better explain this item, a T-account and journal entries for the provision for bad and doubtful debts is shown below in Figure 4.1.

**Figure 4.1: T-Account and Journals for Provision for Bad and Doubtful Debts**

| <b>Provision for bad and doubtful debts</b> |      |
|---|------|
| 5   | 72   |
| 20  | 26   |
|   | 3    |
|   | £ 76 |

|   |    |    |
|---|----|----|
| Provision for bad and doubtful debts          | 5  |    |
| Gain on exchange                              |    | 5  |
| Bad and doubtful debt expense                 | 26 |    |
| Provision for bad and doubtful debts          |    | 26 |
| Provision for bad and doubtful debts          | 20 |    |
| Trade receivables                             |    | 20 |
| Loss on acquisition through business combinat | 3  |    |
| Provision for bad and doubtful debts          |    | 3  |

In the case, Note 22 contains a section titled “Trade and other receivables.” The bottom of this section contains the movements on the provision for bad and doubtful debts. Any number listed as a subtraction is a credit to the contra asset account, because a subtraction from an asset is a credit. Therefore, the positive numbers listed are debits to the provision account.

So, the T-account shows the beginning of the year balance as £72 million. The debit column contains two transactions. The first in the amount of £5 million are the exchange differences. Exchange differences arise from the difference in the date of sale and the date the receivables are collected. Since inflation rates vary on a daily basis, the amount varies as a gain or loss

from the inflation rate. The next debit of £20 million is the utilised figure. The utilised figure comes from the receivables that have been written off.

Next, the t-account shows credits throughout the year. The first credit of £26 million accounts for income statements movements. These are the actual expenses listed on the income statement, otherwise the bad and doubtful debts expense for 2009. Lastly, the company experienced a £3 million loss on their business combination, which leads to a credit of this amount. So, this loss means that whatever receivables came from the acquiree created increased the provision for bad and doubtful debts.

So, as the journal entries show, these cause changes in both balance sheet accounts as well as income statement accounts. Bad and doubtful debt expense, and the Loss on acquisition through business combination are income statement accounts. Provision for bad and doubtful debts and Trade receivables are balance sheet accounts. After these debits and credits have been made, the ending balance of the provision for bad and doubtful debts totals to £76 million. This provision total will be the provision of bad and doubtful debt expense that goes under the operating expenses section on the income statement. Similarly, Pearson's has a provision for sales returns. Reconciling the change in the provision for sales returns requires two types of journal entries—first to record the estimated sales returns for the period and second to record the amount of actual returns.



**Figure 4.2: T-Account and Journals for Provision for Sales**

| Provision for sales |       |
|---------------------|-------|
| 443                 | 372   |
|                     | 425   |
|                     | £ 354 |

|                              |     |
|------------------------------|-----|
| Sales returns and allowances | 425 |
| Provision for sales returns  | 425 |
| Provision for sales returns  | 443 |
| Trade receivables            | 443 |

Above, Figure 4.2 shows these journal entries as well as the T-account for the provision for sales. During the year, Pearson estimated that returns relating to the 2009 Sales were £425 million. Therefore, sales returns and allowances were debited and the provision was credited for the £425 million. Since the beginning and ending balances are found on the balance sheet, the only other figure missing are the actual book returns that occurred during the year. This figure totals £443 million, and brings provision for sales to the proper ending balance of £354 million. Like the provision for bad and doubtful debts expense, the estimated sales returns will be an operating expense on the income statement. So, the journal entries show the various accounts that are affected. Sales returns and allowance is an income statement account. Provision for sales returns and Trade receivables are balance sheet accounts.

Once these provisions have been estimated, the next step is to find the changes in the total or gross trade receivables (trade receivables before

deducting the provision for bad and doubtful debts and the provision for sales returns). To do so, we must assume that all sales in 2009 were credit sales. The calculation for the total can be found in Figure 4.3.

**Figure 4.3: T-Account and Journals for Total Trade Receivables**

| <b>Trade receivables, gross</b> |       |
|---------------------------------|-------|
| 1,474                           | 5,679 |
| 5,624                           |       |
| <b>£ 1,419</b>                  |       |

|                   |       |
|-------------------|-------|
| Trade receivables | 5,624 |
| Sales             | 5,624 |
| Cash              | 5,679 |
| Trade receivables | 5,679 |

In creating these journal entries and T-account, we also assume that there were no changes to the account due to business combinations or foreign exchange rate changes. The beginning balance was a debit amount of £1,474 million. Since the trade receivables here are gross trade receivables rather than net trade receivables, we do not include the entries from the two contra asset accounts. So, the debit of £5,624 million represents sales made on account. Therefore, the remaining credit amount of £5,679 million constitutes the trade receivables that were collected during 2009. This gives an ending balance of £1,419 million, which can also be found on the balance sheet.

## Analysis and Conclusion

So, the above calculations show the provision for bad and doubtful debts, the provision for gross (total) trade receivables. However, the auditor would like to verify that the amount used for the provision for bad and doubtful debts is a reliable figure. To do so, we will construct an aging-of-account table to find the estimate. This is shown in Figure 4.4.

**Figure 4.4: Aging-of-Accounts Estimation Calculation**

|                                   | Trade receivables<br>balance<br>(1) | Estimated %<br>uncollectible<br>(2) | Accounts estimated<br>uncollectible<br>(1 x 2) |
|-----------------------------------|-------------------------------------|-------------------------------------|--|
| Within due date                   | £ 1,096                             | 2%                                  | £ 22   |
| Up to three months past due date  | 228                                 | 4%                                  | 9  |
| Three to six months past due date | 51                                  | 25%                                 | 13   |
| Six to nine months past due date  | 20                                  | 50%                                 | 10   |
| Nine to 12 months past due date   | 4                                   | 60%                                 | 2  |
| More than 12 months past due date | 20                                  | 90%                                 | 18   |
| <b>Total</b>                      | <b>£ 1,419</b>                      |                                     | <b>£ 74</b>                                    |

By analyzing historical collection information, the auditor estimated the various percentages of the uncollectibles. The percentages for the various ages can be found in column two. The first column shows the amounts and ages of outstanding trade receivables at the end of 2009. To find the estimated uncollectible amount (otherwise the provision for bad and doubtful accounts), we simply multiply the figures by their appropriate percentage. These amounts can be found in the last column and totals £74 million. Based on my estimate, the auditor would be comfortable with the provision reported in Note 22. The difference between the two amounts is

immaterial, therefore there is no reason for this estimate to be changed based on this calculation.

The last step in analyzing the trade receivables is to compute the accounts receivable turnover as well as the average collection period. These ratios shown in Figure 4.5 can be found by using the net credit sales along with the average gross trade receivables. Thus, the accounts receivable turnover can be found by dividing the net credit sales by the average gross accounts receivable. This gives a 3.75 turnover ratio for 2008 and a 3.89 turnover ratio for 2009. Average collection period (in days) is calculated by dividing 365 days by the accounts receivable turnover. This gives average collection periods of 97.30 days and 92.88 days for 2008 and 2009 respectively.

**Figure 4.5: Turnover and Collection Ratio Calculations**

|                                 | 2009 |       | 2008 |       |
|---------------------------------|------|-------|------|-------|
| Credit sales, net               | £    | 5,624 | £    | 4,811 |
| Average gross trade receivables | £    | 1,419 | £    | 1,474 |
| Accounts receivable turnover    |      | 3.89  |      | 3.75  |
| Average collection period       |      | 93.88 |      | 97.30 |

In the past two years, Credit sales have increased, however the average gross trade receivables have decreased. This lead to an increased accounts receivable turnover ratio and a decreased average collection period. Overall, the company is collection receivables at a quicker rate in 2009 than in 2008. However, McGraw Hill Publishing, one of Pearson’s competitors, had an average collection period of 79 days for 2009.

In order to better compete with McGraw Hill Publishing, Pearson must decrease its average collection period, and there are various ways of doing this. First, Pearson could implement more diligent credit research to better estimate these expenses and offer greater incentives to pay cash on time. Pearson could also improve follow-up action with these receivables. If these do not work, the company could charge interest on any payments that are overdue in order to discourage late payments. However, Pearson should research each of these options carefully before deciding on a new action. Increasing restrictions on credit sales too much could cause a loss of customers or cause receivables to never be paid on time. On the other hand, reduced restrictions may allow receivables to be paid on time, but the actual cash would not be collected quickly. In all, this shows just how complex it can be for a company to accurately portray a single account on the balance sheet. Any other questions or extensions to answers regarding this case can be found in Appendix D.

# Case Five

## **Graphic Apparel Company: Reporting Changes in Financial Statements**

An explanation of financial statement changes and recommendations for the company's future.

## Overview

As ownership of Graphic Apparel Company has recently changed, there are key changes of which to be aware. These changes include: altered graphic shirts, change in customer base, increase in custom orders, and shift of equity financing to debt financing. To fully understand the effects of these changes, we must look at how the company was previously operated, how the company is currently operating, and how the company should be operating to achieve maximum potential. Comparing the current balance sheet, seen below in Figure 5.1, with subsequent balance sheets showing different changes allows us to assess the company and recommend the best steps for the future.

**Figure 5.1: Balance Sheet as Reported by Nicki**

| <b>Graphic Apparel Corporation</b>                  |                   |
|---|-------------------|
| <b>Balance Sheet</b>                                | <b>At</b>         |
| <b>August 31, 2014</b>                              |                   |
| <b>Assets</b>                                       |                   |
| Current Assets:                                     |                   |
| Cash and Cash Equivalents                           | 4,000             |
| Accounts Receivable                                 | 32,500            |
| Inventory   | <u>24,500</u>     |
| Total Current Assets                                | 61,000            |
| Property and Equipment                              | 92,000            |
| Other Assets  | <u>300</u>        |
| <b>Total Assets</b>                                 | <b>\$ 153,300</b> |
| <b>Liabilities and Stockholders' Equity</b>         |                   |
| Current Liabilities:                                |                   |
| Accounts Payable                                    | 36,100            |
| Accrued Liabilities                                 | 8,680             |
| Taxes Payable                                       | <u>400</u>        |
| Total Current Liabilities                           | 45,180            |
| Long-term Debt                                      | <u>54,000</u>     |
| Total Liabilities                                   | 99,180            |
| Stockholders' Equity                                |                   |
| Common Shares                                       | 35,000            |
| Retained Earnings                                   | <u>19,120</u>     |
| Total Stockholders' Equity                          | <u>54,120</u>     |
| <b>Total Liabilities &amp; Stockholders' Equity</b> | <b>\$ 153,300</b> |

## Custom Order Revenue

Currently, the company records revenue when cash or equivalent is received. However, GAAP requires revenue be reported when earned, not when the cash is exchanged. For custom orders, GAC reports revenue when a signed order and payment is received from the customer, which violates GAAP. Any payment should be placed in an unearned revenue account until the revenue is actually earned. So, the \$7,500 of cash is unearned revenue. The \$2500 of receivables should not be reported as a sale until the contracted requirements are met. This is shown in Figure 5.2 below.

**Figure 5.2: Changes in Custom Order Reporting**

| <b>GAC Balance Sheet with<br/>Custom Order Reporting Change<br/>at August 31, 2014</b> |                   |
|--|-------------------|
| <b>Assets</b>  |                   |
| Current Assets:  |                   |
| Cash and Cash Equivalents  | 4,000             |
| Accounts Receivable  | 30,000            |
| Inventory  | <u>24,500</u>     |
| Total Current Assets   | 58,500            |
| Property and Equipment   | 92,000            |
| Other Assets   | <u>300</u>        |
| <b>Total Assets</b>  | <b>\$ 150,800</b> |
| <b>Liabilities and Stockholders' Equity</b>  |                   |
| Current Liabilities:   |                   |
| Accounts Payable   | 36,100            |
| Accrued Liabilities  | 8,680             |
| Taxes Payable  | 400               |
| Unearned Revenue   | <u>7,500</u>      |
| Total Current Liabilities  | 52,680            |
| Long-term Debt   | <u>54,000</u>     |
| Total Liabilities  | 106,680           |
| Stockholders' Equity   |                   |
| Common Shares  | 35,000            |
| Retained Earnings  | <u>9,120</u>      |
| Total Stockholders' Equity   | <u>44,120</u>     |
| <b>Total Liabilities &amp; Stockholders' Equity</b>                                    | <b>\$ 150,800</b> |



Once these shirts have been created, GAC can report the liability as revenue, but at the end of the year, it has not yet been earned. So, the \$7,500 remains unearned revenue, and the \$2,500 still should not be reported as a receivable. Both the subtraction from current assets and the addition to current liabilities decrease the current ratio (found by dividing current assets by current liabilities). This is vital to GAC because the money obtained from the bank requires that GAC maintain a current ratio of 1.0. The change in the current ratios can be seen below in Figure 5.3 and the various changes listed are discussed in the following sections.

**Figure 5.3: Current Ratio Calculation**

| Current Ratios                             |      |
|--|------|
| 2014 Current                               | 1.35 |
| 2014 with Change in Custom Order Reporting | 1.70 |
| 2014 with Change in Bad Debts              | 1.47 |
| 2014 with Change in Returns                | 1.02 |
| 2014 with Change in Inventory              | 1.24 |
| 2014 with all Changes                      | 0.68 |

## Bad Debts

Under GAAP, accounts receivable should be reported at their net realizable value. The net realizable value can be found by subtracting the allowance for bad debts from accounts receivable. Currently, GAC does not have an established allowance for bad debts. GAC currently uses the direct

write off method and only accounts for the specific items they know they will not receive. However, with the change in customer base, this is especially important. The new customers are not as reliable as the customers in the past. Therefore, GAC must have an established allowance for doubtful accounts in order to comply with GAAP. Since Nicki believes that \$3,000 of receivables will not be collected, this can be the estimated allowance for doubtful accounts. The effects of this account on the balance sheet are shown below in Figure 5.4.

**Figure 5.4: Change in Bad Debts Reporting**

| <b>GAC Balance Sheet with<br/>Debts Reporting Change<br/>31, 2014</b> |              | <b>Bad<br/>at August</b> |
|---|--------------|--------------------------|
| <b>Assets</b>   |              |                          |
| Current Assets:   |              |                          |
| Cash and Cash Equivalents   |              | 4,000                    |
| Accounts Receivable   | 32,500       |                          |
| Less: Allowance for doubtful accounts                                 | <u>3,000</u> | 29,500                   |
| Inventory   |              | <u>32,700</u>            |
| Total Current Assets  |              | 66,200                   |
| Property and Equipment  |              | 92,000                   |
| Other Assets  |              | <u>300</u>               |
| <b>Total Assets</b>   |              | <b>\$ 158,500</b>        |
| <b>Liabilities and Stockholders' Equity</b>                           |              |                          |
| Current Liabilities:  |              |                          |
| Accounts Payable  |              | 36,100                   |
| Accrued Liabilities   |              | 8,680                    |
| Taxes Payable   |              | <u>400</u>               |
| Total Current Liabilities   |              | 45,180                   |
| Long-term Debt  |              | <u>54,000</u>            |
| Total Liabilities   |              | 99,180                   |
| Stockholders' Equity  |              |                          |
| Common Shares   |              | 35,000                   |
| Retained Earnings   |              | 24,320                   |
| Total Stockholders' Equity  |              | <u>59,320</u>            |
| <b>Total Liabilities &amp; Stockholders' Equity</b>                   |              | <b>\$ 158,500</b>        |

Having an allowance for doubtful accounts gives a lower net realizable value for accounts receivable. This reduces both current assets and the current ratio. The new current ratio is listed in Figure 5.3. However, accounts receivable is involved in another special ratio—days to collect receivables. This ratio is shown in Figure 5.5 at the top of the next page and can be found by dividing 365 by the accounts receivable turnover.

**Figure 5.5: Other Ratio Calculations**

| <b>Additional Ratios</b>            |             |             |
|-------------------------------------|-------------|-------------|
|                                     | <b>2014</b> | <b>2013</b> |
| <b>Accounts Receivable Turnover</b> | 7.26        | 10.96       |
| <b>Days to Collect Receivables</b>  | 50.25       | 33.30       |
| <b>Inventory Turnover</b>           | 3.80        | 9.00        |
| <b>Days Sales of Inventory</b>      | 96.16       | 40.56       |
| <b>Gross Profit Percentage</b>      | 48.32%      | 52.35%      |

As you can see, the number of days to collect receivables has increased from 2013 to 2014. This means that the company is not receiving cash from its customers as quickly this year as it was last year. This could be accounted for by the change in customer base mentioned earlier.

## **Sales Returns**

Another issue that GAC potentially faces is sales returns. GAC currently reports returns in the month in which retail customers return goods. However, like bad debts, this does not establish an allowance.

Therefore, this method is considered unacceptable, unless these are rarely occurring events at immaterial amounts.

Recently, circumstances surround returns have changed. Due to the new design of shirts used, the inventory in retail stores has not been selling as quickly. These shirts have either been seen on clearance racks or not at all, thus higher return amounts are expected. After a poll was taken, Nicki determined the selling price of shirts remaining in retail inventory to be \$15,000. GAC has a policy that says they will repurchase the shirts at the full amount if the inventory is returned before October. Since it is unknown whether these shirts have actually been sold, are in clearance racks, or are sitting in an inventory warehouse, the actual amount of returns is unpredictable. Therefore, the \$15,000 should be listed as a returns allowance, which would be a subtraction from the accounts receivable balance. The balance sheet effect of this change is shown below in Figure 5.6.

Since the return amount is predictable, inventory should the account. So, no adjustment should be made to inventory. However, as there was a decrease in the total amount of current assets, the current ratio also decreased, shown previously in Figure 5.3.

**Figure 5.6: Change in Returns Reporting**

| <b>GAC Balance Sheet with<br/>Reporting Change<br/>31, 2014</b> | <b>Returns<br/>at August</b> |
|---|------------------------------|
| <b>Assets</b>   |                              |
| Current Assets:   |                              |
| Cash and Cash Equivalents                                       | 4,000                        |
| Accounts Receivable   | 17,500                       |
| Inventory   | <u>24,500</u>                |
| Total Current Assets  | 46,000                       |
| Property and Equipment  | 92,000                       |
| Other Assets  | <u>300</u>                   |
| <b>Total Assets</b>   | <b>\$ 138,300</b>            |
| <b>Liabilities and Stockholders' Equity</b>                     |                              |
| Current Liabilities:  |                              |
| Accounts Payable  | 36,100                       |
| Accrued Liabilities   | 8,680                        |
| Taxes Payable   | <u>400</u>                   |
| Total Current Liabilities                                       | 45,180                       |
| Long-term Debt  | <u>54,000</u>                |
| Total Liabilities   | 99,180                       |
| Stockholders' Equity  |                              |
| Common Shares   | 35,000                       |
| Retained Earnings   | <u>(4,080)</u>               |
| Total Stockholders' Equity                                      | <u>39,120</u>                |
| <b>Total Liabilities &amp; Stockholders' Equity</b>             | <b>\$ 138,300</b>            |

## Inventory

Due to the unpredictable returns, the inventory balance has increased. However, a significant event this year further affects the actual cost of inventory. A water leak damaged half of the inventory purchased for this year's production. As Nicki's creative idea allowed the majority of these shirts to be used in the making of the graphic design shirts, she was able to

minimize the loss on these shirts. However, many of these graphic design shirts were not as popular as shirts used previously. We know this by looking at the days to sell inventory in 2014 versus 2013, both of which are found in Figure 5.5. This inventory is taking much longer to sell this year than last year, and the items that aren't sold were returned to the inventory, as mentioned before.

Right now, GAC has a deal with a discount store that allows them to sell the graphic shirts in their inventory at half their cost. If all the shirts in the graphic account are only worth half their original cost, then the difference should be a loss from inventory impairment. This allows GAC to report inventory at its lower-of-cost-or-market price in accordance with GAAP reporting. The amount to be written off would be \$4,900, calculated as half the cost of the graphic shirt account. This amount would not only be an impairment loss on the income statement, but would also be a reduction to the inventory account, as shown at the top of the next page in Figure 5.7. This reduction in the current assets would result in a lower current ratio seen in Figure 5.3, and should once again be considered a concern for GAC.

**Figure 5.7: Change in Inventory Reporting**

| <b>GAC Balance Sheet with<br/>Reporting Change<br/>August 31, 2014</b> | <b>Inventory<br/>at</b> |
|--|-------------------------|
| <b>Assets</b>  |                         |
| Current Assets:  |                         |
| Cash and Cash Equivalents  | 4,000                   |
| Accounts Receivable  | 32,500                  |
| Inventory  | <u>19,600</u>           |
| Total Current Assets   | 56,100                  |
| Property and Equipment   | 92,000                  |
| Other Assets   | <u>300</u>              |
| <b>Total Assets</b>  | <b>\$ 148,400</b>       |
| <b>Liabilities and Stockholders' Equity</b>                            |                         |
| Current Liabilities:   |                         |
| Accounts Payable   | 36,100                  |
| Accrued Liabilities  | 8,680                   |
| Taxes Payable  | <u>400</u>              |
| Total Current Liabilities  | 45,180                  |
| Long-term Debt   | <u>54,000</u>           |
| Total Liabilities  | 99,180                  |
| Stockholders' Equity   |                         |
| Common Shares  | 35,000                  |
| Retained Earnings  | <u>14,220</u>           |
| Total Stockholders' Equity   | <u>49,220</u>           |
| <b>Total Liabilities &amp; Stockholders' Equity</b>                    | <b>\$ 148,400</b>       |

## Analysis and Conclusion

So, the effects of the individual changes in the accounts each result in a lower current ratio than was actually reported for the year. However, as stated in the opening, GAC really needs to be aware of its actual current ratio. If the current ratio falls below 1.0, the bank could require an external audit of GAC, which would be both timely and costly for the company. But, in order to get the best look of these changes, we must see the total effect. Therefore, we

begin by looking at a re-casted income statement for 2014 with all changes shown. This is found below in Figure 5.8.

**Figure 5.8: Comparison to Revised Income Statement**

| <b>Graphic Apparel Corporation</b> |                           |                        |
|------------------------------------|---------------------------|------------------------|
| <b>Income Statement</b>            | <b>At</b>                 |                        |
|                                    | <b>August 31</b>          |                        |
|                                    | <b>2014 with Changes</b>  | <b>2014</b>            |
| <b>Revenue</b>                     |                           |                        |
| Sales Revenue                      | \$ 170,000                | \$ 180,000             |
| Sales Returns and Allowances       | <u>15,050</u>             | <u>50</u>              |
| <b>Net Sales Revenue</b>           | 154,950                   | 179,950                |
| <b>Cost of Goods Sold</b>          | <u>93,000</u>             | <u>93,000</u>          |
| <b>Gross Profit</b>                | 61,950                    | 86,950                 |
| <b>Expenses</b>                    |                           |                        |
| Salaries and Wages                 | 58,000                    | 58,000                 |
| Selling and Administrative         | 20,000                    | 20,000                 |
| Depreciation                       | 5,000                     | 5,000                  |
| Repairs and Maintenance            | 1,000                     | 1,000                  |
| Bad Debt Expense                   | 3,000                     | -                      |
| Loss on Impairment of Inventory    | 4,900                     | -                      |
| Interest and Other                 | <u>900</u>                | <u>900</u>             |
| <b>Income before Income Taxes</b>  | (30,850)                  | 2,050                  |
| <b>Provision for Income Taxes</b>  | <u>400</u>                | <u>400</u>             |
| <b>Net Income</b>                  | <u><b>\$ (31,250)</b></u> | <u><b>\$ 1,650</b></u> |

With the current reporting methods, the net income for GAC is \$1,650. However, when following GAAP principles, the company actually has a net loss of \$31,250. This difference is reconciled by \$7,500 sales revenue listed as unearned revenue, the \$2,500 sales revenue taken off the books, the \$15,000 increase in sales allowances, the \$3,000 bad debt expense that arose from the allowance, and the \$4,900 loss from the impairment of inventory.



This operating loss greatly affects the retained earnings account on the balance sheet, and the balance sheet with all changes can be seen below in Figure 5.9.

**Figure 5.9: All Changes Reported**

| <b>GAC Balance Sheet with<br/>Changes Reported</b>  |              | <b>All<br/>at</b>        |
|---|--------------|--------------------------|
| <b>August 31, 2014</b>                              |              |                          |
| <b>Assets</b>                                       |              |                          |
| Current Assets:                                     |              |                          |
| Cash and Cash Equivalents                           |              | 4,000                    |
| Accounts Receivable                                 | 15,000       |                          |
| Less: Allowance for doubtful accounts               | <u>3,000</u> | 12,000                   |
| Inventory   |              | <u>19,600</u>            |
| Total Current Assets                                |              | 35,600                   |
| Property and Equipment                              |              | 92,000                   |
| Other Assets  |              | <u>300</u>               |
| <b>Total Assets</b>                                 |              | <b><u>\$ 127,900</u></b> |
| <b>Liabilities and Stockholders' Equity</b>         |              |                          |
| Current Liabilities:                                |              |                          |
| Accounts Payable                                    |              | 36,100                   |
| Accrued Liabilities                                 |              | 8,680                    |
| Taxes Payable                                       |              | 400                      |
| Unearned Revenue                                    |              | <u>7,500</u>             |
| Total Current Liabilities                           |              | 52,680                   |
| Long-term Debt                                      |              | <u>54,000</u>            |
| Total Liabilities                                   |              | 106,680                  |
| Stockholders' Equity                                |              |                          |
| Common Shares                                       |              | 35,000                   |
| Retained Earnings                                   |              | <u>(13,780)</u>          |
| Total Stockholders' Equity                          |              | <u>21,220</u>            |
| <b>Total Liabilities &amp; Stockholders' Equity</b> |              | <b><u>\$ 127,900</u></b> |

From the original balance sheet shown in Figure 5.1 to the balance sheet reporting all changes seen above, there are significant differences.

Besides the addition of accounts, the current assets amount decreases by \$25,400 and the current liabilities account increases by \$7,500 when all changes are implemented. This reduces the current ratio from 1.35 to 0.68, shown above in Figure 5.3. In order to meet the bank's requirement and return to a current ratio of 1.0, GAC would need additional capital of \$17,080. This is calculated by subtracting the current assets from the current liabilities.

In light of this dramatic decrease in the current ratio, I would recommend that GAC return to the previous method for doing business. While Nicki may want to launch a new career in fashion, the graphic design shirt business is obviously not the best choice, especially given the current location and customers. However, Nicki could still try to be creative when it comes to custom orders. Rather than making custom orders for sport teams, she could make custom orders for unique customers or even her Internet fan base using the leftover plain shirts purchased in 2014, which would allow her to further her fashion career without hurting the original business. If Nicki continues using the changes implemented this past year, GAC will more than likely declare bankruptcy, as the company will be unable to pay the interest on the new debt financing.

# Case Six

## Planes and Garbage

A further exploration of depreciation expense and potential manipulation of revenue and expenses.

## Overview

First, this case begins with a situation involving three companies. These companies are Northwest Airlines, Delta Airlines, and United Airlines. On January 1, 2005, all three airlines purchased new Boeing 757's for \$75 million apiece. Each company then decided upon a useful life and a residual value (also known as a salvage value) for the new plane. The useful life is the period of time over which the plane will be depreciated. These values are especially important not only for properly recording depreciation expense, but also for correctly quantifying a gain or loss in the event that the company sells the plane.

Secondly, Part II of the case is titled “Garbage Trucks” in reference to the main company of the section—Waste Management Incorporated. In this section, we examine the relationship between the company, Waste Management, and its auditor, Arthur Andersen. Part II uses knowledge gained from Part I of the case along with information from two websites (listed in Appendix F) in order to better understand the huge scandal between Arthur Andersen and Waste Management.

## Planes

As stated in the overview, Northwest Airlines, Delta Airlines, and United Airlines each bought a new, \$75 million Boeing 757 on January 1, 2005. All three companies used the straight-line method to determine the

depreciation expense on these planes. The estimated residual value of each company's plane was five percent of cost. Therefore, the residual value was \$3,750,000 for each plane. This gives a depreciable amount of \$71,250,000, calculated by subtracting the residual value from cost (or book value).

After establishing the depreciable amount, the firm must determine the plane's useful life. In this situation, all companies use the average of the useful life period that best suits the plane. Northwest uses a range from four to twenty-five years for flight equipment and three to thirty-two years for other property and equipment. Since a plane is considered flight equipment, we take the average of four and twenty-five, which gives fourteen and one-half years. Delta determines the useful life span of owned flight equipment to be between fifteen and twenty-five years, giving an average of twenty years. Lastly, United depreciates aircrafts over periods of twenty-five to thirty years, which gives an average of twenty-seven and one-half. The companies then divide the depreciable amount by the average useful life, giving the annual depreciation amount. All calculations are shown below in Figure 6.1.

**Figure 6.1: Airline Plane Value and Sales**

|  | <b>Northwest<br/>Airlines</b> | <b>Delta<br/>Airlines</b> | <b>United<br/>Airlines</b> |
|--|-------------------------------|---------------------------|----------------------------|
| <b>Book Value January 1, 2005</b>                    | 75,000,000                    | 75,000,000                | 75,000,000                 |
| <b>Residual value</b>                                | 3,750,000                     | 3,750,000                 | 3,750,000                  |
| <b>Depreciable amount</b>                            | 71,250,000                    | 71,250,000                | 71,250,000                 |
| <b>Useful life</b>                                   | 14.5                          | 20                        | 27.5                       |
| <b>Annual Depreciation</b>                           | 4,913,793                     | 3,562,500                 | 2,590,909                  |
| <b>Accumulated Depreciation at December 31, 2008</b> | 19,655,172                    | 14,250,000                | 10,363,636                 |
| <b>Book Value at December 31, 2008</b>               | 55,344,828                    | 60,750,000                | 64,636,364                 |
| <b>Sale Price I</b>                                  | 55,000,000                    | 60,000,000                | 65,000,000                 |
| <b>Gain (Loss) on Sale I</b>                         | (344,828)                     | (750,000)                 | 363,636                    |
| <b>Sale Price II</b>                                 | 60,000,000                    | 60,000,000                | 60,000,000                 |
| <b>Gain (Loss) on Sale II</b>                        | 4,655,172                     | (750,000)                 | (4,636,364)                |

As seen above, Figure 6.1 not only shows annual depreciation, but also shows what happens on January 1, 2009 when these companies decide to sell the planes. On January 1, 2009, Northwest, Delta, and United sell their planes for \$55 million, \$60 million, and \$65 million respectively. These amounts refer to “Sales Price I.” To find the gain or loss, we take the difference between the book value at the date of sale and the sales price. The book value at sale date equals the book value at acquisition minus the accumulated depreciation at the end of 2008 (which equals the annual depreciation multiplied by four). Doing the calculation, we found that Northwest and Delta experienced losses of \$344,828 and \$750,000 from Sales Price I; United, however, experienced a gain of \$363,636.

On the other hand, if each company were to sell their planes at the exact same amount of \$60 million, then the results would be much different for Northwest and United. Under "Sales Price II" (the \$60 million for all planes), Northwest gained \$4,655,172 whereas United lost \$4,636,364. Delta's loss remained at \$750,000 for both Sale I and Sale II, since the selling price was the same in both instances. Of these two prices, I believe that Price I is the more realistic. While it may seem to make sense that those planes of the same model and age may sell for the exact same price, this leaves out various factors that greatly impact the price. For instance, the company owning the plane affects the resale value. This is because companies modify their planes in certain ways. Delta and United, for example, both have options where passengers can purchase extra legroom. Many of their planes have "comfort" options as well as TV screens in front of every seat. Northwest may not have these same luxuries. Therefore, these additional modifications would increase the resale price of the plane.

Still, sales prices are not the only way revenue and expenses can be different for companies. The other and more prominent method a company can manipulate these figures is through its depreciation expense method. Changing the residual value, the useful life, or both of these can allow the company to recognize either too much or too little depreciation expense which, in turn, could either understate or overstate both assets and revenues. There are two reasons a company would do this. The first reason would be for tax purposes. If a company were more concerned with paying lower

taxes, they would manipulate their figures in order to recognize higher expenses, leaving them with lower earnings before tax. A company with lower earnings before tax translates into lower taxes, given that the tax rates of the companies are the same. The second reason would be the historical use of the equipment with the certain airline. Some companies are known for using equipment for long periods of time, whereas other companies are known for keeping a luxurious image, as mentioned previously in the discussion of sales prices. Therefore, if a company only plans to use the equipment for ten years, it may depreciate it over the period of ten years. However, a company like AirTran may choose to depreciate its equipment over a period of twenty-five years. In this instance, the depreciation method simply becomes part of the business model.

## **Garbage Trucks**

After underlining some of the reasoning behind depreciation expense, book values, and gains and losses, the case turns towards Part II— “Garbage Trucks.” As stated in the overview, Part II deals with the relationship between Waste Management and Arthur Andersen. In summary, charges were filed against both companies. Charges against Waste Management include falsifying earnings and other financial performance measures by concealing the realities of operations. Their statements failed to record expenses, established inflated reserves, capitalized expenses improperly, and failed to reserve money for income taxes. Arthur Andersen, the auditor for



Waste Management, authorized these misleading financial statements. When the scheme was finally uncovered, it resulted in shareholders' losses of over \$6 billion.

One charge in particular includes failure to record expenses and, in particular, depreciation expense, which we learned how to calculate in Part I. In fact, depreciation expense played a key role in the manipulation of earnings, or "earnings management," as Waste Management deferred the reporting of depreciation expense. They did this by increasing both salvage value and useful life over time. This, in turn, decreased the amount of depreciation expense reported.

Earnings management is something that accounting standards are attempting to overcome. In most cases, earnings management is seen as unethical. However, there could be several reasons why managers would want to do this. For Waste Management, top managers and executives wanted to increase the revenue in order to meet a predetermined target that would allow them to keep their positions, gain substantial performance-based bonuses, and even enhance their retirement benefits. While this would look good from the manager's standpoint, the manipulation to achieve these desires only leads to misleading shareholders and not only causing these shareholders to lose their investments but also causing the company the lose its credible reputation.

Throughout this scheme, Arthur Andersen aided Waste Management. Arthur Andersen issued unqualified audit reports on the falsified annual financial statements that Waste Management had created. Also, the accounting firm accepted “special fees” from Waste Management and presented ways in which these errors could appear to be fixed, rather than having to rewrite the financial statements to correct the errors. These errors were subsequently written off over periods of up to ten years rather than following GAAP protocol. Therefore, Arthur Andersen’s suggestions it gave to Waste Management constituted as an agreement to cover up Waste Management’s past frauds by using future frauds.

When the settlement finally occurred, Arthur Andersen agreed to its first anti-fraud injunction in more than 20 years that amounted to \$7 million. It also agreed to be censured under the SEC’s rules of practice. However, in the future, Arthur Andersen did not learn from this mistake. Andersen not only aided Waste Management in its fraud scheme, but also aided WorldCom and Enron in their fraud schemes. Andersen abided by its own, newly acquired standard of generating as much revenue as possible rather than following its founder’s standard of remaining ethical in the industry. The damage to Arthur Andersen’s reputation that resulted when these schemes were uncovered was so severe that the firm has yet to return as a viable business.

# Case Seven

## **Construct Manufacturing**

An overview of using U.S. GAAP and IFRS to know when to recognize liabilities and loss or gain contingencies.

## Overview

In 2007, Construct, a construction materials manufacturing company, purchased property from BigMix, Inc. BigMix privately manufactured bituminous concrete. The property held one of BigMix's manufacturing facilities, and the sale agreement included an indemnification provision for potential environmental liabilities. However, Construct did not require any of the purchase price to be held in a separate trust account—otherwise funds held in escrow. Construct intended to use the property to produce construction materials for New York City, since the property was already located there. In subsequent years, various series of events pertaining to both BigMix and Construct required Construct to determine whether or not the events created liabilities or contingencies that should be recorded. Determining this requires the use of the FASB Codification to follow US GAAP and the use of International Accounting Standards (IAS) to follow IFRS. In upcoming sections, we will further discuss the details of the events and the obligations associated with them. This discussion will also answer the questions, found in Appendix G, pertaining to these events and obligations.

## Purchase and Bankruptcy

According to ASC 410-30-25-1, a company must accrue a liability if the following conditions are met: “a. Information available before the financial statements are issued or are available to be issued indicates that it is probable that an asset has been impaired or a liability has been incurred at

the date of the financial statements; b. The amount of the loss can be reasonably estimated.” Also, IAS 37.14 states, “An entity must recognize a provision if, and only if: a present obligation (legal or constructive) has arisen as a result of a past event (the obligating event), payment is probable (‘more likely than not’), and the amount can be estimated reliably.” During 2007, Construct was not aware of any environmental liability for the purchased site. Therefore, according to both US GAAP and IFRS, no liability should be accrued in the financial statements.

In 2008, BigMix filed under Chapter 11 of the United States Bankruptcy Code, which is bankruptcy in which the company plans to reorganize. ASC 852-10-45-4, the section pertaining organizations who have filed under Chapter 11 of the United States Bankruptcy Code, says, “Liabilities that may be affected by the plan shall be reported at the amounts expected to be allowed, even if they may be settled for lesser amounts.” Construct unsuccessfully attempted to secure an interest in the assets of BigMix’s shareholders. Therefore, as Construct held no interest in the shareholders’ assets nor was aware of any expected liability at the time, BigMix’s bankruptcy does not affect Construct’s environmental liabilities. So, as Construct was still unaware of any environmental liability from either 2007 or 2008, the company would not accrue a liability on the financial statements according to both US GAAP and IFRS.

## **EPA Investigation**

During 2009, The Environmental Protection Agency (EPA) notified Construct about an investigation into the property purchased from BigMix in 2008. The property potentially contained contaminated water. For that reason, Construct hired an agency to test for potential contamination. The agency estimated that there was a 60 percent chance Construct would face penalties, and the cost of these penalties would be around \$250,000, including legal fees. As stated previously, in order to recognize a loss contingency, the amount must be probable and reasonably estimable. Since there is only a 60 percent chance of being fined, Construct would not accrue a liability for this amount if it were using GAAP.

However, according to ASC 450-20-50-3, "Disclosure of the contingency shall be made if there is at least a reasonable possibility that a loss or an additional loss may have been incurred" if "an accrual is not made for a loss contingency because any of the conditions in paragraph 450-20-25-2 are not met." Since the \$250,000 of potential penalties is reasonably possible, this amount should be disclosed on the financial statements. Also, IAS 37.86 says, "A possible obligation (a contingent liability) is disclosed but not accrued. However, disclosure is not required if payment is remote." Therefore, IFRS requires a disclosure of \$250,000 as well.

## **EPA National Priority**

In 2010, the property was placed on the EPA's National Priorities List. The EPA named Construct, BigMix, and the former shareholders of BigMix as potentially responsible parties (PRPs). The ASC 410-30-20 defines PRPs as "any individual, legal entity, or government—including owners, operators, transporters, or generators—potentially responsible for, or contributing to, the environmental impacts at a Superfund site." However, the recalcitrant potentially responsible party—a special type of PRP—refuses to acknowledge involvement in the site. The ASC also states that "typically, parties in this category must be sued in order to collect their allocable share of the remediation liability; however, it may be that it is not economical to bring such suits because the parties' assets are limited." As BigMix declared bankruptcy in 2008, its assets are limited. Therefore, Construct cannot rely on BigMix or its former shareholders as PRPs. Instead, they would be classified as recalcitrant PRPs and probably must be sued to receive any allocable share.

Construct began the remedial investigated and feasibility study (RI/FS) ordered by the EPA. At this time, Construct also filed suit against BigMix's former shareholders for an unspecified amount in order to collect its allocable share as a PRP for the reasoning stated in the previous paragraph. For 2010, the estimated legal fees related to the remediation action were \$100,000, and the total estimated for the RI/FS was \$300,000.

Since these amounts were both probable and reasonably estimable, Construct should accrue the total amount of \$400,000 as an environmental remediation liability on its financial statements. However, ASC 410-30-25-10 states, "At the early stages of the remediation process, particular components of the overall liability may not be reasonably estimable. This fact should not preclude the recognition of a liability. Rather, the components of the liability that can be reasonably estimated should be viewed as a surrogate for the minimum in the range of the overall liability." Since \$400,000 was the only figure that could be reasonably estimated in this year, Construct should neither accrue nor disclose more than the \$400,000. The above reasoning is in agreement with IFRS reporting as well.

### **RI/FS Completion**

In 2011, upon completion of the RI/FS, contractors advised Construct that the soil contamination had not affected water supplies and that the recommended remediation plan was estimated to cost \$1.5 million. This plan had been presented to the EPA in late 2010. According to the previous noted ASC and IAS sections, Construct would record this additional \$1.5 million remediation liability on the financial statements, as the amount is both reasonably probable and estimable.

Lastly, in August of the following year, Construct's attorneys believed they had a 75 percent chance of obtaining a \$1 million settlement from the



suit filed in 2010 against BigMix's former shareholders. Typically, when a company faces a gain contingency, it is not recorded. This is because the financial statements should not mislead users and report these gains too soon. However, according to the illustration shown in ASC 410-30-55-16, disclosure of the gain is possible. ASC 450-30-50-1 says, "Adequate disclosure shall be made of a contingency that might result in a gain, but care shall be exercised to avoid misleading implications as to the likelihood of realization." IAS 37.31-25 says, "Contingent assets should not be recognized – but should be disclosed where an inflow of economic benefits is probable. When the realization of income is virtually certain, then the related asset is not a contingent asset and its recognition is appropriate." Therefore, whether it uses US GAAP or IFRS, Construct should disclose the estimated gain of \$1 million on the financial statements, as Construct believes it is probable it will recover.

# Case Eight

## **Rite Aid Corporation: Long-Term Debt**

An in-depth look at long-term debt and current maturities and the ways these can affect credit ratings of a corporation.

## Overview

This case analyzes Rite Aid Corporation's credit rating by examining Rite Aid's financial reports as well as its long-term debt and current maturities of long-term debt. To begin, there are different kinds of debt. Secured debt is debt backed by various assets or "securities"—for example, a mortgage on a house. Secured debt usually has lower interest rates. In contrast, unsecured debt does not require assets to be held and relies solely on creditworthiness and the borrower's promise to repay the amount. Rite Aid distinguishes between the two types in order to show investors and lenders that Rite Aid will be able to make payments on time. A guaranteed debt is an agreement under which, if one party defaults, another party will pay the debt. The Rite Aid corporate parent guarantees payment of the debt.

Other than secured or guaranteed debt, several debt-related terms are not always clear. These terms include senior, fixed-rate, and convertible. Senior means the top priority; it takes precedence over unsecured debt. Fixed-rate means that the interest rate of the loan stays the same over its life. Convertible debt means that the debt can potentially be converted into an equity investment. Rite Aid has different types of debt in order to fund different kinds of activities. Also, each source of debt can have different terms—hence the different interest rates and principal amounts.

In this analysis, all amounts are in thousands unless otherwise stated. For Rite Aid Corporation, total debt equals \$6,370,899, and its current long-term debt equals \$51,502. These calculations are in Figure 8.1. Looking at the components of Rite Aid’s long-term debt allows us better comprehension of its true financial situation.

**Figure 8.1: Calculation of Debt**

| Debt Calculations  |              |
|--|--------------|
| Current maturities of long-term debt and lease financing obligations | \$ 51,502    |
| Long-term debt, less current maturities                              | \$ 6,185,633 |
| Lease financing obligations, less current maturities                 | \$ 133,764   |
| Total Current maturities   | \$ 51,502    |
| Total Long-term debt   | \$ 6,319,397 |
| Total Debt   | \$ 6,370,899 |

## Debt-Related Journals

According to Rite Aid’s financial statements, the corporation holds 7.5 percent senior secured notes—a form of long-term debt. The face value of these notes equals \$500,000. We know this because there were no interest payments made on the note within the last fiscal year. If there were payments, we would have seen a change in either a discount or a premium. Since there was no change in the carrying value on the financial statements,

we know the amount does not include interest payments, thus containing no discounts or premiums either.

When these notes were issued, Rite Aid would have made a debit to cash and a credit to record to the notes payable. Throughout the years, Rite Aid would also have to pay interest on these notes. We calculate the interest expense by multiplying the face value by the face rate of 7.5 percent. This gives a total of \$37,500. To properly record the interest payment, the \$37,500 would be debited to interest expense and credited to cash. The journal entries for the issuance of these notes and the payment of interest can both be found in Figure 8.2. Figure 8.2 also shows the entry that would be made when the firm repays the debt when the notes mature in 2017.

**Figure 8.2: Appendix Cii Journal**

|                  |               |  |         |
|------------------|---------------|--|---------|
| Cash             | 500,000       |  |         |
|                  | Notes payable |  | 500,000 |
| Interest expense | 37,500        |  |         |
|                  | Cash          |  | 37,500  |
| Notes payable    | 500,000       |  |         |
|                  | Cash          |  | 500,000 |

## Interest Calculations

Rite Aid Corporation's debt also includes 9.375 percent senior notes. The face value of these notes is \$410,000. The current carrying value is \$405,951. Carrying value—otherwise called book value—is the face value

plus any premiums or minus any discounts. Thus, the difference between the face value and carrying value of these notes is due to an unamortized discount of \$4,049. The cash interest payment on these notes during fiscal year 2009 equals \$38,438 and can be calculated by taking the face value of \$410,000 and multiplying it by the coupon rate—otherwise the face interest rate—of 9.375 percent. This amount would also be credited to cash when journalizing the entry.

Although the cash payment is \$38,438, this does not mean that the interest expense will be this same amount. Interest expense contains both a cash portion and a noncash portion due to the discount on the notes. Therefore, to determine the total interest expense, we must find the amount of discount amortized. Looking at the financial statements, we know the discount amortized is calculated by subtracting \$4,049 (amount of unamortized discount at the end of fiscal year 2009) from \$4,754 (amount of unamortized discount at the end of fiscal year 2008), giving a total of \$705. The discount amortized would be credited to the discount account. This credit and the credit for cash payment are added to find the proper amount of interest expense to be debited. So, adding both credits—the cash payment with the discount amortized— gives the total interest expense of \$39,143. These journals mentioned previously can be found below in Figure 8.3, and the calculations for the amounts are shown in Figure 8.4.

**Figure 8.3: Appendix Div Journal**

|                           |        |        |
|---------------------------|--------|--------|
| Interest expense          | 39,143 |        |
| Discount on notes payable |        | 705    |
| Cash                      |        | 38,438 |

**Figure 8.4: Interest payment calculation**

| 9.375% Senior Note Calculations |                             |           |
|---------------------------------|-----------------------------|-----------|
| Interest expense                | 410,000 x 9.375%            | \$ 38,438 |
| Discount                        | 4,754 - 4,049               | \$ 705    |
| Cash payment                    | Interest expense + discount | \$ 39,143 |

## Effective and Straight-Line Interest

To get a better understanding of the way Rite Aid amortizes its debt, we must look further into both effective interest rates and straight-line interest rates. We can see the effects of using each type of rate by analyzing Rite Aid's 9.75 percent notes. According to note 11 to the financial statements, proceeds of these notes at the time of issuance were 98.2 percent. So, the amount received when issued equals the face value of \$410,000 by 98.2%. Total proceeds come to \$402,620, which means the notes are at a discount. So, the journal entry for the issuance of these bonds is shown below in Figure 8.5.

**Figure 8.5: Appendix Ei Journal**

|                           |         |               |
|---------------------------|---------|---------------|
| Cash                      | 402,620 |               |
| Discount on notes payable | 7,380   |               |
|                           |         | Notes payable |
|                           |         | 410,000       |

To find at what effective rate these notes were issued, we can use the RATE formula in excel. To use this formula, we must determine a few pieces. First, the number of periods during which the note is outstanding equals 7— from June 2009 to June 2016. The payment on the notes equals the face value of \$410,000 multiplied by the face rate, otherwise \$39,975. The present value of the note is the current carrying value, which, stated previously, is \$402,620. Lastly, the future value of the note equals the face value— \$410,000. Plugging these numbers into the formula gives an effective interest rate of 10.1212 percent. The individual pieces are shown on the next page in Figure 8.6.

**Figure 8.6: Effective Interest**

| Effective Interest Calculation |               |
|--------------------------------|---------------|
| n                              | 7             |
| pmt                            | \$ 39,975     |
| pv                             | \$ 402,620    |
| fv                             | \$ 410,000    |
| <b>Interest</b>                | <b>10.12%</b> |

Once the effective interest rate has been calculated, we can then create an amortization schedule for these notes. To begin this chart, we also



need the \$39,975 interest payment calculated previously along with the interest expense (equals beginning period carrying value multiplied by the effective interest rate), the bond discount amortization (interest expense minus interest payment), and the net book value of debt (previous carrying value plus the bond discount amortization). The calculations for each year of the life of the note can be seen in Figure 8.7.

**Figure 8.7: Effective Interest Amortization Schedule**

| Date      | Interest Payment | Interest Expense | Bond Discount Amortization | Net Book Value of Debt | Effective Interest Rate |
|-----------|------------------|------------------|----------------------------|------------------------|-------------------------|
| 30-Jun-09 | \$ -             | \$ -             | \$ -                       | \$ 402,620             | 10.1212%                |
| 30-Jun-10 | \$ 39,975        | \$ 40,750        | \$ 775                     | \$ 403,395             | 10.1212%                |
| 30-Jun-11 | \$ 39,975        | \$ 40,828        | \$ 853                     | \$ 404,248             | 10.1212%                |
| 30-Jun-12 | \$ 39,975        | \$ 40,915        | \$ 940                     | \$ 405,188             | 10.1212%                |
| 30-Jun-13 | \$ 39,975        | \$ 41,010        | \$ 1,035                   | \$ 406,223             | 10.1212%                |
| 30-Jun-14 | \$ 39,975        | \$ 41,115        | \$ 1,140                   | \$ 407,363             | 10.1212%                |
| 30-Jun-15 | \$ 39,975        | \$ 41,230        | \$ 1,255                   | \$ 408,618             | 10.1212%                |
| 30-Jun-16 | \$ 39,975        | \$ 41,357        | \$ 1,382                   | \$ 410,000             | 10.1212%                |

Based on the previous information, we can calculate the carrying value Rite Aid would have recorded on February 27, 2010. The carrying value can be found for this date by taking the beginning period carrying value of \$402,620 plus the amount of amortized discount up to February 27, 2010. Taking the \$775 amortized discount from June 30, 2009 to June 30 2010, and multiplying it by eight over twelve (number of months amortized up to February 27), we get an amortized discount of \$517. We can also multiply eight over twelve by both the interest expense and the cash payment from the 2009 to 2010 year to find these amounts. This calculation gives an

interest expense of \$27,167 and cash payment of \$26,650. These amounts are journalized below in Figure 8.8.

**Figure 8.8: Appendix Eiv Journal**

|                           |        |
|---------------------------|--------|
| Interest expense          | 27,167 |
| Discount on notes payable | 517    |
| Interest payable          | 26,650 |

The discount amortized up to February 27, 2010 is also useful for determining the carrying value at this date. As stated previously, we can find the carrying value for a specific date by taking the beginning period's carrying value and adding the discount amortized to that date. So, when \$517 is added to the \$402,620, it gives a carrying value of \$403,137 on February 27, 2010.

The carrying amount above is different from the \$403,308 reported in the financial statements due to the fact that Rite Aid uses straight-line amortization rather than effective interest amortization. To calculate the amounts using the straight-line method, we simply take the total unamortized discount at the time the note was issued and divide by seven. This gives a constant discount amortization of \$1,054 per year. The interest cash payment remains the same every year at \$39,975. If both the discount and the cash payment remain constant, we can infer that the interest expense will remain constant every year at an amount of \$41,029. The only amounts changing on a straight-line amortization schedule are the net book value of

the debt and the straight-line interest rate. Net book value can be calculated the same way mentioned in the previous paragraph, and straight-line interest can be calculated by dividing the interest expense by the previous period's book value. These calculations are shown below in Figure 8.9.

**Figure 8.9: Straight-Line Interest Amortization Schedule**

| Date      | Interest Payment | Interest Expense | Bond Discount Amortization | Net Book Value of Debt | Straight-Line Interest Rate |
|-----------|------------------|------------------|----------------------------|------------------------|-----------------------------|
| 30-Jun-09 | \$ -             | \$ -             | \$ -                       | \$ 402,620             | 0.00%                       |
| 30-Jun-10 | \$ 39,975        | \$ 41,029        | \$ 1,054                   | \$ 403,674             | 10.1906%                    |
| 30-Jun-11 | \$ 39,975        | \$ 41,029        | \$ 1,054                   | \$ 404,729             | 10.1640%                    |
| 30-Jun-12 | \$ 39,975        | \$ 41,029        | \$ 1,054                   | \$ 405,783             | 10.1375%                    |
| 30-Jun-13 | \$ 39,975        | \$ 41,029        | \$ 1,054                   | \$ 406,837             | 10.1111%                    |
| 30-Jun-14 | \$ 39,975        | \$ 41,029        | \$ 1,054                   | \$ 407,891             | 10.0849%                    |
| 30-Jun-15 | \$ 39,975        | \$ 41,029        | \$ 1,054                   | \$ 408,946             | 10.0589%                    |
| 30-Jun-16 | \$ 39,975        | \$ 41,029        | \$ 1,054                   | \$ 410,000             | 10.0329%                    |

In accordance with GAAP, corporations should use the effective interest rate of amortizing debt unless they can prove that their method only creates differences that are immaterial. To make this determination, we must look at the differences in interest expenses for each of the amortization methods. These amounts can be found below in Figure 8.10.

**Figure 8.10: Difference in Effective and Straight-Line**

| <b>Interest Expense<br/>Difference</b> |          |
|--|----------|
| 30-Jun-10                              | \$ 775   |
| 30-Jun-11                              | \$ 853   |
| 30-Jun-12                              | \$ 940   |
| 30-Jun-13                              | \$ 1,035 |
| 30-Jun-14                              | \$ 1,140 |
| 30-Jun-15                              | \$ 1,255 |
| 30-Jun-16                              | \$ 1,382 |

As seen above, the differences are immaterial in comparison to the actual interest expense. Therefore, Rite Aid is allowed to use the straight-line method of amortization rather than the effective interest method. However, the differences are slowly increasing, and if the amount were ever deemed material, Rite Aid would have to use the effective interest method.

## **Repurchasing Notes**

In some cases, companies retire or extinguish their debt before the maturity date. This can be accomplished by repurchasing debt. During fiscal year 2010, Rite Aid engaged in an open-market debt transaction in order to repurchase the 9.5 percent senior notes. The repurchase agreement included that Rite Aid pays \$77,769, which resulted in a gain for Rite Aid of \$3,750. The journal for this transaction is seen in Figure 8.11.

**Figure 8.11: Appendix Fi Journal**

|                           |         |         |
|---------------------------|---------|---------|
| Notes payable             | 810,000 |         |
| Cash                      |         | 797,769 |
| Discount on notes payable |         | 8,481   |
| Gain on extinguishment    |         | 3,750   |

So, shown on the previous page in Figure 8.11, Rite Aid takes the \$810,000 face value of the note off the books by debiting the account. It then credits cash of \$797,769 to record payment as well as credits a gain on extinguishment of \$3,750 to record the gain. The discount on the notes must be taken off the books as well, and the amount of discount equals the difference between the notes payable and the cash paid plus the gain. In this situation, Rite Aid did not have to pay the face value, because the note was not fully amortized and not currently worth the entire face amount.

By looking at this transaction, we know the market rate of interest is higher than the coupon rate. We also know the market rate is higher than the effective rate, because the sale results in a gain. The gain results from the note losing value from the increased market rates or even from the increased risk of Rite Aid.

## **Convertible Notes**

Rite Aid's financial statements show that it holds 8.5 percent convertible notes due May 2015. Usually, firms use convertible notes to raise

money. Notes offered at a lower coupon rate attract investors that may not be interested otherwise. Additionally, both investors' and the company's interest in these notes peaks, because convertible notes give the option to convert the notes into stock. If the notes were converted, the firm would reduce liability and increase equity on Rite Aid's balance sheet for the amount converted.

## Analysis

To properly analyze the long-term debt of Rite Aid, we must calculate various debt-related ratios. These ratios help find Rite Aid's leverage and solvency. They also allow us to compare Rite Aid to the industry average. Rite Aid's ratios and the industry averages are shown on the next page in Figure 8.12.

Looking at these ratios, the biggest concerns lie in common-size debt, debt to assets, as well as long-term debt to equity ratios. The company is doing very poorly in these categories. The common size debt ratio shows that Rite Aid holds more debt than it does assets, whereas companies near the industry average have half the amount of debt compared to its assets. This could create a problem in the future in terms of Rite Aid using minimal assets to pay off vast amounts of debt. Again, the potential problem shows in the debt to assets ratio. As there is a high percentage of long-term debt to assets, the majority of Rite Aid's assets could be restricted by future payments of

long-term debt. Lastly, the long-term debt to equity ratio shows a great difference between the industry average and Rite Aid. Rite Aid has negative shareholders' equity in both fiscal year 2008 and fiscal year 2009. Even if Rite Aid continues to make payments on debt, its equity section shows that the company, overall, has not been profitable nor has it been able to pay dividends. Further, this indicates that Rite Aid may not be able to pay dividends on any future stock converted from debt, which would make the convertible notes less valuable.

**Figure 8.12: Common Debt-Related Ratios**

| <i>Ratio</i>                                 | <i>Definition</i>                                    | <i>Industry average</i> | <i>Rite Aid FY2009</i> | <i>Rite Aid FY2008</i> |
|--|--|-------------------------|------------------------|------------------------|
| Common-size debt                             | Total liabilities/Total assets                       | 43.83%                  | 120.79%                | 114.41%                |
| Common-size interest expense                 | Interest expense/Net sales                           | 0.35%                   | 2.01%                  | 1.82%                  |
| Debt to assets                               | Total long-term debt/ Total assets                   | 14.41%                  | 78.50%                 | 71.71%                 |
| Long-term debt to equity                     | Total long-term debt/ Total shareholders' equity     | 0.26                    | -3.78                  | -4.98                  |
| Proportion of long-term debt due in one year | Long-term debt due in one year/ Total long-term debt | 6.11%                   | 0.81%                  | 0.68%                  |
| Times-interest-earned (interest coverage)    | (Pretax income+ interest expense)/ Interest expense  | 33.44                   | 0.07                   | -4.41                  |

Due to the above analysis, using Standard and Poor's scale, I would think Rite Aid's credit rating at this time is very close to CCC-. The CCC credit rating states that a company is currently vulnerable and depends upon favorable business, financial and economic conditions in order to meet its financial commitments. Also, the CC credit rating states that a company is

currently highly vulnerable. With the current situation of Rite Aid well below the industry average as well as large amounts of debt to be repaid in the next five years, Rite Aid must really focus on its operations in order to not only meet its obligations but also to increase its credit rating. Therefore, Rite Aid's current economic state lies between the credit ratings of CCC and CC, but still, in my opinion, closer to CCC than CC. This reasoning gives the credit rating of CCC-. Thus, if Rite Aid fails to improve its economic state, it would, inevitably, default on its debt and declare bankruptcy. In addition, this type of financial situation could even lead to Rite Aid being bought out by one of its competitor. Any additional questions regarding this chapter may be addressed in Appendix H.



# Case Nine

## Merck & Co., Inc. and GlaxoSmithKline plc: Shareholders' Equity

A look into the shareholders' equity section of both GAAP and IFRS companies.

## Overview

If not reported correctly, the shareholders' equity section can be the most difficult section of the balance sheet. Looking at shareholders' equity and its related transactions throughout the year, we can see what kind of position the company holds and why it made certain decisions regarding its stock and dividends. So, to better understand this concept, we will be examining the financial statements of Merck & Co., Inc., a global research-driven pharmaceutical company, as well as the financial statements of GlaxoSmithKline plc., a global healthcare group engaged in the creation, discovery, development, manufacture and marketing of pharmaceutical and consumer health-related products.

## Merck's Common Shares

According to the financial statements of Merck & Co., the company is authorized to issue 5,400,000,000 shares of common stock. However, on December 31, 2007, Merck has actually issued 2,983,508,675 shares. The difference in these amounts comes from the fact that not all authorized shares have been issued (issued means placed into the market). Merck's balance sheet shows that the number of common shares differs from the dollar amount of the common shares account. This difference arises due to the shares having a par value of one cent. Multiplying the par value of the shares by the issues shares gives the dollar amount in the account. Therefore,

the dollar value of common stock is less than the actual number of shares issued.

Also part of the equity section, treasury stock is an important item to pay attention to, especially for investors. On December 31, 2007, Merck held 811,005,791 shares in treasury stock. Treasury stock helps viewers of the financial statements determine the number of shares outstanding. To find shares outstanding, subtract the treasury stock shares from the common stock shares that have been issued. People outside of the company hold the company's outstanding shares, whereas the company holds treasury stock shares. Following the previous equation, we find that Merck's shares outstanding equals 2,172,502,884 on December 31, 2007.

Lastly, one more valuable piece of information arises from using the number of shares outstanding—total market capitalization. Total market capitalization is the total value of the shares outstanding. On December 31, 2007, the market price closed Merck's stock at \$57.61 per share. Multiplying this amount by the shares outstanding mentioned in the last paragraph give a total market capitalization of \$125,157,891,147.

## **GlaxoSmithKline's Ordinary Shares**

Next, we can examine the financial statements of GlaxoSmithKline (GSK). Since GSK operates from London, its currency listed is in pounds. Also,

rather than having a common stock account, GSK refers to its corresponding account as ordinary shares. On December 31, 2007, GSK was authorized to issue 10,000,000,000 shares. However, at this date, GSK has actually issued 6,012,587,026 shares. Therefore, the shares outstanding (otherwise called free issue shares) equal 5,373,862,962 at December 31, 2007.

Similar to common stock having a different name under companies using IFRS (International Financial Reporting Standards) rather than GAAP (Generally Accepted Accounting Principles), other accounts have analogous terms under each standard as well. For instance, share capital—an account used by GSK—is the equivalent of capital stock, which includes common stock as well as preferred stock. Also, share premium—another account used by GSK— is like other paid-in capital, which is the money contributed above par value. Knowing which accounts are comparable under IFRS and GAAP help analysts to compare them to one another.

## **Dividends and Treasury Stock**

Now that a basic understanding of common stock authorized, issued, and outstanding has been established, we can better comprehend related accounts, such as dividends and treasury stock. To begin, dividends are what the company pays to its stockholders. Dividends can come in many forms; however, we are only concerned with cash dividends at the moment. While some people and companies argue that dividends have no use, other

companies choose to pay dividends for many reasons. First, dividends attract investors because they help show investors know that a company is financially stable. The investors usually receive a return on their investment if the company is profitable and stable. Nevertheless, when dividends are paid, the share price decreases by about the same as the amount of the dividend. While this may seem negative, we must remember that the market price of stock is the expected value of all future dividends. So, the stock price goes down as dividends are paid, since part of the value is being paid.

The next account, treasury stock, has its own benefits to companies as well. Treasury stock is stock that the company has repurchased and holds for resale or for cancellation. Generally, companies repurchase their own shares to prevent a buyout by another company if share price falls too low. Companies also buy back shares to increase their earnings per share ratio and their return on equity ratio. For these ratios, equity accounts are both the denominators, and since treasury stock reduces the total amount of equity, this increases both ratios.

There are different ways that a company can account for its activity over the year. First, we will look at the way each company reported its dividend activity over 2007. Figure 9.1 shows a single journal entry that summarizes Merck's common dividend activity for 2007. The amounts shown in Figure 9.1 are in millions.

**Figure 9.1: Journal for Appendix I part E**

|                    |       |       |
|--------------------|-------|-------|
| Dividends declared | 3,311 |       |
| Cash               |       | 3,307 |
| Dividends payable  |       | 4     |

Above, the journal shows several pieces of the financial statements. First, dividends declared are found on Merck's Consolidated Statement of Retained Earnings. Cash dividends paid are found on Merck's Statement of Cash Flows under the financing activities. Lastly, dividends payable is the difference between these two numbers. Dividends payable represents the difference between what the company said it would pay to its shareholders and what it actually paid to them.

During 2007, GSK paid ordinary dividends to its shareholders. Unlike Merck, GSK reports its dividends differently due to IFRS. Under IFRS, companies do not make a journal entry when dividends are declared. Companies using IFRS only make journal entries when dividends are paid. On the other hand, companies using GAAP make a journal when dividends are declared to record a liability—as seen in Figure 9.1 with the dividends payable account. This, we see this difference by looking at GSK's journal entries for its dividends paid during 2007. The journal entries are found below in Figure 9.2, and the amounts listed are in millions.

**Figure 9.2: Journal for Appendix I part Fi**

|                    |       |       |
|--------------------|-------|-------|
| Dividends declared | 2,793 |       |
| Cash               |       | 2,793 |

Looking at Note 16 of GSK's financial statement shows that GSK's declared dividends in 2007 equal £2,905,000,000. According to Note 16, GSK pays dividends two quarters after the quarter to which it relates and one quarter after it is declared. Therefore, adding the third and fourth interim dividends for 2006 and the first and second interim dividends gives the actual cash paid for dividends for 2007. This amount, as shown above, is \$2,793,000,000. As mentioned previously, there is not a dividends payable account listed on the journal entries for GSK due to IFRS. If IFRS required companies to report dividends as a liability when declared, then the entries would more closely resemble those of Merck and would utilize GSK's total dividends declared for 2007.

The next account we will view on these financial statements is the treasury stock account. For its treasury stock transactions, Merck uses the cost method rather than the par value method. For the cost method, the company makes all entries to the Treasury Stock account at original repurchase cost. Also, under the cost method, the treasury stock account is listed beneath the total contributed capital and retained earnings accounts.

For treasury stock, note 11 shows that Merck repurchased 26,500,000 shares on the open market during 2007. This amount equals its treasury stock purchased during 2007. In total, Merck paid \$1,429,700,000 to repurchase stock in 2007. Per share, Merck paid \$53.95 to buy back stock in 2007. This cash flow represents a financing activity.

As seen on the balance sheet, treasury stock is not an asset account. Treasury stock is a contra-equity account. It is a contra-equity account because treasury stock causes a disparity between the number of shares issued and number of shares outstanding. Since it is a contra equity account, this means that its normal balance is a debit balance, which reduces the total equity of the company.

During 2007, GSK also repurchased a number of its own shares on the open market. Note 33 of GSK's financial statements shows that the company repurchased 285,000,000 shares on the open market. Of these shares, 269,000,000 were held in treasury stock, but 16,000,000 shares were cancelled. On average, GSK paid £13.16 for each share purchased during 2007. GSK's financial statements also show a special section titled "Movements in equity." Under U.S. GAAP, the comparable financial statement is the "Statement of Stockholders' Equity." This differs from GAAP in that IFRS does not distinguish between the stock repurchased and held in treasury stock account and the stock repurchased for cancellation. To better



understand this difference, the journals GSK made when repurchasing its stock are shown at the top of the next page in Figure 9.3 Entries in this journal are in millions.

**Figure 9.3: Journal for Appendix I part Hiii**

|                   |       |       |
|-------------------|-------|-------|
| Retained earnings | 3,750 |       |
| Cash              |       | 3,750 |

As we see above, GSK debited the retained earnings and credited its cash account to record the repurchase of ordinary shares. If Merck were to report its repurchases, it would make a debit to the treasury stock account to establish this balance. In this way, GAAP’s financial statements give a clearer understanding of what types of accounts compose the capital stock—otherwise called share capital for GSK.

### Analysis

Once the proper amount of shares and account balances have been found for the various equity items, we can find the amounts needed to compare the two companies. At the top of the next page, Figure 9.4 lists the figures needed to create several dividend-related ratios.

**Figure 9.4: Amounts Needed for Dividend-Related Ratios**

| <b>Figures to Calculate Comparability</b> |              |             |                  |
|---|--------------|-------------|------------------|
|   | <b>Merck</b> |             | <b>Glaxo (£)</b> |
| <i>(in thousands)</i>                     | <b>2007</b>  | <b>2006</b> | <b>2007</b>      |
| Dividends paid                            | \$ 3,307     | \$ 3,323    | £ 2,793          |
| Shares outstanding                        | 2,173        | 2,168       | 5,374            |
| Net income                                | \$ 3,275     | \$ 4,434    | £ 6,134          |
| Total assets                              | 48,351       | 44,570      | 31,003           |
| Operating cash flows                      | \$ 6,999     | \$ 6,765    | £ 6,161          |
| Year-end stock price                      | \$ 57.61     | \$ 41.94    | £ 97.39          |

There are several figures that can be used for dividend-related ratio. However, the most important figures (and the ones used in this analysis) are shown above in Figure 9.4. These amounts were used to calculate the ratios shown below in Figure 9.5.

**Figure 9.5: Calculations for Dividend-Related Ratios**

| <b>Dividend-Related Ratios</b>                            |              |             |                  |
|---|--------------|-------------|------------------|
|   | <b>Merck</b> |             | <b>Glaxo (£)</b> |
|   | <b>2007</b>  | <b>2006</b> | <b>2007</b>      |
| Dividends per share                                       | \$ 1.52      | \$ 1.53     | £ 0.52           |
| Dividend yield<br>(dividends per share<br>to stock price) | 2.64%        | 3.65%       | 0.53%            |
| Dividend payout<br>(dividends to net<br>income)           | 1.01         | 0.75        | 0.47             |
| Dividends to total<br>assets                              | 0.068        | 0.075       | 0.090            |
| Dividends to<br>operating cash flows                      | 0.47         | 0.49        | 0.45             |

To calculate dividends per share, divide dividends paid by shares outstanding. This amount is then divided by the year-end stock price to

calculate the dividend yield. The formulas are stated within Figure 9.5 for the more complicated ratios. As seen above, over 2006 to 2007, all of Merck's ratios—except for dividend payout—have decreased. However, Merck's ratios are higher overall. The one exception to this is the dividends to total assets ratio, where GSK's ratio is higher than Merck's in both years. Merck's decreasing ratios may be able to account for why Merck repurchased more stock during 2007. Improved ratios not only attract investors but also help control company risk—which is what both companies need in order to continue to grow. Any additional questions regarding this chapter may be answered below in Appendix I.

# Case Ten

## **State Street Corporation: Marketable Securities**

An analysis of State Street's financial statements to determine the balances and changes in its investment securities accounts and the way the company journalizes the related transactions.

## Overview

Typically, many company's transactions involve raising funds in order to finance its company, complete its daily operations, or even purchase needed assets. Sometimes, the company generates these funds through its main operations, such as sales if it is a retailer. Other times, the company issues bonds or stock to raise capital for various projects and needs. However, the company sometimes makes certain investments in order to produce a potential profit in the near or distant future. One such investment is in marketable securities, otherwise called investment securities. There are three main types of marketable securities—trading securities, investment securities available-for-sale, and investment securities held-to-maturity. Each type of security will be analyzed below. Note that all numbers in figures found in this chapter are in millions.

## Trading Securities

To begin, trading securities are both debt and equity securities that a company holds for a short amount of time. The company reports trading securities at fair market value and expects these securities to generate a profit. If a company receives dividends or interest from trading securities, it debits the trading securities account and credits an unrealized gain. The company presents this unrealized gain on trading securities as part of the consolidated statement of income—flowing through net income.

For State Street, the “Trading account assets” account, otherwise trading securities, on December 31, 2012, contains \$637 million. This amount is also the fair value at year-end, since trading securities are reported on the statements at fair market value. Since the account needs to be stated at fair value, the company makes adjusting entries at the end of the year to ensure it follows this standard. So, if State Street’s 2012 unadjusted trial balance for trading account assets were \$552 million, the adjusting entry involves debiting trading account assets and crediting an unrealized gain on trading account assets for \$85 million.

### **Securities Held-to-Maturity**

In general, held-to-maturity securities are debt securities, such as bonds, which the company holds until the maturity date. The company holds these securities at cost and adjusts them by amortizing the premiums (addition to value) or discounts (reduction from value) recorded at purchase. This account, unlike trading securities, does not contain equity securities. Equity securities have no maturity date. Therefore, they cannot be classified as held-to-maturity. Also, whereas trading securities recognizes unrealized gains and losses when its fair market value changes, securities held-to-maturity ignores these changes in market value.

On December 31, 2012, the balance in securities held-to-maturity equaled \$11,379 million. However, the market value of these securities at

this date totaled \$11,661 million. The amortized cost, or book value, of these securities is \$11,379 million. The amortized cost represents the difference between the original cost minus or plus any discounts or premiums associated with the securities. Original cost is the amount paid, whereas the amortized cost will eventually converge to the face amount of the securities. Understanding these definitions helps explain the difference between the amortized cost and fair value. In reality, this difference can help financial statement users to interpret returns on the securities versus returns in the market. For State Street, the difference suggests that the average market rate has decreased since the purchase, because the fair value of the securities is higher than the amortized value.

### **Securities Available-for-Sale**

Lastly, the securities available-for-sale account consists of both debt and equity securities that are purchased to sell before they reach maturity and are reported at fair market value. For State Street to record dividends or interest received from securities available-for-sale, it needs to debit the cash account and credit dividend income or interest income. To record an increase in market value of securities available-for-sale increased during the reporting period, State Street would debit the securities available-for-sale account and credit the unrealized holding gain on securities available-for-sale account. State Street should report the unrealized gain within other

comprehensive income, which later becomes part of the accumulated other comprehensive income section on the balance sheet.

At the end of 2012, State Street's balance sheet shows the "Investment securities available for sale" account holds a balance of \$109,682 million, which is the fair value of the securities at this date. Note 4 of the financial statements displays the net unrealized gains or losses related to the available-for-sale securities. For 2012, these securities have a net gain of \$1,119 million. In addition, these securities have realized earnings for 2012. The net realized gain on the available-for-sale securities is \$55 million. The realized gain of \$55 million would go on the income statement in the other revenues and gains section but would decrease the investing section of the cash flow statement since the realized gain was already included in net income. If State Street failed to deduct this gain in the investing section, it results in accounting for the gain twice. Even so, since State Street sold the securities for a gain, this means the cash is higher than the cost. So, overall, cash flow from this transaction increases.

Throughout the year, State Street bought and sold available-for-sale securities. We know this is the case since the company has realized gains and losses from the sale of the securities in 2012. To journalize the purchase of available-for-sale securities, State Street debited the available-for-sale security account and credited the cash account to show payment. Below,



Figure 10.1 shows the journal entry State Street made to record the purchase of available-for-sale securities for 2012.

**Figure 10.1: Journal for Appendix J part Gi**

|  |        |        |
|--|--------|--------|
| Investment securities available-for-sale | 60,812 |        |
| Cash                                     |        | 60,812 |

During the year, State Street sold some of its older available-for-sale securities as well. According to Note 13 of the financial statements, the available-for-sale securities sold during 2012 had “unrealized pre-tax gains of \$67 million as of December 31, 2011.” When a company sells its available-for-sale securities, it must remove any unrealized gains as well as realize any gains or losses on the sale. At the top of the next page, Figure 10.2 shows the journal entry State Street made to record the sale of available-for-sale securities for 2012.

**Figure 10.2: Journal for Appendix J part Gii**

|   |       |       |
|---|-------|-------|
| Unrealized gain from investment securities available-for-sale | 67    |       |
| Cash  | 5,399 |       |
| Investment securities available-for-sale                      |       | 5,411 |
| Realized gain from sales of available-for-sale securities     |       | 55    |

As seen above, State Street removed the unrealized gain on the available-for-sale securities. The company received \$5,399 million in cash from the sale, realized a gain of \$55 million (as shown in Note 4 of the

financial statements), and removed the original cost of the available-for-sale securities. Therefore, the original cost for these securities was found by adding the amounts for the cash received and unrealized gain then subtracting the amount of realized gain. So, the original cost of the securities equals \$5,411 million.

Similar to using the other amounts to find the original cost of the securities, we can find the actual debit and credit amounts to the unrealized gains and losses on available-for-sale securities as well by using amounts found in the financial statement. Doing so allows us to discern the net unrealized gain or loss during 2012 for the available-for-sale securities on hand at December 31, 2012—not just unrealized gains or losses on the securities sold as shown in the last paragraph. According to Note 4 to the financial statements, the beginning balance in the net unrealized gain (loss) on investment securities available for sale account was \$181 million, and the ending balance equaled \$1,119. We also know State Street debited this account for \$67 million when it sold some of the available-for-sale securities. So, to find the unrealized gain or loss for the securities on hand on December 31, 2012, we must simply find the missing number on the T-account. This T-account, along with the other amounts mentioned, is found on the next page in Figure 10.3.

**Figure 10.3: Journal for Appendix J part Giv**

| <b>Net unrealized gain (loss) on Investment securities available-for-sale</b> |          |
|---|----------|
| 181   |          |
| 67  |          |
|   | 1,367    |
|   | \$ 1,119 |

As seen above, the amount needed to balance the account is a credit of \$1,367 million. This amount is the unrealized holding gain on the available-for-sale securities on hand at year-end 2012. To journalize this transaction, State Street would debit the investment securities available for sale account and credit the unrealized gain from investment securities available for sale account for \$1,367 million. This journal entry is found in Figure 10.4 below.

**Figure 10.4: Journal for Appendix J part Giv**

|   |       |
|---|-------|
| Investment securities available-for-sale                      | 1,367 |
| Unrealized gain from investment securities available-for-sale | 1,367 |

## Conclusion

As explained above, investment securities can be tricky. If any of these securities were classified incorrectly, then a company's balance sheet, income statement, and even statement of cash flows would be incorrect and would mislead both the company's stockholders as well as its investors. Understanding what the company intends to do with the securities

purchased is the most effective and precise way to classify each marketable security. Thus, accountants must be extremely careful when handling transactions involving these kinds of investment securities. Any additional questions concerning this chapter may be answered in Appendix J.

# Case Eleven

## **Groupon: Revenue Recognition**

An analysis of both risk factors and revenue recognition standards companies face and the way these affect financial statements.

## Overview

In some cases, a company's decision to go public proves an excellent decision. However, in other cases, the company's decision was not as well thought as it ought to have been. For instance, when a company goes public, it must comply with Section 404 of the Sarbanes-Oxley Act. By its decision to go public, Groupon, a well-known "e-tailer," imposed new requirements upon itself and had to face the reality of meeting the SEC's demands. These requirements challenged Groupon's internal control leading to major changes within the company, which are analyzed in this case.

## Risk Analysis

By looking at Amazon, Wal-Mart, and Groupon's 10-Ks, we see a variety of things. First, Groupon structures its company much differently than Amazon and Wal-Mart. According to the general business section on Amazon and Wal-Mart's 10-Ks, they both focus their operations on the customer. The companies make decisions in order to better serve their customers and supplies. In contrast, Groupon's general overview states terms on a revenue basis. Groupon focuses only on business growth rather than the demands of the customer.

As stated above, the companies' plans guide the way they operate. These strategic plans, in turn, significantly influence the types of risks the companies face. For the first major risk that is listed in the management

discussion and analysis sections of the 10-Ks, the companies all claim volatility in expansion into new markets and products. These new markets and products require an increase in technology in order to meet the demands of consumers. If these demands are not met, the company will ultimately lose customers, which decreases its revenue. Also, if a company over invests in these expansions, operating costs would increase, which decreases profit.

Secondly, all of these companies face risk due to relationships with partners and suppliers. If any of the companies strained a relationship with a supplier, then the company either loses that supplier or pays more to receive the goods it needs. In the first case, losing the supplier causes the company to lose revenues due to the fact that it could no longer meet the demands of the market. In the second case, paying more to receive the good results in higher expenses for the company.

The last risk that Amazon, Wal-Mart, and Groupon all face that was not explicitly listed on the 10-Ks is the liability claims dealing with returns. All of these companies are retail companies and, as such, face inventory risks. As discussed later in this case, companies must meet certain requirements to record revenue for items that have a right of return. If companies are continually expanding into new markets, they must prove that they are able to reasonably estimate these returns before they are able to report revenue. Obviously, companies would not have internal historical data regarding this

information for its new markets and products. Therefore, the company's administration and investors must be cautious of these return estimates, especially since these estimates decrease reported revenue and increase liabilities or, if calculated incorrectly, over report revenue and under report liabilities.

## **Trends in Amazon**

Some say, "Revenue and revenue growth are more important than income and income growth for new businesses, especially in the new-age economy." In regards to the new-age economy, I agree with this statement. As shown in Figure 11.1, all three of these figures rely on one another. For example, in finance, many companies compute stock price based on potential earnings. If this number were negative, a company would not properly be able to compute stock price. Therefore, revenue, in this case, is a better measure to compute stock price. This way potential investors see how much of the market a company actually controls.

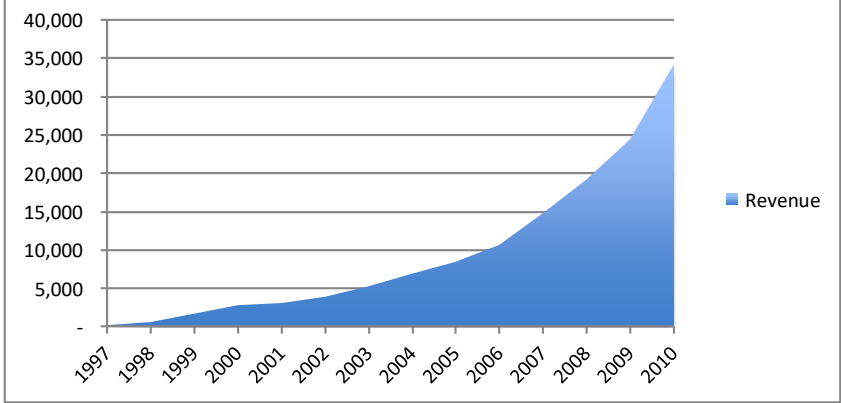


**Figure 11.1: Trend in Amazon's Financial Figures (Revenue and net income reported in millions of US Dollars)**

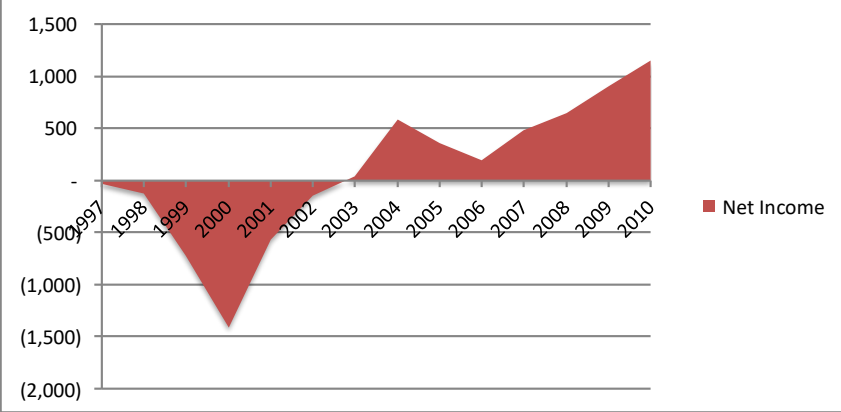
| Amazon's Financial Status as Reported on December 31 from 1997 to 2010 |         |                   |            |                      |             |                       |
|--|---------|-------------------|------------|----------------------|-------------|-----------------------|
| Year   | Revenue | Change in Revenue | Net Income | Change in Net Income | Stock Price | Change in Stock Price |
| 1997   | 148     | -                 | (31)       | -                    | \$ 5.02     | -                     |
| 1998   | 610     | 75.74%            | (125)      | -303.23%             | \$ 53.54    | 966.53%               |
| 1999   | 1,640   | 62.80%            | (720)      | -476.00%             | \$ 76.13    | 42.19%                |
| 2000   | 2,762   | 40.62%            | (1,411)    | -95.97%              | \$ 15.56    | -79.56%               |
| 2001   | 3,122   | 11.53%            | (567)      | 59.82%               | \$ 10.82    | -30.46%               |
| 2002   | 3,933   | 20.62%            | (149)      | 73.72%               | \$ 18.89    | 74.58%                |
| 2003   | 5,264   | 25.28%            | 35         | 123.49%              | \$ 52.62    | 178.56%               |
| 2004   | 6,921   | 23.94%            | 588        | 1580.00%             | \$ 44.29    | -15.83%               |
| 2005   | 8,490   | 18.48%            | 359        | -38.95%              | \$ 47.15    | 6.46%                 |
| 2006   | 10,711  | 20.74%            | 190        | -47.08%              | \$ 39.46    | -16.31%               |
| 2007   | 14,835  | 27.80%            | 476        | 150.53%              | \$ 92.64    | 134.77%               |
| 2008   | 19,166  | 22.60%            | 645        | 35.50%               | \$ 51.28    | -44.65%               |
| 2009   | 24,509  | 21.80%            | 902        | 39.84%               | \$ 134.52   | 162.32%               |
| 2010   | 34,204  | 28.34%            | 1,152      | 27.72%               | \$ 180.00   | 33.81%                |

However, even if revenue is a better measure for stock price, Amazon is a “for-profit” company. As a “for-profit” company, Amazon’s goal should be to maximize its profits, not simply maximize its revenues. A company could have extremely high revenues, but if it does not minimize its expenses it will not be profitable. As shown by the trends in Figures 11.2, 11.3, and 11.4 below, both revenue and net income affect the stock price trend. For instance, stock price trend does grow over the years just like revenue. However, as net income decreases vastly, stock price falls shortly after. Therefore, both accounts must be taken into consideration when analyzing stock price.

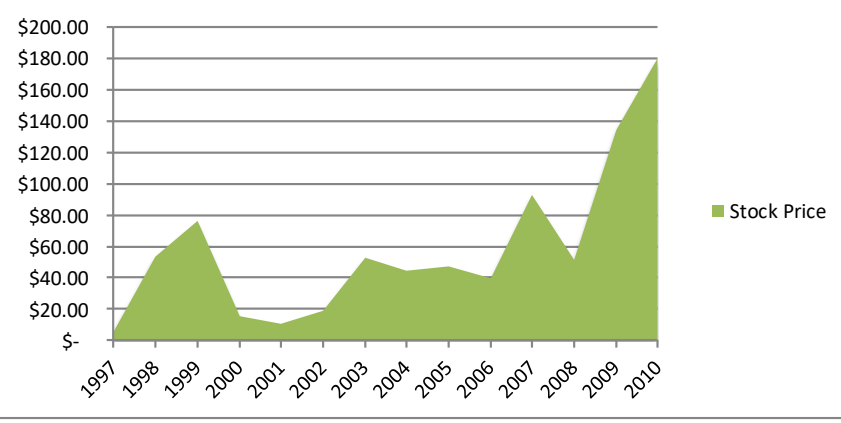
**Figure 11.2: Amazon's Revenue from 1997 to 2010**



**Figure 11.3: Amazon's Net Income from 1997 to 2010**



**Figure 11.4: Amazon's Stock Price from 1997 to 2010**



As concluded from the above information, a revenue focused company would consider stock price much more volatile than a profit or loss focuses company. Thus, a company's strategic and operational plans should follow what it believes is most important, keeping in mind that business structure greatly impact its future decisions and investments, further affecting all of the above trends.

### **Groupon's Revenue Reporting**

As noted above, a company's decision can influence its financial statements. One such decision a company must be particularly cautious of is the way it recognized revenue. There are two main methods for revenue reporting—the gross method and the net method. Under the gross method, the company records the amount received from the customer as revenue and reports payment to the supplier as cost of sales. Under the net method, the company records only the excess of the price over the cost of sales as revenue. In this case, cost of sales is a liability rather than a cost account that must be remitted to the supplier.

Looking at Groupon's S-1s, we see that the revenue reported under the original S-1s for 2009 and 2010 is much higher than the amended S-1s for 2009 and 2010. This difference comes from the fact that Groupon used the gross method for revenue recognition for the original S-1s but used the net method for revenue recognition for the amended S-1s. Of the two

amounts listed on the S-1s, Groupon obviously preferred the gross method of revenue recognition. From the CEO's statements about being the "fastest growing company—ever" as well as the company's general goal stated earlier, Groupon's goal was to grow its revenue as fast as possible, paying no or little attention to net income or loss.

During 2011 when the SEC questioned Groupon on its initial S-1 filing, Groupon asserted that it was the primary obligor, so the gross method of accounting was reasonable to use. Groupon claimed that the "purchase of a Groupon voucher gives the Customer the option to purchase goods or services at a specified price in the future." Groupon believed that trying to prove it had latitude in establishing the price allowed claiming the status as the primary obligor. Groupon also claimed it had credit risk involved in its transactions. If this were true, these facts would allow Groupon to report revenue using the gross method.

With reference to ASC 605-45-45, there are eight indicators that support the reporting of gross revenue. These indicators are as follows: the entity (1) is the primary obligor in the arrangement, (2) has general inventory risk—before customer order is placed or upon customer return, (3) has latitude in establishing price, (4) changes the product or performs part of the service, (5) has discretion in supplier selection, (6) is involved in the determination of product or service specifications, (7) has physical loss

inventory risk—after customer order or during shipping, and (8) has credit risk.

Looking at Groupons responses to the SEC, we see the main indicators in question are numbers one, three, and eight. For the first indicator, ASC 605-45-45-4 states, “If an entity is responsible for fulfillment, including the acceptability of the products or services ordered or purchased by the customer, that fact is a strong indicator that an entity has risks and rewards of a principal in the transaction and that it should record revenue gross based on the amount billed to the customer.” Groupon claims that it “does not accept any other responsibility for the delivery of goods or services provided to the customer.” In response to indicator three, we know that the company offers the price that Groupon must accept in order to do business, so Groupon does not have control over what price is established for the service. Last, in response to indicator eight, ASC 605-45-45-13 states, “Credit risk exists if an entity is responsible for collecting the sales price from a customer but must pay the amount owed to a supplier after the supplier performs, regardless of whether the sales price is fully collected.” Groupon has no obligation to pay the supplier if the sales price is not collected. Therefore, Groupon’s arguments for using the gross method of revenue recognition fail.

Since Groupon needed to report its revenue under the net method rather than the gross method, Groupon amended its S-1s. The amended S-1s for 2009 and 2010 show a comparison between the net method and the gross method. These figures are shown using a common size income statement. A common size income statement is a shortened income statement that places figures on a percentage-of-revenue basis. This statement is found below in Figure 11.5

**Figure 11.5: Groupon's Common Size Income Statement**

| <b>Abridged Common Size Income Statements<br/>for Groupon</b> |              |            |              |            |
|---|--------------|------------|--------------|------------|
|   | <b>2009</b>  |            | <b>2010</b>  |            |
|   | <u>Gross</u> | <u>Net</u> | <u>Gross</u> | <u>Net</u> |
| Revenue   | 100.00%      | 100.00%    | 100.00%      | 100.00%    |
| Cost of Goods Sold  | 64.14%       | 30.34%     | 60.74%       | 10.39%     |
| Gross Profit  | 35.86%       | 69.66%     | 39.25%       | 89.61%     |
| Marketing Expense   | 15.13%       | 33.79%     | 36.89%       | 90.86%     |
| General and Admin. Expense                                    | 24.67%       | 44.14%     | 32.79%       | 68.17%     |
| Other Expenses  |              |            | 28.48%       | 64.94%     |
| Net Profit (Loss)   | -4.41%       | -7.52%     | -57.93%      | -134.26%   |

As shown in Figure 11.5, the common size percentages differ between the gross method and net method for both 2009 and 2010. For the gross method of each year, the cost of goods sold percentage is higher. This is due to the amount Groupon remit's to its suppliers. The higher cost of goods sold for the gross method gives a lower gross profit than the net method. However, under the net method, the marketing expenses, general and

administrative expenses, and other expenses are all a higher percentage of revenue due to the fact that the revenue under the net method is lower than the revenue under the cost method. This is because the net method does not record the amount it must remit to the suppliers as revenue. In the above figure, we see that in both years, the company's loss was a greater percentage than the gross method made stockholders and investors believe. Also, by using the net method, we not only gain a better understanding of the true financial position of Groupon but also are also more easily able to compare relevant ratios, such as the ratios found below in Figure 11.6.

**Figure 11.6: Groupon's Ratios**

| Ratio Comparison<br>for Groupon |        |        |        |        |
|---------------------------------|--------|--------|--------|--------|
|                                 | 2009   |        | 2010   |        |
|                                 | Gross  | Net    | Gross  | Net    |
| Gross Margin Percentage         | 35.86% | 69.66% | 39.25% | 89.61% |
| Asset Turnover Ratio            | 2.03   | 0.97   | 3.60   | 1.58   |

As seen above, Figure 11.6 shows the gross margin percentage as well as the asset turnover ratio. As explained above, the gross margin percentage is lower under the gross method than the net method because of the way Groupon originally reported its revenue and cost of goods sold. Also, the asset turnover ratio shows us the inefficiency of Groupon's internal controls. During 2009 and 2010, Groupon reported a higher asset turnover ratio by using the gross method of revenue recognition. In reality, the company was

turning over inventory very slowly, and this turnover ratio only became worse from 2009 to 2010. This suggests that the company is not making a return on its inventory, because it is investing a lot more money into the coupons than it is receiving in return for them.

Continuing the idea that Groupon is investing more money into coupons, during late 2011, Groupon began selling high-ticket items. Groupon recognized the revenue from these coupons, even though these Groupons had a right of return. Products with right of returns have special accounting related to them. ASC 605-15-25-1 lists the conditions that must be met in order to recognize revenue at the time of sale. All conditions listed must be met. Condition “f” states, “The amount of future returns can be reasonably estimated (see paragraphs 605-15-25-3 through 25-4).”

As mentioned above, in 2011, Groupon expanded into other markets and increased its product diversity to high-ticket items—items with which Groupon had little or no historical experience. As a result, Groupon experienced higher levels of refund activity, which was significantly correlated with the high price items. Based on the above reasoning, I do not agree with Groupon’s accounting. Since Groupon failed to meet all of the required conditions to recognize revenue when a right of return exists, then Groupon should not have reported revenue. Rather than reporting the money received as revenue, Groupon should have recognized unearned



revenue until it could either reasonably estimate these returns or until the right of return expires. Reporting the money in this manner decreases Groupon's originally reported revenue, decreases its net income, and increases its liabilities.

As a result of Groupon's market expansion and inability to properly estimate returns, Groupon had to make significant changes in its 2011 fourth-quarter financial statements. Thus, The restatement of Groupon's 2011 fourth-quarter financials resulted in an increase to Groupon's refund reserve to reflect the issues Groupon faced with higher than normal returns. As a result of these revisions, Groupon would have to reduce the amount of revenue reported, since the cash received would not actually be considered revenue. To properly record revenue, Groupon would have to increase the provision for returns, which would then be subtracted from revenue on the income statement. This change does not affect the cash flow, since no cash is being paid out. On the other hand, the refund reserve account is a liability account that represents estimated costs to provide refunds. To increase the refund reserve, Groupon would debit an expense account and credit the refund reserve account. Once again, since Groupon is only shifting these funds to record an increased estimated liability rather than paying cash for these estimated costs, then the company is not experiencing cash flow changes as a result. Thus, as a result of both these restatements, Groupon's

revenues decreased, operating expenses increased, and operating income decreased without affecting its operating cash flows.

## **Conclusion**

As shown by analyzing Groupon, planning within a company can be very difficult. Not only is creating a strategic plan for a company difficult but also the decision-making that follows these plans can also cause great stress. In Groupon's case, the decision to go public only showed how ineffective certain controls were and also showed which parts of the income statement had been materially misstated. However, these are the risks that come with taking a company public. Without such risks, companies would not be able to grow into the multi-billion dollar industries we have today. Thus, for Groupon to accomplish its original plan of generating revenue as quickly as possible, in the long run, going public could prove to be Groupon's best decision.

# Case Twelve

## **ZAGG Inc.: Deferred Income**

An analysis of both risk factors and revenue recognition standards companies face and the way these affect financial statements.

## Overview

Today, companies face a plethora of decisions. In some cases, these decisions result in the company using a system for its financial statements purposes that may be different than the one used for its tax return. In consequence, companies may have differing book income and taxable income. Book income is the income that is reported on the financial statements of a company. For ZAGG, “income before provision for income taxes” represents book income.

To understand the results of using contrasting systems, we must look at the resulting differences in account balances. So, two types of differences arise when a company’s book and tax systems differ—permanent tax differences and temporary tax differences. Permanent tax differences are differences that cannot be reversed. In other words, some revenue listed on the financial statements is not taxable, and some expenses listed on the financial statements are not deductible. An example of a permanent difference is municipal bond interest. This interest is not taxable, however it is still reported as income on the financial statements.

In contrast, Temporary tax differences are differences that can be reversed. This means that expenses or revenues are recognized in different periods for financial statements and tax purposes. However, they will eventually be recognized in either case, which “reverses” the difference. For

example, company can use accelerated depreciation for taxes and straight-line depreciation for its books. This results in taxable income being lower than straight-line in the first few years.

These differences can also affect and be affected by tax rates. The statutory tax rate can change the amount of the difference involved. This statutory rate is the rate imposed by law, which can be imposed a federal or state level or even both. The second tax rate involved is the effective tax rate. If a company has no permanent tax differences and the statutory rate is the same for all years involved, then the effective tax rate equals the statutory rate. However, when this is not the case, the effective tax rate can be calculated by dividing the income tax provision (expense) by the book income. The effective tax rate shows what percentage of income was actually paid in taxes.

Today, companies must separate current income taxes payable from deferred income taxes on the income statement. Companies do this to prevent misleading viewers and potential investors. Reporting this figure shows what amount a company is liable for in the future and allows viewers to get the best understanding of the true financial situation of a company.

## Net Deferred Tax Assets

Deferred tax assets represent the amount of tax that is deductible in the future due to a higher level of taxable income than book income. Similarly, deferred tax liabilities represent taxes that a company will have to pay in future years, but does not have to pay currently due to different requirements by the tax code. Again, using an accelerated depreciation recognition method for tax purposes creates a deferred tax liability, because a company increased expenses earlier on to decrease current tax expense. On the other hand, when a company receives money for rent, it is recognized immediately for tax purposes but is recognized as unearned rent revenue for financial statement purposes. This causes the company to have to pay taxes on the income in the year it was received rather than the period in which revenue is recognized on the books. Therefore, this “prepaid” tax is a deferred tax asset. For ZAGG, these deferred tax assets and deferred tax liabilities can be combined to give a net deferred tax assets account.

In some cases, companies must establish a valuation account for its deferred income taxes. The company establishes this account when it believes it is more likely than not that it will not be able to utilize the deferred tax asset. So, the company uses the valuation allowance to offset the deferred tax asset that the company believes will not be used. Most of the time, these situations arise when the company believes the asset will have inadequate profits.

For ZAGG, we can analyze these accounts from the beginning to understand what is involved in these differences and why the account balances change. So, using the information disclosed in Note 8 to the financial statements, we can create the journal entry that ZAGG recorded for its income tax provision for 2012. This journal entry is shown below in Figure 12.1, and all amounts in this case are listed in thousands.

**Figure 12.1: Income Tax Provision 2012**

|                        |        |
|------------------------|--------|
| Income tax provision   | 9,393  |
| Net deferred tax asset | 8,293  |
| Income taxes payable   | 17,686 |

As seen above, ZAGG used a net deferred tax asset account to journalize this transaction. This amount equals the “total deferred benefit” listed in 2012. The total current provision, or current tax payable, is what ZAGG owed during the year, and the remaining \$9,393 is the income tax provision and is shown on ZAGG’s income statement. Additionally, the amount recorded in net deferred income taxes was a debit of \$8,293 and can be broken into two parts—a deferred income tax asset and deferred income tax liability. Looking at the third table in Note 8, we see that of this \$8,293, \$8,002 represents the increase total deferred tax assets. The remaining \$291 is due to the decrease in deferred tax liabilities. This gives an overall increase in deferred tax assets of \$8,293.

In Note 8, we also see a reconciliation of the income taxes computed using the federal statutory rate to income taxes computed using the effective tax rate. ZAGG's effective tax rate for 2012 equals 39.30 percent. Taking the income tax provision and dividing it by the income before provision for income taxes gives the effective rate. As mentioned before, the difference between the statutory rate and the effective rate comes from the permanent differences between the taxable income and the book income. The effective tax rate and statutory tax rate can also differ due to the statutory rate changing over the years.

In the last part of Note 8, the third table shows a net deferred income tax asset balance of \$13,508 at December 21, 2012. GAAP requires there to be a net amount listed on the balance sheet for both current and noncurrent tax assets. So, net current deferred income tax assets is under current assets and equals \$6,912, and net noncurrent deferred income tax assets is under noncurrent assets and equals \$6,596. Adding these amounts gives \$13,508.

## **Property and Equipment**

Shown in the third table in Note 8, the largest component of ZAGG's deferred income tax liabilities is titled "Property and equipment." The difference results depreciation expense timing that contrasts between the book and tax method. As of 2012, the tax system recognized a greater depreciation expense. This greater expense resulted in lower taxable income



than book income, which results in future taxable amounts. These future taxable amounts give rise to deferred tax liabilities. To find the cumulative difference in depreciation between the two systems as of December 31, 2012, we use the formula shown below in Figure 12.2. The summed statutory rate equals 38 percent, and the deferred tax liability related to property and equipment was listed in Note 8 to the financial statements. Therefore, dividing the deferred tax liability by the statutory rate gives the cumulative difference of \$2,089.

**Figure 12.2: Cumulative Difference in Depreciation**

|   |
|---|
| Cumulative difference in book and tax depreciation expense<br>\$ 2,089                      |
| x   |
| Statutory income tax rate<br>38%  |
| =   |
| Deferred income tax liability relating to property and<br>equipment at 12/31/2012<br>\$ 794 |

By using the information in the above figure, we can determine the balance in “Property and equipment, net” at December 31, 2012, if tax depreciation had been used through the assets’ lives. If ZAGG used the tax depreciation throughout the assets’ lives, the balance of the account at December 31, 2012, would be \$1,228. This number comes from taking the book value listed net of accumulated depreciation and subtracting the cumulative difference between the book and tax depreciation expense. We subtract this amount due to the fact that the tax system accelerates

depreciation expense and would result in a lower value than what is listed on the balance sheet under the book method.

## **Allowance for Doubtful Accounts**

Similarly to analyzing the property and equipment account, we can analyze the components related to the “Allowance for doubtful accounts.” During 2012, the book system recognized a greater expense for doubtful accounts. Since taxable income is higher than book income, this results in future deductible amounts in order to reverse the temporary differences. These future deductible amounts create deferred tax assets. Using a chart much like the one shown in Figure 12.2 allows us to compute the dollar magnitude of difference in bad debt expense between the book and tax system for the year ended in December 31, 2012. Once again, we use the summed statutory rate of 38 percent and the difference between the “Allowance for doubtful accounts” in 2011 and in 2012 equals \$229. Therefore, the cumulate difference for 2012 equals \$603. At the top of the next page, Figure 12.3 shows this calculation.

**Figure 12.3: Cumulative Difference in Bad Debt Expense**

|  |
|--|
| Current period difference in book and tax bad debt expense<br>in 2012<br>\$ 603                      |
| x  |
| Statutory income tax rate<br>38%   |
| =  |
| Change in the deferred income tax asset relating to the<br>allowance for doubtful accounts<br>\$ 229 |

## Valuation Account

Sometimes, a company must create a valuation account in order to offset the deferred tax asset that it does not believe it will be able to utilize. At December 31, 2012, ZAGG recorded a deferred income tax asset valuation of \$713. ZAGG recorded this valuation against losses generated by its equity method investment in HzO. ZAGG deemed this valuation necessary given HzO's current operations and uncertainty of future profits. Due to this situation, ZAGG determined "it was more likely than not that the deferred tax asset will not be realizable" and recoded the full valuation of \$713.

## Conclusion

As expected, many factors influence a company's deferred tax assets as well as its deferred tax liabilities. Above, this case showed how temporary differences give rise to deferred tax assets and deferred tax liabilities when the statutory rate remained constant. However, when the statutory rate

changes, permanent differences appear. How does a company account for this type of difference?

Suppose that on January 1, 2013, the IRS changes the federal statutory rate from 35 percent to 30 percent. This change requires us to reevaluate the net deferred income tax asset account and journalize any change in amount. To compute this amount, we take the \$13,508 balance at the end of 2012 and divide it by the 2012 35 percent federal statutory rate to get a cumulative deferred deductible amount of \$38,594. We then multiply this amount by 2013's federal statutory rate of 30 percent to get a balance of \$11,578 for the net deferred income tax asset account. Thus, the resulting difference equals \$13,508 minus \$11,578, or \$1,930. To journalize this amount, ZAGG would debit the income tax provision for \$1,930 and credit the net deferred tax asset account for \$1,930. Figure 12.4 shows this journal entry below.

**Figure 12.4: Change in Federal Statutory Rate**

|                        |       |       |
|------------------------|-------|-------|
| Income tax provision   | 1,930 |       |
| Net deferred tax asset |       | 1,930 |

Especially with the requirements the SEC places on public companies to never mislead financial statement users, companies must really be cautious of any differences between the book and tax systems. Misstating either a temporary difference or a permanent differences can result in not only misstating the financial statements but can also cause information to be

incorrect on a tax return or even cause the effective tax rate to be incorrect. Thus, every decision regarding systems must be carefully scrutinized so companies can be aware of what differences to look for when calculating these various amounts. Any additional questions regarding this chapter may be answered in Appendix K.

# Case Thirteen

## Johnson & Johnson: Retirement Obligations

An analysis of retirement plans as well as the various components and assumptions required to calculate them.

## Overview

For many companies, retirement plans are very valuable benefits that help the present and future lives of employees. So, offering retirement benefits helps companies entice workers to join their business or continue working for them. In some cases, companies receive tax benefits for such plans. Also, if a company is a start-up with little cash, retirement plans could supplement compensation. On the other hand, retirement plans can be very time-consuming to set up and administer. Thus, this case will analyze retirement plans as well as some of the components involved to better understand the accounting behind such benefits.

## Types of Retirement Plans

Generally, there are two types of retirement plans—defined benefit plans and defined contribution plans. In a defined benefit plan, retirement benefits are based on a formula that takes various factors into account, such as number of years worked and salary level. This is typically called a pension plan. On the other hand, a defined contribution plan specifies how much the employer would contribute into the plan. The contribution amount is based on either the employee's salary or a specific amount. Johnson & Johnson uses a defined benefit retirement plan, as seen in the notes to the financial statements.

Companies consider these plans important due to the fact that these retirement plans can create liabilities. Retirement plan obligations are liabilities because they represent the amount that the companies owe past and current employees. Since these plans are typically included in the contract signed when the employee begins work, there is an evident obligation the company must meet, so long as the employee meets all of the requirements. Some people argue that these are not completely liabilities because they are based on estimates, otherwise called assumptions. Some of the assumptions necessary in order to account for retirement plan obligations include predicting employees' lifespans, average retirement age, future salary levels, length of time with the company, and even the disability rate.

## **Pension Plans**

Mainly, four factors influence companies' pension obligations each year, and they are as follows: service cost, interest cost, actuarial gains and losses, and benefits paid to retirees. First, service costs are expenses caused by the increase in the projected benefit obligation due to services rendered during the current year. Interest cost is the rate that the employee's benefits accrue, and, therefore, creates additional expenses and obligations for the company. Actuarial gains and losses occur when the assumptions used to calculate the pension plan change and result in an increase or decrease in



liability. Lastly, benefits paid to retirees decrease the pension obligation, because they are obligations that have already been paid.

In addition, three factors influence pension assets—actual return on pension investments, company contributions to the plan, and benefits paid to retirees. Actual return on pension investments increases the plan assets of the pension plan. The actual return on pension investments can be computed by taking the difference between the beginning and ending balances of the plan assets account and adjusting it for contributions and benefits. Company contributions to the plan also increase the plan assets, since the company pays cash into the plan. Benefits decrease the plan assets as well as plan obligations. The company does not make an adjusting journal entry to its balance sheet when benefits are paid to employees.

As noted above, both pension expense and pension plan assets have a “return on plan assets” component. The portion of “return on assets” that affects pension plan assets is the actual return on plan assets. The portion mentioned earlier is the unexpected gain or loss on plan assets. Both of these, when combined, equals expected return on plan assets. The company wants the expected return on assets to affect the plan assets account; however, we can still see the actual and unexpected returns thanks to the accounting system.

With regard to Johnson & Johnson’s plans, it also provides “other benefits” to retirees. The primary difference between other benefits plans and retirement plans is that the other benefits plans deal primarily with health care and is available to all U.S. retired employees and their dependents. The retirement plans, on the other hand, cover most employees worldwide.

In 2007, Johnson & Johnson reported pension expense of \$646 million. As mentioned before, the pension expense is made of several components. To gain a better understanding of the way the company accounts for these components, refer below to Figure 13.1. The numbers in this figure are in millions.

**Figure 13.1: 2007 Service and Interest Cost**

|                              |       |
|------------------------------|-------|
| Service cost                 | 597   |
| Interest cost                | 656   |
| Projected benefit obligation | 1,253 |

As reported in the notes to the financial statements, Johnson & Johnson had service costs of \$597 million and interest costs of \$656 million. These amounts would be debited to the proper expense accounts and would both be credited to the projected benefit obligation. This transaction increases the company’s liability, but there are still many other aspects to review under a pension plan.

## Retirement Plan Obligations

Johnson & Johnson detailed its retirement plan obligations, otherwise called pension liability, on page 62 of its annual report in 2007. During 2007, the retirement plan obligation equals \$12,002 million. This value represents the amount of benefits the company will pay to employees. This number changes based on actuarial assumptions; however, it is usually computed by an actuary and is rather reliable.

Also shown in the notes to the financial statements, the pension related interest cost for the 2007 was \$656 million. Johnson & Johnson used an average interest rate of 5.63 percent. According to the IRS website, the average interest rate on pension obligations for U.S. companies equaled 5.85 percent. Thus, Johnson & Johnson's rate is extremely reasonable as there is only a 0.22 percent difference in these rates.

Throughout the year, Johnson & Johnson paid pension benefits of \$481 million for 2007. Johnson & Johnson did not pay cash for these benefits. The benefits paid affect the memo record by reducing the plan obligation as well as the plan assets, because the benefits are being paid using the plan assets.

## Retirement Plan Assets

Also detailed on page 62 of Johnson & Johnson's annual report are the retirement plan assets, otherwise called pension plan assets. On December 31, 2007, Johnson & Johnson's retirement plan assets were valued at \$10,469. This amount equals the fair value of the assets at the end of the year. On these assets, Johnson & Johnson expected to make returns during 2006 and 2007 of \$809 and \$701 respectively. However, actual returns for 2006 and 2007 equaled \$743 and \$966. The difference was not significant in 2007 as it was only an 8 percent difference, however the difference of 27 percent in 2006 was very significant. This significant difference may have changed Johnson & Johnson's expected return for 2007, leading to an insignificant difference. Thus, the expected return better reflects the economics of the company's pension expense.

Looking further into the notes to the financial statements, we see that during 2007, Johnson & Johnson and its employees contributed \$379 million. In 2006, they contributed \$306 million. Even though the total amount contributed increases from 2006 to 2007, the other benefits plan contribution decreases by \$1 million, since the U.S. is not required to fund its U.S. retirement plans in 2007. This is something employees should be aware of in the future if they plan to rely on the "other benefits" plan for health-related issues.

So, the funded status is found by netting the retirement plan obligations with the retirement plan assets. At December 31, 2007, Johnson & Johnson's retirement plan is under funded by \$1,533 million. In 2006, its retirement plan was under funded by \$2,122 million. This funded status, in both cases, appears in three areas of the company's balance sheet—non-current assets, current liabilities, and non-current liabilities. The amount under each of these components is found in Note 13 of the financial statements.

## **Conclusion**

In conclusion, there are many pieces that make up the pension asset plan. A company must be aware of each of these pieces in order to make the correct decisions on what kind of retirement plans are best for it to provide. If a company is not truthful about certain facts, then the actuarial assumptions being used to calculate the retirement obligation could be completely inaccurate. Thus, these plans must be highly scrutinized and, if needed, have the assumptions changed at the end of each year to most accurately reflect the obligation amount the company will pay to employees. Any additional questions regarding this chapter may be answered in Appendix L.

# Appendix A

Figure A.1

| GLENWOOD HEATING, INC.<br>Chart of Accounts<br>For Year 20X1 |                |                     |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
|--|----------------|---------------------|-------------------------|------------------|------------------|-------------------|------------------------------------|--------------------|-------------------------------------|------------------|--|------------------|------------------|
| PART A   | ASSET ACCOUNTS |                     |                         |                  |                  |                   |                                    | LIABILITY ACCOUNTS |                                     |                  |  |                  |                  |
|  | Cash           | Accounts receivable | Allowance for bad debts | Inventory        | Land             | Building          | Accumulated depreciation, building | Equipment          | Accumulated depreciation, equipment | Leased equipment | Accumulated depreciation, leased equipment | Accounts payable | Interest payable |
| Transaction 1  | 160,000        |                     |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 2  | 400,000        |                     |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 3  | (420,000)      |                     |                         |                  | 70,000           | 350,000           |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 4  | (80,000)       |                     |                         |                  |                  |                   |                                    | 80,000             |                                     |                  |  |                  |                  |
| Transaction 5  |                |                     |                         | 239,800          |                  |                   |                                    |                    |                                     |                  |  | 239,800          |                  |
| Transaction 6  |                | 398,500             |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 7  | 299,100        | (299,100)           |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 8  | (213,360)      |                     |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 9  | (41,000)       |                     |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 10   | (34,200)       |                     |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 11   | (23,200)       |                     |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 12   |                |                     |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  | 6,650            |
| Part A Totals  | 47,340         | 99,400              | -                       | 239,800          | 70,000           | 350,000           | -                                  | 80,000             | -                                   | -                | -  | 26,440           | 6,650            |
| PART B   |                |                     |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 13   |                |                     | 994                     |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 14   |                |                     |                         | (177,000)        |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 15   |                |                     |                         |                  |                  |                   | 10,000                             |                    |                                     | 9,000            |  |                  |                  |
| Transaction 16   | (16,000)       |                     |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 17   | (30,914)       |                     |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Part B Totals  | (46,914)       | -                   | 994                     | (177,000)        | -                | -                 | 10,000                             | -                  | 9,000                               | -                | -  | -                | -                |
| <b>Final Totals</b>  | <b>\$ 426</b>  | <b>\$ 99,400</b>    | <b>\$ 994</b>           | <b>\$ 62,800</b> | <b>\$ 70,000</b> | <b>\$ 350,000</b> | <b>\$ 10,000</b>                   | <b>\$ 80,000</b>   | <b>\$ 9,000</b>                     | <b>\$ -</b>      | <b>\$ -</b>                                | <b>\$ 26,440</b> | <b>\$ 6,650</b>  |

Figure A.1 continued

| GLENWOOD HEATING, INC.<br>Chart of Accounts<br>For Year 20X1 |                    |               |                   |                   |                  |                   |                    |                  |                      |                  |                          |                  |                            |
|--|--------------------|---------------|-------------------|-------------------|------------------|-------------------|--------------------|------------------|----------------------|------------------|--------------------------|------------------|----------------------------|
| PART A   | LIABILITY ACCOUNTS |               |                   | EQUITY ACCOUNTS   |                  |                   |                    |                  |                      |                  |                          |                  |                            |
|  | Notes payable      | Lease payable | Common stock      | Retained earnings | Dividends        | Sales             | Cost of goods sold | Bad debt expense | Depreciation expense | Interest expense | Other operating expenses | Rent expense     | Provision for income taxes |
| Transaction 1  |                    |               | 160,000           |                   |                  |                   |                    |                  |                      |                  |                          |                  |                            |
| Transaction 2  | 400,000            |               |                   |                   |                  |                   |                    |                  |                      |                  |                          |                  |                            |
| Transaction 3  |                    |               |                   |                   |                  |                   |                    |                  |                      |                  |                          |                  |                            |
| Transaction 4  |                    |               |                   |                   |                  |                   |                    |                  |                      |                  |                          |                  |                            |
| Transaction 5  |                    |               |                   |                   |                  |                   |                    |                  |                      |                  |                          |                  |                            |
| Transaction 6  |                    |               |                   |                   |                  | 398,500           |                    |                  |                      |                  |                          |                  |                            |
| Transaction 7  |                    |               |                   |                   |                  |                   |                    |                  |                      |                  |                          |                  |                            |
| Transaction 8  |                    |               |                   |                   |                  |                   |                    |                  |                      |                  |                          |                  |                            |
| Transaction 9  | (20,000)           |               |                   |                   |                  |                   |                    |                  | 21,000               |                  | 34,200                   |                  |                            |
| Transaction 10   |                    |               |                   |                   |                  |                   |                    |                  |                      |                  |                          |                  |                            |
| Transaction 11   |                    |               |                   |                   | 23,200           |                   |                    |                  |                      |                  |                          |                  |                            |
| Transaction 12   |                    |               |                   |                   |                  |                   |                    |                  | 6,650                |                  |                          |                  |                            |
| Part A Totals  | 380,000            | -             | 160,000           | -                 | 23,200           | 398,500           | -                  | -                | 27,650               | 34,200           | -                        | -                | -                          |
| PART B   |                    |               |                   |                   |                  |                   |                    |                  |                      |                  |                          |                  |                            |
| Transaction 13   |                    |               |                   |                   |                  |                   |                    | 994              |                      |                  |                          |                  |                            |
| Transaction 14   |                    |               |                   |                   |                  |                   |                    |                  |                      |                  |                          |                  |                            |
| Transaction 15   |                    |               |                   |                   |                  |                   | 177,000            |                  | 19,000               |                  |                          | 16,000           |                            |
| Transaction 16   |                    |               |                   |                   |                  |                   |                    |                  |                      |                  |                          |                  |                            |
| Transaction 17   |                    |               |                   |                   |                  |                   |                    |                  |                      |                  |                          |                  | 30,914                     |
| Part B Totals  | -                  | -             | -                 | -                 | -                | -                 | 177,000            | 994              | 19,000               | -                | -                        | 16,000           | 30,914                     |
| <b>Final Totals</b>  | <b>\$ 380,000</b>  | <b>\$ -</b>   | <b>\$ 160,000</b> | <b>\$ -</b>       | <b>\$ 23,200</b> | <b>\$ 398,500</b> | <b>\$ 177,000</b>  | <b>\$ 994</b>    | <b>\$ 19,000</b>     | <b>\$ 27,650</b> | <b>\$ 34,200</b>         | <b>\$ 16,000</b> | <b>\$ 30,914</b>           |

Figure A.2

| EADS HEATER, INC.<br>Chart of Accounts<br>For Year 20X1 |                 |                     |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
|---|-----------------|---------------------|-------------------------|------------------|------------------|-------------------|------------------------------------|--------------------|-------------------------------------|------------------|--|------------------|------------------|
| PART A  | ASSET ACCOUNTS  |                     |                         |                  |                  |                   |                                    | LIABILITY ACCOUNTS |                                     |                  |  |                  |                  |
|   | Cash            | Accounts receivable | Allowance for bad debts | Inventory        | Land             | Building          | Accumulated depreciation, building | Equipment          | Accumulated depreciation, equipment | Leased equipment | Accumulated depreciation, leased equipment | Accounts payable | Interest payable |
| Transaction 1   | 160,000         |                     |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 2   | 400,000         |                     |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 3   | (420,000)       |                     |                         |                  | 70,000           | 350,000           |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 4   | (80,000)        |                     |                         |                  |                  |                   | 80,000                             |                    |                                     |                  |  |                  |                  |
| Transaction 5   |                 |                     |                         | 239,800          |                  |                   |                                    |                    |                                     |                  |  | 239,800          |                  |
| Transaction 6   |                 | 398,500             |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 7   | 299,100         | (299,100)           |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 8   | (213,360)       |                     |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 9   | (41,000)        |                     |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 10  | (34,200)        |                     |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 11  | (23,200)        |                     |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 12  |                 |                     |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  | 6,650            |
| Part A Totals   | 47,340          | 99,400              | -                       | 239,800          | 70,000           | 350,000           | -                                  | 80,000             | -                                   | -                | -  | 26,440           | 6,650            |
| PART B  |                 |                     |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 13  |                 |                     | 4,970                   |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 14  |                 |                     |                         | (188,800)        |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Transaction 15  |                 |                     |                         |                  |                  |                   |                                    |                    | 10,000                              | 20,000           |  |                  |                  |
| Transaction 16  | (16,000)        |                     |                         |                  |                  |                   |                                    |                    |                                     |                  | 92,000                                     |                  | 11,500           |
| Transaction 17  | (23,505)        |                     |                         |                  |                  |                   |                                    |                    |                                     |                  |  |                  |                  |
| Part B Totals   | (39,505)        | -                   | 4,970                   | (188,800)        | -                | -                 | 10,000                             | -                  | 20,000                              | 92,000           | 11,500                                     | -                | -                |
| <b>Final Totals</b>                                     | <b>\$ 7,835</b> | <b>\$ 99,400</b>    | <b>\$ 4,970</b>         | <b>\$ 51,000</b> | <b>\$ 70,000</b> | <b>\$ 350,000</b> | <b>\$ 10,000</b>                   | <b>\$ 80,000</b>   | <b>\$ 20,000</b>                    | <b>\$ 92,000</b> | <b>\$ 11,500</b>                           | <b>\$ 26,440</b> | <b>\$ 6,650</b>  |



Figure A.2 continued

| EADS HEATER, INC.<br>Chart of Accounts<br>For Year 20X1 |                   |                  |                   |                   |                  |                   |                    |                  |                      |                  |                          |              |                            |
|---|-------------------|------------------|-------------------|-------------------|------------------|-------------------|--------------------|------------------|----------------------|------------------|--------------------------|--------------|----------------------------|
| LIABILITY ACCOUNTS                                      |                   | EQUITY ACCOUNTS  |                   |                   |                  |                   |                    |                  |                      |                  |                          |              |                            |
| PART A  | Notes payable     | Lease payable    | Common stock      | Retained earnings | Dividends        | Sales             | Cost of goods sold | Bad debt expense | Depreciation expense | Interest expense | Other operating expenses | Rent expense | Provision for income taxes |
| Transaction 1   |                   |                  | 160,000           |                   |                  |                   |                    |                  |                      |                  |                          |              |                            |
| Transaction 2   | 400,000           |                  |                   |                   |                  |                   |                    |                  |                      |                  |                          |              |                            |
| Transaction 3   |                   |                  |                   |                   |                  |                   |                    |                  |                      |                  |                          |              |                            |
| Transaction 4   |                   |                  |                   |                   |                  |                   |                    |                  |                      |                  |                          |              |                            |
| Transaction 5   |                   |                  |                   |                   |                  |                   |                    |                  |                      |                  |                          |              |                            |
| Transaction 6   |                   |                  |                   |                   |                  | 398,500           |                    |                  |                      |                  |                          |              |                            |
| Transaction 7   |                   |                  |                   |                   |                  |                   |                    |                  |                      |                  |                          |              |                            |
| Transaction 8   |                   |                  |                   |                   |                  |                   |                    |                  |                      |                  |                          |              |                            |
| Transaction 9   | (20,000)          |                  |                   |                   |                  |                   |                    |                  |                      | 21,000           |                          |              |                            |
| Transaction 10  |                   |                  |                   |                   |                  |                   |                    |                  |                      |                  | 34,200                   |              |                            |
| Transaction 11  |                   |                  |                   |                   | 23,200           |                   |                    |                  |                      |                  |                          |              |                            |
| Transaction 12  |                   |                  |                   |                   |                  |                   |                    |                  |                      | 6,650            |                          |              |                            |
| Part A Totals   | \$ 380,000        | \$ -             | \$ 160,000        | \$ -              | \$ 23,200        | \$ 398,500        | \$ -               | \$ -             | \$ -                 | \$ 27,650        | \$ 34,200                | \$ -         | \$ -                       |
| PART B  |                   |                  |                   |                   |                  |                   |                    |                  |                      |                  |                          |              |                            |
| Transaction 13  |                   |                  |                   |                   |                  |                   |                    |                  | 4,970                |                  |                          |              |                            |
| Transaction 14  |                   |                  |                   |                   |                  |                   | 188,800            |                  |                      |                  |                          |              |                            |
| Transaction 15  |                   |                  |                   |                   |                  |                   |                    |                  | 30,000               |                  |                          |              |                            |
| Transaction 16  |                   | 83,360           |                   |                   |                  |                   |                    |                  | 11,500               | 7,360            |                          |              |                            |
| Transaction 17  |                   |                  |                   |                   |                  |                   |                    |                  |                      |                  |                          |              | 23,505                     |
| Part B Totals   | \$ -              | \$ 83,360        | \$ -              | \$ -              | \$ -             | \$ -              | \$ 188,800         | \$ 4,970         | \$ 41,500            | \$ 7,360         | \$ -                     | \$ -         | \$ 23,505                  |
| <b>Final Totals</b>                                     | <b>\$ 380,000</b> | <b>\$ 83,360</b> | <b>\$ 160,000</b> | <b>\$ -</b>       | <b>\$ 23,200</b> | <b>\$ 398,500</b> | <b>\$ 188,800</b>  | <b>\$ 4,970</b>  | <b>\$ 41,500</b>     | <b>\$ 35,010</b> | <b>\$ 34,200</b>         | <b>\$ -</b>  | <b>\$ 23,505</b>           |

# Appendix B

## **A. What are the major classifications on an income statement?**

The major classifications on an income statement are the following:

1) Operating section – including revenue and operating expenses such as cost of goods sold, selling, general, and administrative expenses, depreciation, and research and development expenses.

2) Non-operating section – includes other revenue or gains, other expenses or losses, finance costs, interest expense and income tax.

## **B. Explain why, under U.S. GAAP, companies are required to provide “classified” income statements.**

Companies are required to provide classified income statements, because a classified income statement is much easier for potential investors to understand, as all the information is categorized and subtotaled. This way, investors and other users can more easily assess persistent income.

## **C. In general, why might financial statement users be interested in a measure of persistent income?**

A persistent income interests users due to their recurring nature. A recurring income allows users to better understand future cash flows in order to determine stock price and whether or not to invest in the company.

## **D. Define comprehensive income and discuss how it differs from net income.**

Comprehensive income equals net income plus other comprehensive income. Other comprehensive income items are the changes in equity from non-owner sources, such as unrealized gains and losses.

## **E. The income statement reports “Sales” and “Net sales.” What is the difference? Why does Molson Coors report these two items separately?**

Net sales represent the sale of beer and other beverages net of excise taxes. Excise taxes are reported separately due to the fact that the tax received from customers is recognized as a liability until these taxes are transferred to the tax authority, so they treat these taxes as a reduction of sales.

## **F. Consider the income statement item “Special items, net” and information in Notes 1 and 8.**

### **i. In general, what types of items does Molson Coors include in this line?**

Molson Coors includes infrequent or unusual items, impairments or losses, restructuring charges, and fees on disposals. They are not indicative of their core operations.

### **ii. Explain why the company reports these on a separate line item rather than including them with another expense item.**

**Molson Coors classifies these special items as operating expenses. Do you concur with this classification? Explain.**

I concur with this classification, because these special items are a result of previous operations, whether that is with employees or joint ventures or restructuring the actual operations.

**G. Consider the income statement item “Other income (expense), net” and the information in Note 6. What is the distinction between “Other income (expense), net” which is classified a non-operating expense, and “Special items, net” which Molson Coors classifies as operating expenses?**

The “Special items, net” deals with restructuring employees and operating assets, whereas the “Other income, net” deals with non-operating assets, currency swaps, and stock swaps.

**H. Refer to the statement of comprehensive income.**

**i. What is the amount of comprehensive income in 2013? How does this amount compare to net income in 2013?**

In 2013, the comprehensive income is 760.2 million. Net income in 2013 is 567.3 million.

**ii. What accounts for the difference between net income and comprehensive income in 2013? In your own words, how are the items included in Molson Coors’ comprehensive income related?**

The differences come from foreign currency translation, gains and losses on derivative instruments, pension adjustments, amortization, and ownership shares of unconsolidated subsidiaries’ other comprehensive income. They are related because they are various types of non-operating adjustments.

**I. Identify items on Molson Coors’ income statement that you consider non-persistent. For each item, indicate whether you do not expect the item itself to recur or whether the item might recur on future income statements but at potentially very different amounts.**

- Special items, net= might recur at a very different amount
- Other income, net= might recur at a very different amount
- Income from discontinued operations= might recur at a very different amount

**J. Consider the information on income taxes, in Note 7.**

**i. What is Molson Coors’ effective tax rate in 2013?**

The effective tax rate in 2013 was 12.8 percent.

**ii. Determine a tax rate that you expect to persist for the company. Assume that Molson Coors’ domestic operations**

**will continue to be taxed at the combined statutory rate that prevailed in 2013.**

I expect the persistent tax rate for the upcoming year to be reasonable close to 14.9 percent. Foreign tax law and rate changes, unrecognized tax benefits, change in valuation allowance, and other taxes cannot reasonably be estimated until they happen, thus I do not consider these to be a part of the expected persistent tax rate. I also expect that the deferred tax benefits are not persistent and expect the true rate to be closer to the 2011 rate before many of the new benefits and deferrals were applied. The un-estimable tax rates could instead be included in a margin of safety. The persistent effective tax rate can be found in Figure 2.2.

**K. Calculate an estimate of persistent income for Molson Coors. To assist you in this, make the following assumptions: Income from disc. Operations is a nonrecurring items. "Special items, net" and "Other income (expenses), net" are nonrecurring items. Taxes on all items will be at the persistent rate you determined in part j, above. All other items are considered persistent.**

Calculation can be found in Figure 2.3.

**L. Examine Molson Coors income statements for 2013 and 2012 and the relevant notes to the financial statements.**

**i. Identify items that you consider "non-operating." Explain each item briefly.**

- Interest expense= interest due on borrowed funds
- Interest income= interest received from loaned funds
- Other income (expense), net= gains and losses from activities not directly related to the central operations of brewing and selling beer
- Income tax benefit (expense)= realization of adjustment of tax liability
- Income (loss) from discontinued operations, net of tax= income gained from sale of part of the business
- Net (income) loss attributable to non controlling interests= portion attributed to subsidiaries

**ii. Calculate the total after-tax amount of the non-operating items you identified. To simplify this calculation, assume that the company's three-year marginal tax rate of 12% applies to both years.**

See Figure 2.5.

**iii. Calculate net operating profit after tax for 2013 and 2012.**

See Figure 2.6.

**M. Examine Molson Coors balance sheets 2013 and 2012. Footnotes to the financial statements reveal that the notes receivable relate to loans made to customers.**

**i. Identify assets and liabilities that you consider “nonoperating.” Explain each item briefly.**

- Notes receivables (current and non-current)= loans made to customers
- Derivative hedging instruments (current and long-term)= properties derived from options from stocks and bonds that are traded in markets
- Short-term and long-term debt and borrowings= funds used to finance the company
- Short-term and long-term discontinued operations= gains or losses derived from ending or selling certain portions of the company

**ii. Calculate net operating assets for 2013 and 2012.**

See Figure 2.7.

**N. Calculate Molson Coors’ return on net operating assets (RNOA) for 2013 and 2012. Compare the two returns.**

See Figure 2.8. RNOA for 2013 is higher than RNOA for 2012.

**O. Compute the operating profit margin and net operating asset turnover components of Molson Coors’ RNOA for 2013 and 2012. Use the components to explain the change in RNOA from 2013 to 2012.**

See Figure 2.8. According to the operating profit margin, less income in 2013 came from operations than in 2012. However, the company generated more sales from its operating assets in 2013 than 2012.

**P. Recalculate Molson Coors’ RNOA for 2013, using the persistent income numbers from part *k*, above. Compare the RNOA to the one you calculated with the reported income statement numbers in part *l*, above. Which RNOA is a better predictor of future profitability?**

See Figure 2.8. The better predictor of future profitability is the RNOA calculated using the persistent income numbers.

# Appendix C

**A. What information does the statement of cash flows provide? How is this different from the information contained in the income statement?**

The statement of cash flows provides information on the cash receipts and cash payments of a certain period of time. The key factor being that all transactions were on a cash basis. On the other hand, the income statement contains information about the revenues, expenses, gains, and losses of a certain period. These items may or may not be on a cash basis (for example, depreciation expense).

**B. What are the two different methods for preparing the statement of cash flows? Which method does Golden Enterprises use? How do you know? Why do you think most companies prepare their statement of cash flows using the indirect method?**

The two different methods for preparing the statement of cash flows are the direct and indirect methods. Golden Enterprises uses the indirect method. I know this because their statement of cash flows begins with net income. I believe most companies use the indirect method, because most companies use accrual-basis accounting. Therefore, companies would have to reconcile net income to cash basis making the indirect method the less complex choice.

**C. What are the three sections of the statement of cash flows?**

The three sections of the statement of cash flows are the operating section, the investment section, and the financing section.

**D. How do each of the three sections of the statement of cash flows relate to the balance sheet?**

The operating section deals with changes in current assets and current liabilities. The accounts involved include accounts payable, accounts receivable, unearned revenues, and prepaid expenses. The investment section deals with changes in property, plant, and equipment and other long-term investments. Lastly, the financing section deals with long-term liabilities (bonds payable and long-term notes payable) as well as stock, dividends, and retained earnings.

**E. The balance sheet includes an item called “Cash and cash equivalents.” What are “cash equivalents”?**

Cash equivalents are current assets that will be converted to cash within ninety days.

**F. Net income is determined on an accrual basis. Yet, net income is the first item on the statement of cash flows. Explain this apparent inconsistency.**

Net income is the first item on the statement of cash flows under the indirect method. This may seem consistent, however, this method allows a company to show the reconciliation of net income to a cash basis. The reconciliation gives net income provided by operations.

**G. Construct the 2013 statement of cash flows for Golden Enterprises using the indirect method.**

Shown in Figure 3.3.

**H. Depreciation and amortization are added back to net income in the operating section of the statement of cash flows. Does depreciation expense actually generate cash for Golden Enterprises?**

Depreciation expense does not actually generate cash for Golden Enterprises. However, it must be added in order to reconcile the accrual-based net income, since depreciation expense was not a cash expense.

**I. Use the 2013 statement of cash flows you constructed and the statements of income for 2012 and 2013 to evaluate Golden Enterprises' profitability and ability to generate cash. Comment on the nature of the differences between net income and cash from operations in each year.**

This can be found in the "Reconciliation" section of this chapter.

**J. Refer to the company's statements of cash flows for 2012 and 2013. Has Golden Enterprises maintained its productive capacity, expanded it, or decreased it over the last three years? Explain.**

Golden Enterprises has expanded its productive capacity in the past three years. This is evident in the purchases of property plant and equipment in the subsequent years. The purchase amounts are listed on the statement of cash flows. However, just because Golden Enterprises has expanded its capacity does not mean it is using this capacity to the fullest. This should be taken into account when further analyzing the company.

**K. In the Management discussion and analysis section of Golden Enterprises' 2013 Form 10-K, the company indicates that it expects to spend approximately \$5,000,000 on property, plant and equipment in fiscal 2014—a greater than 20% increase in capital expenditures over that in fiscal 2013.**

**Discuss Golden Enterprises' capacity for making these capital expenditures. What are the likely sources of cash to fund the increased level of investment in property and equipment?**

The likely sources of cash come from the company's operating activities.

# Appendix D

**A. What is an account receivable? What other names does this asset go by?**

An account receivable is an oral agreement from a customer to an entity to repay the cost of goods or services rendered. Other names include trade receivables and nontrade receivables. Account receivables can also be current or noncurrent.

**B. How do accounts receivable differ from notes receivable?**

Account receivables are oral promises that arise from a company's credit sales. On the other hand, notes receivable are written promissory notes from the borrower to repay the lender a certain amount of money and usually include interest.

**C. What is a contra account? What two contra accounts are associated with Pearson's trade receivables (see Note 22)? What types of activities are captured in each of these contra accounts? Describe factors that managers might consider when deciding how to estimate the balance in each of these contra accounts.**

A contra asset account is an account with a normal credit balance that offsets an asset account. The two associated with Pearson are provisions for bad and doubtful debts and anticipated future sales returns. The provision for bad and doubtful debts is associated with customers failing to pay for the goods or services. Anticipated future sales returns are an estimate of the amount of goods that customers will return to the company. For the first account, managers may consider using a percentage-of-sales approach, a percentage-of-gross-receivables approach, or an aging balance approach. For the second account, they could also use the percentage-of sales as well as other underlying factors such as product issues to help better estimate this account.

**D. Two commonly used approaches for estimating uncollectible accounts receivable are the percentage-of-sales procedure and the aging-of-accounts procedure. Briefly describe these two approaches. What information do managers need to determine the activity and final account balance under each approach? Which of the two approaches do you think results in a more accurate estimate of net accounts receivable?**

For percentage-of-sales, the company multiplies the net sales by a certain percentage that the company finds from past data, etc. and this amount is the provision given for uncollectible accounts. This procedure is also called the income statement procedure. Aging of accounts uses a certain percentage for accounts of different ages. Usually, the older the account receivable, the higher the percentage used to estimate uncollectible accounts receivable. Under the first approach, managers need to know the net sales as well as the



single percentage that will be used. Under the second approach, the managers need to know the age of all accounts receivables, the age group divisions, and the percentages used for each age group. The aging-of-accounts procedure provides a more accurate estimate.

**E. If Pearson anticipates that some accounts will be uncollectible, why did the company extend credit to those customers in the first place? Discuss the risks that managers must consider with respect to accounts receivable.**

Usually, a company never knows which specific accounts will be uncollectible. Also, if the company were to not offer credit, it would create a poor relationship with a potential customer. This customer could then entice other customers in to no longer purchasing anything from your company. The obvious risks to consider would not only be the loss of customers if the company were to not offer credit but also a loss associated with bad debt. The other risk that must be considered is sales that are returned before money has been collected and ensuring that customers are not paid back multiple times.

**F. Note 22 reports the balance in Pearson's provision for bad and doubtful debts (for trade receivables) and reports the account activity ("movements") during the year ended December 31, 2009. Note that Pearson refers to the trade receivables contra account as a "provision." Under U.S. GAAP, the receivables contra account is typically referred to as an "allowance" while the term provision is used to describe the current-period income statement charge for uncollectible accounts (also known as bad debt expense).**

**i. Use the information in Note 22 to complete a T-account that shows the activity in the provision for bad and doubtful debts account during the year. Explain, in your own words, the line items that reconcile the change in account during 2009.**

See Table 1. Exchange differences arise from the difference in the date of sale and the date the receivables are collected. Since inflation rates vary on a daily basis, the amount varies as a gain or loss from the inflation rate. Income statements movements are the actual expenses listed on the income statement, otherwise the bad and doubtful debts expense for 2009. The utilized figure comes from the receivables that have been written off. Lastly, the company experienced a loss on their business combination. So, whatever receivables came from the acquiree caused a loss.

**ii. Prepare the journal entries that Pearson recorded during 2009 to capture 1) bad and doubtful debts expense for 2009 and 2) the write-off of accounts receivable during 2009. For each account in your journal entries, note whether the account is a balance sheet or income statement account.**

See Table 1. Gain on exchange, Bad and doubtful debt expense, and the Loss on acquisition through business combination are income statement accounts. Provision for bad and doubtful debts and Trade receivables are balance sheet accounts.

**iii. Where in the income statement is the provision for bad and doubtful expense included?**

This is found in the operating expenses section of the income statement.

**G. Note 22 reports that the balance in Pearson's provision for sales returns was £372 at December 31, 2008, and £354 at December 31, 2009. Under U.S. GAAP, this contra account is typically referred to as an "allowance" and reflects the company's anticipated sales returns.**

**i. Complete a T-account that shows the activity in the provision for sales returns account during the year. Assume that Pearson estimated that returns relating to 2009 Sales to be £425 million. In reconciling the change in the account, two types of journal entries are required, one to record the estimated sales returns for the period and one to record the amount of actual book returns.**

See Table 2.

**ii. Prepare the journal entries that Pearson recorded during 2009 to capture, 1) the 2009 estimated sales and returns and 2) the amount of actual book returns during 2009. In your answer, note whether each account in the journal entries is a balance sheet or income statement account.**

See Table 2. Sales returns and allowance is an income statement account. Provision for sales returns and Trade receivables are balance sheet accounts.

**iii. In which income statement line item does the amount of 2009 estimated sales returns appear?**

If the company does not include this as a contra sales account and report net sales on the income statement, then this account will be an operating expense.

**H. Create a T-account for total or gross trade receivables (that is, trade receivables before deducting the provision for bad and doubtful debts and the provision for sales returns). Analyze the change in this T-account between December 31, 2008 and 2009. Assume that all sales in 2009 were on account. That is, they are all "credit sales." You may also assume that there were no changes to the account due to business combinations or foreign exchange rate changes. Prepare the journal entries to record the sales on account and accounts receivable collection activity in this account during the year.**

See Table 3.

- I. Note 22 reports information about the number of days Pearson's trade receivables have been outstanding relative to their due date. Assume that Pearson's auditor analyzed historical collection information to estimate the percentage of uncollectible accounts by age category and reported the estimates in the table below. Use these percentages and the trade receivable aging information provided in Note 22 to estimate uncollectible accounts at December 31, 2009, and complete the table. Based on your estimate, would the auditor be comfortable that the balance of the provision for bad and doubtful debt account reported in Note 22 was adequate?**

See Table 4. Based on my estimate, the auditor would be comfortable with the provision reported in Note 22. The difference between the two amounts is immaterial, therefore there is no reason for this estimate to be changed based on this calculation.

- J. Analysts typically evaluate the time it takes for a company to collect its average account receivables balance. Once common metric, accounts receivable turnover, is computed as net credit sales divided by average gross accounts receivable.**

**This ratio reveals how many times receivables "turn over" or are collected during the period. A higher number of turnovers indicates faster collections. Another common, more intuitive metric is the average collection period in days, which is easily computed from the accounts receivable turnover ratio. Average collection period in days equals 365 divided by accounts receivable turnover.**

**Use the table below to compute the average collection period for Pearson for 2009 and 2008. You may assume that all sales are made on account (that is, all sales are credit sales). At December 31, 2007, Pearson's total (gross) trade receivables were £1,091 million. Comment on the trend you observe. Provide possible reasons for any change in average collection period from 2008 to 2009.**

See Table 5. In the past two years, Credit sales have increased, however the average gross trade receivables have decreased. This lead to an increased accounts receivable turnover ratio and a decreased average collection period.

- K. Pearson's Chief Financial Officer was assessing Pearson's efficiency in collecting trade receivables by comparing is average collection period with McGraw Hill Publishing, a close competitor to Pearson with a similar business model. He found that McGraw Hill's average collection period was 79.0 days for 2009 and**

**decided to evaluate how Pearson might reduce its average collection period to align more with that of its peer. What actions might he implement to reduce Pearson's average collection period?**

The company could implement more diligent credit research to better estimate these expenses and offer better incentives to pay cash on time. They could also improve their follow-up action with these receivables. If these do not work, the company could charge interest on any payments that are overdue. This way, they discourage late payments.

# Appendix E

## **A. What are the key changes affecting GAC this year?**

The key changes affecting GAC are altering the look of the graphic shirts, changing the customer base, securing more custom orders, and shifting from equity financing to debt financing.

### **i. Who owns GAC?**

As of January 2014, Nicki owns GAC.

### **ii. Who uses GAC's financial statements?**

Originally, the IRS was the only user of the financial statements. However, due to the shift in financing, the bank is now a user of the financial statement.

### **iii. What is significant about GAC's business relationship with its new user?**

It is significant, because the bank is the lender and requires a minimum current ratio of 1.0. If GAC does not meet this, the bank could require an external audit of the company.

## **B. What are the big events to account for in 2014?**

The big events to account for are the different changes Nicki has made this year to ensure the financial statements are correct.

### **i. How is the custom shirt business working out?**

The custom shirt business is increasing under Nicki's watch.

### **ii. What do we know about GAC's customer base?**

The customer base has shifted from the longstanding, reliable conservative retailers to new start-up clothing stores.

### **iii. How is the new graphic design working out?**

The new graphic design seems to be catching on with bloggers and fashion critics, however the items do not appear to be selling in the local department store.

### **iv. What happened at the warehouse this year?**

This year, Nicki discovered that the roof was leaking but was easily repaired at little cost with no actual damage to the building.

## **C. What is the revenue principle? At what point does GAAP indicate revenue should be recognized?**

The revenue principle is how revenue should be recognized. According to the policies, GAC should record revenue at the point when it is earned (when all requirements have been met—such as making the t-shirts).

## **D. When does GAC report its revenue from custom orders? Under what circumstances would this be appropriate?**

For a custom order, GAC should report its revenue when a signed order and payment is received from a customer. This would only be appropriate if the shirts were already made.

**E. What alternative point in time exists for reporting revenue from custom orders?**

An alternative for reporting revenue would be when the service is fulfilled, such as when the T-shirts are completed, rather than when cash is received.

**F. What method do you think is best for recognizing revenue from custom shirts? What arguments support that method?**

For recognizing revenue from custom shirts, I believe the best method is to report this revenue when GAC completes the shirts made for the custom order.

**G. How would changing to this alternative method affect GAC's financial statements? How would changing to this alternative method affect GAC's current ratio?**

It would increase current liabilities and decrease owner's equity. This would lower the current ratio. See Table 3.

**H. At what value does GAAP require accounts receivable to be reported?**

It requires accounts receivable to be reported at net realizable value.

**I. What method of accounting for bad debts does GAC use? When is this method okay?**

They use the direct write-off method. This method is only used in very special circumstances or with immaterial amounts but is not an acceptable method to use.

**J. Has anything changed this year to suggest this approach is no longer acceptable? What do you learn from the number of days to collect receivables in 2014 versus 2013?**

Her customer base has changed and is less reliable, and she keeps shifting her product line as well, so there is no actual amount she will collect. The Accounts receivable turnover would increase from 2013 to 2014. See Table 5.

**K. What alternative method could GAC use for bad debts? Does any evidence suggest it is better?**

The alternative method for bad debts is the allowance method. Yes, this is better, because it would state the receivables at net realizable value. Also, Nicki estimates not collecting a certain amount of receivables, which would become the allowance account. The direct write-off method does not use estimations or an allowance account.

**L. What method of accounting for bad debts do you think GAC should use?**

GAC should use the allowance method for bad debts.

**M. How would changing to this alternative method affect GAC's financial statements? How would changing to this alternative method affect GAC's current ratio?**

This alternative method would decrease current assets and decrease equity. Therefore, this would decrease the current ratio. See Table 3.

**N. When does GAC report sales returns? Under what circumstances is that method acceptable?**

Sales returns are reported in the month that retail customers return goods. This is only acceptable if the amounts returned are considered immaterial.

**O. Have circumstances surrounding returns changed in 2014? How?**

The inventory in the retail stores is not selling quickly and being placed on clearance racks or even taken off the shelves. Some of these shirts even have water damage. Thus, higher returns are expected.

**P. What does GAAP recommend under these new circumstances?**

GAAP recommends that the returns be estimated.

**Q. Should GAC consider this alternative? Why? Are sales returns material to the key external user?**

Yes, GAC should consider this alternative because of the expected returns from the water-damaged inventory. Yes, they are key; expected returns reduce sales and lower current assets.

**R. Which method of accounting for sales do you think is best?**

I believe the estimate method is best rather than recording them as they happen.

**S. How would changing to this alternative method affect GAC's financial statements? How would changing to this alternative method affect GAC's current ratio?**

This alternative method would lower current assets as well as lower equity. Therefore, this would also decrease the current ratio. See Table 3.

**T. Using what measurement does GAAP require inventory to be reported?**

GAAP requires inventory to be reported at lower-of-cost-or-market.

**U. Using what measurement has GAC been reporting its inventory? When is this appropriate?**

They use lower-of-cost-or-market and determine their cost using the weighted average cost method.

**V. Has anything changed this year to suggest this approach is no longer acceptable? What do you learn from the number of days to sell inventory in 2014 versus 2013?**

This year, Nicki purchased a different kind of inventory that is probably more expensive than previous years. From the days to sell inventory, we learn that the inventory is taking longer to sell than previously.

**W. Is there any evidence to suggest that GAC will have to mark down its selling price below cost? What does the gross profit percentage in 2014 indicate about the margin of difference between selling price and cost?**

The gross profit percentage has decreased which shows the cost of the goods is increasing compared to their prices. However, the shirts used are damaged, thus the selling price should not be as high as it is, especially for the remaining inventory.

**X. What do you think GAC should do when reporting its inventory of graphic shirts?**

When reporting the inventory of the graphic shirts, these items should have a loss from impairment due to the water damages. The company typically sells any remaining graphic shirts to a discount store for half the original cost. So, we can reasonable expect the impairment to be at least half the cost of the remaining inventory.

**Y. How would changing to the alternative method affect GAC's financial statements? How would changing to this alternative method affect GAC's current ratio?**

Since the inventory is overstated, then changing would decreases current assets, which decreases the current ratio. See Table 3.

**Z. If all the proposed changes were made, how would GAC's current ratio change?**

If all the proposed changes were made, the current ratio would decrease and fall below the lender's required current ratio.

**AA. How much additional equity would Nicki need to contribute to return GAC to a current ratio of 1.0?**

In order to return to a current ratio of 1.0, GAC would need additional capital of \$12,980.

**BB. What next steps would you recommend for Nicki?**

I would recommend that Nicki return to the previous method for doing business. She may want to launch a new career in fashion, however the graphic design shirt business is obviously not the best choice, especially given her current location and customers. She should return to the previous graphic shirt style, however, Nicki could still try to be creative when it comes



to custom orders. Rather than making custom orders for sport teams, she could make custom orders using the leftover plain shirts purchased in 2014. If Nicki does not make any changes, this business will more than likely declare bankruptcy, as GAC will be unable to pay the interest on the new debt financing.

# Appendix F

## A. Part I: Planes

- i. **Why would these three companies depreciate the same equipment using different useful lives? Describe at least two possible explanations.**

The first reason would be for tax purposes. If a company were more concerned with paying lower taxes, they would want to increase their expenses. The second reason would be the historical use of the equipment with the certain airline. Some companies are known for using equipment for long periods of time, whereas other companies are known for keeping a luxurious image. Therefore, useful life would become part of their business model.

- ii. **Which set of sales prices (I or II) do you think is more realistic? Why?**

I believe that Price I is the more realistic of the two. While it may seem to make sense that planes that are the same model and the same age may sell for the exact same price, this leaves out various factors that greatly affect the price. First, the company owning the plane affects the resale value. This is because certain companies modify their planes in certain ways. Delta and United, for example, both have options where passengers can purchase extra legroom. Many of their planes have “comfort” options as well as TV screens in front of every seat. Northwest may not have these same luxuries. Therefore, these additional modifications would increase the resale price of the plane.

## B. Part II: Garbage

- i. **Read the SEC complaint against Waste Management, Inc. and the settlement with Arthur Andersen LLP at the following websites:**

<http://www.sec.gov/litigation/complaints/complr17435.htm>

<http://www.sec.gov/news/healines/andersenfraud.htm>

- ii. **Summarize the charges against Waste Management**

Charges against Waste Management include falsifying earnings and other financial performance measures by concealing the realities of operations. Their statements failed to record expenses, established inflated reserves, improperly capitalized expenses, and failed to reserve money for income tax. They authorized these misleading financial statements, and when the scheme was uncovered, it resulted in certain shareholders' loss of over \$6 billion.

- iii. **How did management use depreciation expense to manage earnings?**

They deferred the reporting of depreciation expense. They did this by increasing the salvage value over time as well as increasing the useful life. This, in turn, decreased the amount of depreciation expense to be reported.

**iv. Why do you think the managers of Waste Management wanted to manage earnings?**

They wanted to increase the revenue in order to meet a predetermined target that would allow them to keep their top positions, gain substantial performance-based bonuses, and even enhance retirement benefits.

**v. What was Arthur Andersen's role in the Waste Management case? What were the terms of its settlement with the SEC? Did Andersen abide by the terms of the settlement?**

Arthur Andersen aided Waste Management in their fraud. They issued unqualified audit reports on the falsified annual financial statements. Also, the company accepted "special fees" to present Proposed Adjusting Journal Entries in order to correct the errors, which were subsequently written off over periods of up to ten years. Arthur Andersen's suggested constituted as agreement to cover up past frauds using future frauds.

Arthur Andersen agreed to its first antifraud injunction in more than 20 years that amounted to \$7 million, and it also agreed to be censured under the SEC's rules of practice. However, in the future, Arthur Andersen did not learn from this mistake. The company learned that it could generate exponential revenues by overlapping auditing and consulting—a practice no longer allowed thanks to big scandals. Andersen not only aided Waste Management in fraud but also aided WorldCom and Enron in their frauds. Andersen abided by its own, newly acquired standard of generating as much revenue as possible rather than following its founder's standard of remaining ethical in the industry.

## Appendix G

**A. In 2007, at the time of the purchase, should Construct record a liability for environmental liabilities? If so, how much?**

Under US GAAP and IFRS, no liability should be recorded.

**B. In 2008, should the company record any liability due to BigMix filing for Chapter 11? If so, how much?**

Under US GAAP and IFRS, no liability should be recorded.

**C. In 2009, should the company record any liability for the potential environmental liability? If so, how much?**

According to US GAAP, a disclosure should be made for the \$250,000. According to IFRS, an accrual should be made for the \$250,000.

**D. In 2010, should the company record any liability for the potential environmental remediation? If so, how much?**

According to US GAAP and IFRS, the company should record a liability for \$400,000.

**E. In 2011, should the company record any additional liability for the potential environmental remediation?**

According to US GAAP and IFRS, the company should record the liability for the additional \$1.5 million.

**F. In 2012, should the company record any gain contingency/contingent asset for the potential settlement?**

According to US GAAP and IFRS, the gain of \$1 million should be disclosed but not reported.

# Appendix H

## A. Consider the various types of debt described in note 11, Indebtedness and Credit Agreement.

- i. **Explain the difference between Rite Aid's secured and unsecured debt. Why does Rite Aid distinguish between these two types of debt?**

Secured debt is debt backed by various assets or "securities," for example a mortgage on a house. Secured debt usually has lower interest rates. Unsecured debt does not require anything to be held relies solely on creditworthiness and the borrower's promise to repay the amount. Rite Aid distinguishes between the two types in order to show investors and lenders that they will be able to make payments on time.

- ii. **What does it mean for debt to be "guaranteed?" According to note 11, who has provided the guarantee for some of Rite Aid's unsecured debt?**

A guarantee debt is an agreement under which, if one party defaults, another party will pay the debt. The Rite Aid corporate parent guarantees the debt.

- iii. **What is meant by the terms "senior," "fixed-rate," and "convertible?"**

Senior means first in line to get money back if the company fails. Fixed-rate means that the interest rate of the loan stays the same over its life. Convertible debt means that the debt can potentially be converted into an equity investment.

- iv. **Speculate as to why Rite Aid has many different types of debt with a range of interest rates.**

Rite Aid has different types of debt in order to decrease the likelihood of failing. If many types of debt are involved, the company can better control its risk rating and various financial ratios.

## B. Consider note 11, Indebtedness and Credit Agreement. How much total debt does Rite Aid have at February 27, 2010? How much of this is due within the coming fiscal year? Reconcile the total debt reported in note 11 with what Rite Aid reports on its balance sheet.

Total debt equals \$6,370,899. The amount due within the next fiscal year equals \$51,502. See Figure 8.1.

## C. Consider the 7.5% senior secured notes due March 2017.

- i. **What is the face value (i.e. the principal of these notes)? How do you know?**

The face value is \$500,000. We know because it doesn't include interest payments thus no discounts or premiums. We see this in the fact that the carrying value stays the same on the balance sheet from the previous year.

- ii. **Prepare the journal entry that Rite Aid must have made when these notes were issued.**

See Figure 8.2.

- iii. **Prepare the annual interest expense journal entry. Note that the interest paid on a note during the year equals the face value of the note times the stated rate (i.e., coupon rate) of the note.**

See Figure 8.2.

- iv. **Prepare the journal entry that Rite Aid will make when these notes mature in 2017.**

See Figure 8.2.

- D. **Consider the 9.375% senior notes due December 2015. Assume that interest is paid annually.**

- i. **What is the face value (or principal) of these notes? What is the carrying value (net book value) of these notes at February 27, 2010? Why do the two values differ?**

The face value is \$410,000. The carrying value is \$405,951. The difference is due to the fact that there is an unamortized discount of \$4,049.

- ii. **How much interest did Rite Aid pay on these notes during the fiscal 2009?**

The cash paid equals \$38,438.

- iii. **Determine the total amount of interest expense recorded by Rite Aid on these notes for the year ended February 27, 2010. Note that there is a cash and a noncash portion to interest expense on these notes because they were issued at a discount. The noncash portion of interest expense is the amortization of the discount during the year (that is, the amount by which the discount decreased during the year).**

Total amount equals \$39,143.

- iv. **Prepare the journal entry to record interest expense on these notes for fiscal 2009. Consider both the cash and discount (noncash) portions of the interest expense from part *iii* above.**

See Figure 8.3.

- v. **Compute the total interest rate of interest recorded for fiscal 2009 on these notes.**

See Figure 8.4.

- E. **Consider the 9.75% notes due June 2016. Assume that Rite Aid issued these notes on June 30, 2009 and that the company pays interest on June 30<sup>th</sup> of each year.**

- i. **According to note 11, the proceeds of the notes at the time of issue were 98.2% of the face value of the notes. Prepare the journal entry that Rite Aid must have made when these notes were issued.**

- See Figure 8.5.
- ii. **At what effective annual rate of interest were these notes issued?**  
Effective interest rate equals 10.1212%. See Figure 8.6.
- iii. **Assume that Rite Aid uses the effective interest rate method to account for this debt. Use the table to prepare an amortization schedule for these notes. Use the last column to verify that each year's interest expense reflects the same interest *rate* even though the *expense* changes.**  
See Figure 8.7.

- iv. **Based on the above information, prepare the journal entry that Rite Aid would have recorded February 27, 2010, to accrue interest expense on these notes.**

See Figure 8.8.

- v. **Based on your answer to part iv, what would be the net book value of the notes at February 27, 2010.**

The book value would be \$403,137. Found by taking the face value of \$410,000 and subtracting the unamortized discount of \$6,863. The unamortized discount was found by taking the beginning unamortized discount of \$7,380 and subtracting the \$775 from Figure 8.7.

- vi. **Your answer to part v will be different from the amount that Rite Aid reported because the company used the straight-line method to amortize the discount on these notes instead of the effective interest rate method. Complete the following table using the straight-line method to amortize the bond discounts. Use the last column in the table to record the interest rate each year. Under this method, does Rite Aid report the same interest *rate* on these notes each year?**

See Figure 8.9. Rite Aid will report different effective interest rates each year since the interest expense remains the same, but the carrying value changes.

- vii. **Compare the year-by-year difference in interest expense derived from each method. What pattern do you observe? Is the difference material in any year?**

See Figure 8.10. Year-by-year, the difference increases each year, however the amount is still immaterial in each year, which is why Rite Aid uses straight line rather than effective interest method.

- F. **Suppose that Rite Aid engages in an open-market debt transaction during year fiscal 2010 to repurchase the 9.5% senior notes due June 2017. Assume that Rite Aid paid \$797,769 to repurchase the notes, which resulted in a gain of \$3,750.**

- i. **Prepare the journal entry record the repurchase of these notes.**

See Figure 8.11.

**ii. Why did Rite Aid not have to pay the face value to repurchase these notes on the open market?**

Rite Aid did not have to pay the face value, because the note was not fully amortized and not currently worth the entire face amount.

**iii. Is the market rate of interest at the time of the repurchase higher or lower than the 9.5% coupon rate on the notes? Is it higher or lower than the effective rate?**

The market rate of interest is higher than the coupon rate. We also know the market rate is higher than the effective rate, because the sale results in a gain. The gain results from the fact that the loan has lost value due to increased market rates or increased risk of Rite Aid.

**G. Consider the 8.5% convertible notes due May 2015. Why do firms issue convertible notes? Why do investors buy such notes? How would Rite Aid's balance sheet be affected if these notes were converted?**

Firms use convertible notes to raise money. They can offer the bond at a lower coupon rate and attract investors that may not otherwise be interested. Interest is peaked because convertible bonds give you the option to convert to stocks. If converted, the firm would reduce a liability and increase equity on the balance sheet for the amount converted.

**H. Assume that you are a credit analyst and would like to compare Rite Aid's leverage and solvency to other firms in the Retail Pharmaceutical industry.**

**i. Calculate each of the ratios in the table for Rite Aid for the years ending February 27, 2010, and February 28, 2009.**

See Figure 8.12.

**ii. How does Rite Aid compare to the industry?**

In every category, Rite Aid was much different than the industry average. This is not considered a good thing, as it shows Rite Aid is not keeping up in its market.

**iii. As a credit analysis, what conclusion would you reach about Rite Aid's ability to meet its long-term commitments as they come due?**

I would conclude that Rite Aid will not be able to meet its long-term commitments as they come due.

**I. Using the Standard and Poor's scale below and the information analyzed in part 8, describe the credit rating that you would provide for Rite Aid as of the end of fiscal 2009. Discuss the factors that influence your opinion.**

I would provide a credit rating of CCC. Rite Aid's future is vulnerable and depends on favorable business in order to meet its financial commitments. We know Rite Aid has great financial commitments in the future due to analyzing the ratios from part H.



# Appendix I

## A. Consider Merck's Common shares.

### i. How many common shares in Merck authorized to issue?

Merck is authorized to issue 5,400,000,000 shares of common stock.

### ii. How many common shares has Merck actually issued at December 31, 2007?

On December 31, 2007, Merck has actually issued 2,983,508,675 shares.

### iii. Reconcile the number of shares issued at December 31, 2007, to the dollar value of common stock reported on the balance sheet.

The shares has a par value of one cent, therefore the dollar value of common stock is less than the actual number of shares issued.

### iv. How many common shares are held in treasury at December 31, 2007?

On December 31, 2007, Merck has 811,005,791 shares in treasury stock.

### v. How many common shares are outstanding at December 31, 2007?

There are 2,172,502,884 shares outstanding on December 31, 2007.

### vi. At December 31, 2007, Merck's stock price closed at \$57.61 per share. Calculate the total market capitalization of Merck on that day.

The total market capitalization for Merck on December 31, 2007, is \$125,157,891,147. This is found by multiplying market price per share by the number of shares outstanding.

## B. Consider GlaxoSmithKline's ordinary shares.

### i. How many ordinary shares is GlaxoSmithKline authorized to issue?

GlaxoSmithKline (GSK) is authorized to issue 10,000,000,000 shares.

### ii. How many ordinary shares has GlaxoSmithKline actually issued at December 31, 2007?

GSK has actually issued 6,012,587,026 shares at December 31, 2007.

### iii. How many ordinary shares are in free issue at December 31, 2007?

There are 5,373,862,962 shares in free issue on December 31, 2007.

### iv. Explain the difference between "Share capital" and the "Share premium account" reported on GlaxoSmithKline's balance sheet. What does Merck call these types of accounts on their U.S. GAAP balance sheet?

Share capital is capital stock, which includes commons tock as well as preferred stock. Share premium is like other paid-in capital, which is the money contributed above par value.

**C. Why do companies pay dividends on their common or ordinary shares? What normally happens to a company's share price when dividends are paid?**

Dividends attract investors because they help show investors know that a company is financially stable. The investors are able to receive a return on their investment if the company is profitable. Usually, when dividends are paid, the share price decreases by the amount of the dividend. Stock price is the expected value of all future dividends, so the stock price goes down as dividends are paid.

**D. In general, why do companies repurchase their own shares?**

Generally, companies repurchase their own shares to prevent a buyout by another company if share price falls too low. Companies also buy back shares to increase the earnings per share ratio and the return on equity ratio.

**E. Consider Merck's statement of cash flow and statement of retained earnings. Prepare a single journal entry that summarizes Merck's common dividend activity for 2007.**

See Figure 9.1.

**F. During 2007, GlaxoSmithKline paid ordinary dividends to shareholders.**

- i. Use information in the statement of cash flow (financing activities) to prepare a single journal entry that summarizes GlaxoSmithKline's ordinary dividends to shareholders for 2007.**

See Figure 9.2.

- ii. Note 16 Dividends reports total dividends declared of £2,905 for 2007. Reconcile this to the dividends recorded in the statement of cash flows.**

According to Note 16, GSK pays dividends two quarters after the quarter to which it relates and one quarter after it is declared. Therefore, adding the third and fourth interim dividends for 2006 and the first and second interim dividends gives the actual cash paid for dividends for 2007.

**G. During 2007, Merck repurchased a number of its own common shares on the open market.**

- i. Describe the method Merck used to account for its treasury stock transactions.**

Merck uses the cost method to account for treasury stock transactions. For the cost method, the company makes all entries to the Treasury Stock account at original repurchase cost. Also, under the cost method, the treasury stock account is listed beneath the total contributed capital and retained earnings accounts.

- ii. **Refer to note 11 to Merck's financial statements. How many shares did Merck repurchase on the open market during 2007?**

In 2007, Merck repurchased 26.5 million shares on the open market.

- iii. **How much did Merck pay, in total and per share, on average, to buy back its stock during 2007? What type of cash flow does this represent?**

In total, Merck paid 1,429.7 million to repurchase stock in 2007. Per share, Merck paid \$53.95 to buy back stock in 2007. This cash flow represents a financing activity.

- iv. **Why doesn't Merck disclose its treasury stock as an asset?**

Treasury stock is a contra-equity account. It is a contra-equity account, because treasury stock causes a disparity between the number of shares issued and number of shares outstanding.

**H. During 2007, GlaxoSmithKline repurchased a number of its own shares on the open market.**

- i. **Refer to Note 33 of GlaxoSmithKline's annual report. How many shares did GlaxoSmithKline repurchase on the open market during 2007? Were all of these shares held in treasury?**

During 2007, GSK repurchased 285 million shares on the open market. Of these shares, 269 million were held in treasury stock, but 16 million shares were cancelled.

- ii. **How much did the company pay, on average, for each share purchased during 2007?**

On average, the company paid £13.16 for each share purchased during 2007.

- iii. **Consider note 34 Movements in equity. What is the name of the comparable financial statement required under U.S. GAAP? Prepare a single journal entry that summarizes GlaxoSmithKline's share repurchases in 2007. How does this compare to the U.S. GAAP treatment?**

Under U.S. GAAP, the comparable financial statement is the Statement of Stockholders' Equity. See Figure 9.3. This differs from GAAP in that IFRS does not distinguish between the stock repurchased and held in treasury stock and the stock repurchased for cancellation.

**I. Determine the missing amounts and calculate the ratios in the tables below. For comparability, use dividends paid for both companies rather than dividends declared. Use the number of shares outstanding at year-end for per-share calculations. What differences to you observe in Merck's dividend-related ratios across the two years? What differences do you observe in the two companies' dividend-related ratios?**

See Figure 9.4 and 9.5. Across the two years, all of Merck's ratios, except for dividend payout, have decreased. Overall, Merck's ratios are higher. The one exception to this is the dividends to total assets ratio, where GSK's ratio is higher than Merck's in both years.

## Appendix J

### A. Consider trading securities. Note that financial institutions such as State Street typically call these securities “Trading account assets.”

#### i. In general, what are trading securities?

Trading securities are both debt and equity securities that a company holds for a short amount of time. They are reported at fair market value. The company expects these securities to generate a profit.

#### ii. How would a company record \$1 of dividends or interest received from trading securities?

The company would debit cash and credit the dividend income or interest income account. These would be part of net income.

#### iii. If the market value of trading securities increased by \$1 during the reporting period, what journal entry would the company record?

The company would debit the trading securities account and credit an unrealized gain. The unrealized gain would be part of the consolidated statement of income.

### B. Consider securities available-for-sale. Note that State Street calls these, “Investment securities available for sale.”

#### i. In general, what are securities available-for-sale?

An available-for-sale security is a debt or equity security that is purchased to sell before they reach maturity. They are reported at fair market value.

#### ii. How would a company record \$1 of dividends or interest received from securities available-for-sale?

The company would debit the cash account and credit dividend income.

#### iii. If the market value of securities available-for-sale increased by \$1 during the reporting period, what journal entry would the company record?

They would credit an unrealized holding gain that would go to accumulated other comprehensive income on the balance sheet and debit the security available-for-sale to increase its value. Realized gains and losses would go on the consolidated statement of income.

### C. Consider securities held-to-maturity. Note that State Street calls these, “Investment securities held to maturity.”

#### i. In general, what are these securities? Why are equity securities never classified as held-to-maturity?

These are debt securities, like bonds, which the company holds until the maturity date. They are held at cost, adjusted for the amortization of premiums and accretion of discounts. Equity securities have no maturity date, so they cannot be classified as held-to-maturity.

- ii. **If the market value of securities held-to-maturity increased by \$1 during the reporting period, what journal entry would the company record?**

Any changes in market value for these securities are ignored.

**D. Consider the “Trading account assets” on State Street’s balance sheet.**

- i. **What is the balance of this account on December 31, 2012? What is the market value of these securities on that date?**

The balance of this account is \$637 million, which is the fair value on that date.

- ii. **Assume that the 2012 unadjusted trial balance for trading account assets was \$552 million. What adjusting entry would State Street make to adjust this account to market value? Ignore any income tax effects for this part.**

The adjusting entry would be a debit to trading account assets and a credit to unrealized gain on trading securities in the amount of \$85 million.

**E. Consider the balance sheet account “Investment securities held to maturity” and the related disclosures in Note 4.**

- i. **What is the 2012 year-end balance in this account?**

The balance in this account is \$11,379 million.

- ii. **What is the market value of State Street’s investment securities held to maturity?**

The market value of these securities is \$11,661.

- iii. **What is the amortized cost of these securities? What does “amortized cost” represent? How does amortized cost compare to the original cost of the securities?**

The amortized cost of these securities is \$11,379 million. The amortized cost represents the difference between the original cost and the discount and premium associated with the securities. Original cost is the amount paid, whereas the amortized cost will converge to the face amount.

- iv. **What does the difference between the market value and the amortized cost represent? What does the difference suggest about how the average market rate of interest on held-to-maturity securities has changed since the purchase of the securities held by State Street?**

The difference does not really represent anything important except for the difference between the book value and market value. The difference suggests that the average market rate has decreased since the purchase, because the fair value of the securities is higher than the amortized value.

**F. Consider the balance sheet account “Investment securities available for sale” and the related disclosures in Note 4.**

- i. What is the 2012 year-end balance in this account? What does this balance represent?**

The balance in this account is \$109,682 million. The balance represents the fair value of these securities.

- ii. What is the amount of net *unrealized* gains or losses on the available-for-sale securities held by State Street at December 31, 2012? Be sure to note whether the amount is a net gain or loss.**

The net unrealized gain for these securities is \$1,119 million.

- iii. What was the amount of net *realized* gains (losses) from sales of available-for-sale securities for 2012? How would this amount impact State Street’s statements of income and cash flows for 2012?**

Net realized gain on these securities is \$55 million. This amount would go on the income statement in other revenues and gains but would be a decrease in the investing section of the cash flow statement. However, since your selling it as a gain, the cash is higher than the cost, so overall cash flow is increasing.

**G. State Street’s statement of cash flow for 2012 (not included) shows the following line items in the “Investing Activities” section relating to available-for-sale securities (in millions):**

- i. Show the journal entry State Street made to record the purchase of available-for-sale securities for 2012.**

See Figure 10.1.

- ii. Show the journal entry State Street made to record the sale of available-for-sale securities for 2012. Note 13 (not included) reports that the available-for-sale securities sold during 2012 had “*unrealized pre-tax gains of \$67 million as of December 31, 2011*”**

See Figure 10.2.

- iii. Use the information in part *g. ii* to determine the original cost of the available-for-sale securities sold during 2012.**

The original cost of the available for sale securities is \$5,411 million.

- iv. Use Note 4 and your solution to part *g. ii*, to determine the amount of net unrealized gains (losses) during 2012 for the available-for-sale securities *on hand* at December 31, 2012. Show the journal entry that State Street would have made to mark the available-for-sale securities portfolio to market value at year-end. How would this amount impact State Street’s statement of cash flows for 2012? Ignore any tax considerations for this analysis.**

See Figures 10.3 and Figure 10.4. These entries would not impact the statement of cash flows for 2012. For available-for-sale securities, the

unrealized holding gain affects the accumulated other comprehensive income section of the balance sheet, not the statement of cash flows or net income statement.



# Appendix K

- A. Describe what is meant by the term book income? Which number in ZAGG's statement of operation captures this notion for fiscal 2012? Describe how a company's book income differs from its taxable income.**

Book income is the income that is reported on the financial statements of a company. For ZAGG, "Income before provision for income taxes" represents book income. Book income sometimes differs from taxable income due to both temporary and permanent differences.

- B. In your own words, define the following terms:**

**i. Permanent tax differences (also provide example)**

Permanent tax differences are differences that cannot be reversed. In other words, some revenue listed on the financial statements is not taxable, and some expenses listed on the financial statements are not deductible. An example of a permanent difference is municipal bond interest. This interest is not taxable, however it is still reported as income on the financial statements.

**ii. Temporary tax difference (also provide example)**

Temporary tax differences are differences that can be reversed. This means that expenses or revenues are recognized in different periods for financial statements and tax purposes. However, they will eventually be recognized in either case, which "reverses" the difference. For example, company can use accelerated depreciation for taxes and straight-line depreciation for its books. This results in taxable income being lower than straight-line in the first few years.

**iii. Statutory tax rate**

The statutory tax rate is the tax rate that is imposed by law.

**iv. Effective tax rate**

The effective tax rate is the tax paid divided by the book income, which gives what percentage of income was actually paid in taxes.

- C. Explain in general terms why a company reports deferred income taxes as part of their total income tax expense. Why don't companies simply report their current tax bill as their income tax expense?**

A company reports a deferred tax expense to prevent misleading viewers. Reporting this figure shows what amount a company is liable for in the future and allows viewers to get the best understanding of the true financial situation of a company.

- D. Explain what deferred income tax assets and deferred income tax liabilities represent. Give an example of a situation that would give rise to each of these items on the balance sheet.**

Deferred tax liabilities represent taxes that a company will have to pay in future years, but does not have to pay currently due to different

requirements by the tax code. Similarly, deferred tax assets represent the amount of tax that is deductible in the future due to a higher level of taxable income than book income. Again, using an accelerated depreciation recognition method for tax purposes creates a deferred tax liability, because a company increased expenses earlier on to decrease current tax expense. On the other hand, when a company receives money for rent, it is recognized immediately for tax purposes but is recognized as unearned rent revenue for financial statement purposes. This causes the company to have to pay taxes on the income in the year it was received rather than the period in which revenue is recognized on the books. Therefore, this “prepaid” tax is a deferred tax asset.

**E. Explain what a deferred income tax valuation allowance is and when it should be recorded.**

When a company believes it is more likely than not that it will not be able to recognize a deferred tax asset, it must create a valuation allowance. The valuation allowance is used to offset the deferred tax asset that the company believes won't be used. Most of the time, this arises when the company believes it will have inadequate profits.

**F. Consider the information disclosed in Note 8—Income Taxes to answer the following questions:**

- i. Using the information in the first table in Note 8, show the journal entry that ZAGG recorded for the income tax provision in fiscal 2012?**

See Figure 12.1.

- ii. Using the information in the third table in Note 8, decompose the amount of “net deferred income taxes” recorded in income tax journal entry in part *f. i.* into its deferred income tax asset and deferred income tax liability components.**

The amount recorded in net deferred income taxes was a debit of \$8,293. This number is broken into two parts—a deferred income tax asset and deferred income tax liability. Looking at the third table in Note 8, we can see that of this \$8,293, \$8,002 represents the increase total deferred tax assets. The remaining \$291 is due to the decrease in deferred tax liabilities. This gives an overall increase in deferred tax assets of \$8,293.

- iii. The second table in Note 8 provides a reconciliation of income taxes computed using the federal statutory rate (35%) to income taxes computed using ZAGG's effective tax rate. Calculate ZAGG's 2012 effective tax rate using the information provided in their income statement. What accounts for the difference between the statutory rate and ZAGG's effective tax rate?**

ZAGG's effective tax rate for 2012 equals 39.30 percent. Taking the income tax provision and dividing it by the income before provision

for income taxes gives the effective rate. The difference between the statutory rate and the effective rate comes from the permanent differences between the taxable income and the book income. The effective tax rate and statutory tax rate can also differ due to the statutory rate changing over the years.

- iv. **According to the third table in Note 8—Income Taxes, ZAGG had a net deferred income tax asset balance of \$13,508 at December 31, 2012. Explain where this amount appears on ZAGG’s balance sheet.**

GAAP requires there to be a net amount listed on the balance sheet for both current and noncurrent tax assets. So, net current deferred income tax assets is under current assets and equals \$6,912, and net noncurrent deferred income tax assets is under noncurrent assets and equals \$6,596. Adding these amounts gives \$13,508.

- G. **The largest component of ZAGG’s deferred income tax liability, labeled “Property and equipment,” relates to differences between book and tax depreciation expense.**

- i. ***As of December 31, 2012, which system recognized a greater expense over time relating to depreciation— book or tax? Describe what information you used to make this assessment.***

As of 2012, the tax system recognized a greater depreciation expense. This greater expense resulted in lower taxable income than book income, which results in future taxable amounts. These future taxable amounts give rise to deferred tax liabilities.

- ii. **Estimate the dollar magnitude of the cumulative difference in depreciation expense between the two systems as of December 31, 2012, using the chart below. Begin with step 1 and work up.**

The cumulative difference amounts to about \$2,089.

- iii. **Using the information in the chart above, determine the balance in “Property and equipment, net” on the balance sheet at December 31, 2012, if tax depreciation had been used throughout the assets’ lives instead of the reported method?**

If ZAGG used the tax depreciation throughout the assets’ lives, the balance of the account at December 31, 2012, would be \$1,228. This number was found by taking the book value listed net of accumulated depreciation and subtracting the cumulative difference between the book and tax depreciation expense.

- H. **One of ZAGG’s deferred income tax assets components relates to the “Allowance for doubtful accounts.”**

- i. ***During the year ended December 31, 2012, did the book or the tax system recognize a greater expense for doubtful accounts? Describe what information you used to make this assessment.***

During 2012, the book system recognized a greater expense for doubtful accounts. Since taxable income is higher than book income, this results in future deductible amounts in order to reverse the temporary differences. These future deductible amounts create deferred tax assets.

- ii. **Estimate the dollar magnitude of the difference in bad debt expense between the book and tax system for the year ended December 31, 2012, using the chart on the following page. Begin with step 1 and work up.**

The dollar magnitude of difference between the book and tax system for the year ended 31, 2012, equals \$603.

- I. **What is the amount of the deferred income tax asset valuation allowance at December 31, 2012? Explain how ZAGG determined this amount and why they determined that a valuation allowance was necessary.**

The deferred income tax asset valuation allowance at December 31, 2012, is \$713. ZAGG recorded this valuation against losses generated by its equity method investment in HzO. ZAGG deemed this valuation necessary given HzO's current operations and uncertainty of future profits. Due to this situation, ZAGG determined "it was more likely than not that the deferred tax asset will not be realizable" and recoded the full valuation of \$713.

- J. **Suppose that on the first day of the next fiscal year (January 1, 2013), the Internal Revenue Service changed the federal statutory tax rate from 35% to 30%, what journal entry related to the net deferred income tax asset would ZAGG record at the time of the tax change? You may assume that the state statutory rate will not change.**

See Figure 12.4.

# Appendix L

## **A. There are two general types of retirement plans—defined benefit plans and defined contribution plans.**

### **i. How do these two types of plans differ? Which does Johnson & Johnson have?**

In a defined benefit plan, retirement benefits are based on a formula that takes various factors into account, such as number of years worked and salary level. This is typically called a pension plan. On the other hand, a defined contribution plan specifies how much the employer would contribute into the plan. The contribution amount is based on either the employee's salary or a specific amount. Johnson & Johnson uses a defined benefit retirement plan, as seen in the notes to the financial statements.

### **ii. Explain why retirement plan obligations are liabilities.**

Retirement plan obligations are liabilities because they represent the amount that the companies owe past and current employees. Since these plans are typically included in the contract signed when the employee begins work, there is an evident obligation the company must meet, so long as the employee meets all of the requirements. Some people argue that these are not completely liabilities because they are based on estimates, otherwise called assumptions.

### **iii. List some of the assumptions that are necessary in order to account for retirement plan obligations.**

Some of the assumptions necessary in order to account for retirement plan obligations include predicting employees' lifespans, average retirement age, future salary levels, length of time with the company, and even the disability rate.

## **B. In General, companies' pension obligations are influenced each year by four main types of activities: service cost, interest cost, actuarial gains or losses, and benefits paid to retirees. Explain each of the four activities in your own words.**

Service costs are expenses caused by the increase in the projected benefit obligation due to services rendered during the current year. Interest cost is the rate that the employee's benefits accrue, and, therefore, creates additional expenses and obligations for the company. Actuarial gains and losses occur when the assumptions used to calculate the pension plan change and result in an increase or decrease in liability. Lastly, benefits paid to retirees decrease the pension obligation, because they are obligations that have already been paid.

## **C. In general, companies' pension assets are influenced each year by three main types of activities: actual return on pension investments, company contributions to the plan, and benefits paid to retirees. Explain each of the three items in your own words.**

Actual return on pension investments increases the plan assets of the pension plan. The actual return on pension investments can be computed by taking the difference between the beginning and ending balances of the plan assets account and adjusting it for contributions and benefits. Company contributions to the plan also increase the plan assets, since the company pays cash into the plan. Benefits decrease the plan assets as well as plan obligations. The company does not make an adjusting journal entry to its balance sheet when benefits are paid to employees.

**D. In general, companies' pension expense and pension plan assets both have a "return on plan assets" component. How do the two returns differ? Explain the rationale for this difference.**

The portion of "return on assets" that affects pension plan assets is the actual return on plan assets. The portion mentioned earlier is the unexpected gain or loss on plan assets. Both of these, when combined, equals expected return on plan assets. The company wants the expected return on assets to affect the plan assets account; however, we can still see the actual and unexpected returns thanks to the accounting system.

**E. Johnson & Johnson provides other benefits to retirees including health-care and insurance benefits. What is the primary difference between the company's other-benefits plans and its retirement plans?**

The primary difference between other benefits plans and retirement plans is that the other benefits plans deal primarily with health care and is available to all U.S. retired employees and their dependents. The retirement plans, on the other hand, cover most employees worldwide.

**F. Consider Johnson & Johnson's pension expense detailed on page 61 of the company's annual report. Note that the company uses the term "net periodic benefit cost" to refer to pension expense.**

**i. How much pension expense did Johnson & Johnson report on its 2007 income statement?**

In 2007, Johnson & Johnson reported pension expense of \$646 million.

**ii. Prepare the journal entry to record the service cost and interest cost portion of the 2007 pension expense.**

See Figure 13.1.

**G. Consider Johnson & Johnson's retirement plan obligations, that is, the pension liability, as detailed on page 62 of the company's annual report.**

**i. What is the value at December 31, 2007, of the company's retirement plan obligation? What does this value represent? How reliable is this number?**

The value of Johnson & Johnson's retirement plan obligation equals \$12,002 million at the end of 2007. This value represents the amount of benefits the company will pay to employees. This number changes based on actuarial assumptions; however, it is usually computed by an actuary and is rather reliable.

- ii. **What is the pension-related interest cost for the year? Compute the average interest rate the company must have used to calculate interest cost during 2007. Does this rate seem reasonable? Explain.**

The pension related interest cost for the 2007 was \$656 million. Johnson & Johnson used an average interest rate of 5.63 percent. According to the IRS website, the average interest rate on pension obligations for U.S. companies equaled 5.85 percent. Thus, Johnson & Johnson's rate is extremely reasonable as there is only a 0.22 percent difference in these rates.

- iii. **What amount of pension benefits were paid to retirees during the year? Did Johnson & Johnson pay cash for these benefits? How do the benefits paid affect the retirement plan obligation and the retirement plan assets?**

Johnson & Johnson paid pension benefits of \$481 million for 2007. Johnson & Johnson did not pay cash for these benefits. The benefits paid affect the memo record by reducing the plan obligation as well as the plan assets, because the benefits are being paid using the plan assets.

**H. Consider Johnson & Johnson's retirement plan assets, that is, the pension plan asset, as detailed on page 62 of the company's annual report.**

- i. **What is the value at December 31, 2007, of the retirement plan assets held by Johnson & Johnson's retirement plan? What "value" is this?**

Johnson & Johnson's retirement plan assets were valued at \$10,469 million on December 31, 2007. This is the fair value of the assets at the end of the year.

- ii. **Compare the amount of the expected return on plan assets to the amount of the actual return during 2006 and 2007. Are these differences significant? In your opinion, which return better reflects the economics of the company's pension expense?**

The expected returns during 2006 and 2007 were \$809 and \$701 respectively. However, actual returns for 2006 and 2007 equaled \$743 and \$966. The difference was not significant in 2007 as it was only an 8 percent difference, however the difference of 27 percent in 2006 was very significant. This significant difference may have changed Johnson & Johnson's expected return for 2007, leading to an

insignificant difference. Thus, the expected return better reflects the economics of the company's pension expense.

**iii. How much did Johnson & Johnson and their employees contribute to the retirement plan during 2007? How does that compare to contributions in 2006? (See page 63).**

During 2007, Johnson & Johnson and its employees contributed \$379 million. In 2006, they contributed \$306 million. Even though the total amount contributed increases from 2006 to 2007, the other benefits plan contribution decreases by \$1 million, since the U.S. is not required to fund its U.S. retirement plans in 2007.

**iv. What types of investments are in Johnson & Johnson's retirement plan assets?**

Johnson & Johnson's retirement plan assets in the U.S. consist of both equity securities and debt securities. Johnson & Johnson's international retirement plans consist of equity securities, debt securities, as well as real estate. Real estate, however, is expected to compose less than 1% of the assets by 2008.

**I. Is the company's retirement plan under funded or over funded at December 31, 2007? At December 31, 2006? Where does this funded status appear on the company's balance sheet?**

In 2007, Johnson & Johnson's retirement plan is under funded by \$1,533 million. In 2006, its retirement plan was under funded by \$2,122 million. The funded status in both cases appears in three areas of the company's balance sheet—non-current assets, current liabilities, and non-current liabilities.