

ANALYSIS OF FINANCIAL ACCOUNTING METHODOLOGIES AND
APPLICATIONS

By:
Kate Culbertson

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Approved by

Advisor: Professor Victoria Dickinson

Reader: Dean Mark Wilder

ABSTRACT
KATE CULBERTSON: ANALYSIS OF FINANCIAL ACCOUNTING
METHODOLOGIES AND APPLICATIONS

This thesis consists of a series of case studies on various areas of financial accounting. The areas of financial accounting discussed include inventory valuation, relevant income and assets, statement of cash flows, accounts receivable and estimations, inventory and revenue recognition, depreciation, international accounting standards, long-term debt, stockholders' equity, securities, income and regulation, deferred taxes, and pension and retirement plans.

In the financial accounting case on inventory valuation, two companies' financial statement values were analyzed through evaluating the related balance sheets and income statements to determine which company would be a better investment. Through ratio analysis related to profitability and liquidity of the companies, it was determined that Glenwood Heating, Inc. is the better potential investment. For the second case on financial accounting, several different kinds of income and assets were evaluated to determine which income statement and balance sheet accounts are most relevant for investors and other users of the financial statements. The income accounts that were considered include persistent income, equity income, interest income, and other income from operations. The the asset accounts that were determined critical for decision making by investors and other users of the financial statements include total operating assets, assets from affiliates, and investments.

The third case provides a thorough discussion and explanation on the purpose, format, and usage of the statement of cash flows. The purpose of the statement of cash flows is to report cash receipts or inflows and cash payments or outflows during the fiscal period. For the fourth case, Accounts Receivable and Estimations, several different contributors to the accounts receivable account are discussed and analyzed for a specific company, Pearson. Accounts that affect accounts receivable include current receivables, trade receivables, allowance for doubtful accounts, and allowance for sales returns. Additionally, journal entries are expressed to show how the specific account affects accounts receivable.

The fifth case addresses the revenue recognition financial accounting principle to determine if a specific company, GAC, has accurately calculated financial statement accounts, such as revenue, accounts receivable, inventory, and unearned revenue. Through an evaluation of the revenue recognition principle and GAC's financial statements, it was determined that the company was breaking the revenue recognition principle and must change the account values accordingly. The sixth case evaluates different depreciation methods considering both legal and illegal methods for decreasing

depreciation expense in the fiscal period. Northwest, Delta, and United Airlines used legal methods to depreciate the same asset different over a certain period, but Waste Management used illegal depreciation methods to falsify earnings to investors, the public, and the SEC. The seventh case explains the differences between GAAP and IFRS when accounting for various liabilities.

For the eighth case, long-term debt was evaluated in Rite Aid to explore different kinds of debt, methods of issuance, interest expense, and discounts on bond payables through journal entries and calculations. The ninth case, Stockholders' Equity, evaluates the common stock, treasury stock, dividends, and related ratios in two companies to consider different method for accounting for these values and transactions and to determine what the resulting values tell investors about the company. For the tenth case, State Street Corporation's financial statements were analyzed to determine what securities the company current held. Through exploration of the unclassified balance sheet, it was established that State Street Corporation held trading securities, listed at fair value, available-for-sale securities, listed at fair value, and held-to-maturity securities, accounted for at amortized cost.

The eleventh case considers several large corporations' business models to establish what risks these companies face and which aspects of the financials are most important in determining risk. It was decided that revenue and revenue growth are more important than income and income growth. For the twelfth case, ZAGG, Inc.'s financial statements were analyzed to determine what factors contribute to the total income tax calculation for a company with international operations. The factors included in the income tax calculation were tax at federal statutory rate, state tax, non-deductible expense, domestic production activities deduction, return to provision adjustment, and increase in valuation allowance. The thirteenth case, explores and explains defined contribution plans and defined benefit plans and considers related advantages and disadvantages.

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CASE 1: INVENTORY VALUATION

In order to decide between investing in Glenwood Heating, Inc. or Eads Heaters, Inc., the liquidity, efficiency, profitability, and debt leverage of each company must be compared. Although Eads Heaters, Inc. proves to be more efficient, Glenwood Heating, Inc. is the better investment because of increased profitability and greater liquidity. The debt leverage is not a determining factor between the two companies because neither company proved better than the other in this area.

Glenwood Heating, Inc. is in a better financial position than Eads Heaters, Inc. proven by the Current Ratio and Acid-Test Ratio results. Glenwood Heating, Inc.'s Current Ratio is higher than Eads Heaters, Inc.'s, which indicates Glenwood Heating, Inc.'s ability of current assets to meet current liabilities is better than Eads Heaters, Inc.'s. Also, Glenwood Heating, Inc.'s Acid-Test Ratio is higher than Eads Heaters, Inc.'s Acid-Test Ratio result. The Current Ratio and Acid-Test Ratio results prove that Glenwood Heating, Inc. is more liquid than Eads Heaters, Inc. Current Ratio proves that Glenwood Heating, Inc. is more capable to meet the current liability needs, while Acid-Test Ratio proves that Glenwood Heating, Inc. is better prepared to meet the immediate short-term liability needs.

The Accounts Receivable Turnover, Days to Collect Receivables, Inventory Turnover, Days to Sell Inventory, and Operating Cycle Ratios represent the efficiency of each company. Although Glenwood Heating, Inc. is in a better financial position due to

liquidity, Eads Heaters, Inc. proves to be more efficient. Because Eads Heaters, Inc.'s Accounts Receivable Turnover is higher than Glenwood Heating Inc.'s, the former mentioned company is more efficient in liquidating accounts receivable during the reporting period. The Days to Collect Receivables Ratio indicates that Eads Heaters, Inc.'s average number of days taken to collect account receivables is fewer than Glenwood Heating, Inc.'s. Because it takes fewer days to collect account receivables for Eads Heaters, Inc. than for Glenwood Heating, Inc., Eads Heaters, Inc. is more efficient in collected payments on accounts receivables. Also, Inventory Turnover for Eads Heaters, Inc. is higher than Glenwood Heaters, Inc., which indicates that Eads Heaters, Inc.'s inventory is more liquid than Glenwood Heaters, Inc.'s. In order to be more efficient, companies aim to have a relatively low Days to Sell Inventory Ratio. According to the data, it takes Eads Heaters, Inc. fewer days to sell their inventory than Glenwood Heating, Inc. Lastly, efficiency can be measured by the number of days between the purchase of inventory and the collection of cash from the sale of inventory, which is known as the Operating Cycle Ratio. The data states that Eads Heaters, Inc. requires fewer days than Glenwood Heating, Inc. to collect money from the sale of inventory, once again proving that Eads Heaters, Inc. is more efficient than Glenwood Heating, Inc.

Profitability of a company is measured by the gross profit margin, profit margin, return on assets, return on owners' equity, and earnings per share ratios. Gross profit margin ratio measure profit generated from sales after considering cost of goods sold. Because Eads Heaters, Inc. proves to have a higher gross profit margin than Glenwood Heating, Inc., Eads Heaters, Inc. appears to be more profitable. Profit margin ratio measures the overall profitability as a percent of sales dollars. Although Eads Heaters,

Inc. proves to be more profitable when comparing gross profit margin ratio, Glenwood Heating, Inc. appears to be more profitable when analyzing profit margin ratio. The difference in profitability is due to the increase in net income for Glenwood Heating, Inc. According to the data, Eads Heaters, Inc. has a higher return on assets ratio than Glenwood Heating, Inc. This information relates to the fact that Eads Heaters, Inc. has a higher measurement of overall efficiency in managing the assets and generating profits. Return on owners' equity ratio measures the return on stockholder's investment after interest is paid to creditors. According to this ratio, Glenwood Heating, Inc. is more profitable than Eads Heaters, Inc. because the former mentioned company has a higher return on stockholders' investments. According to earnings per share ratio, Glenwood Heating, Inc. proves to be more profitable because the return to common stockholders for each share owned is higher for Glenwood Heating, Inc. than for Eads Heaters, Inc.

The debt ratio and times interest earned ratio provide information concerning a company's ability to diminish asset reductions due to losses without decreasing return to creditors. Because Glenwood Heating, Inc.'s measurement of the portion of investment that is from debt is less than that of Eads Heaters, Inc., Glenwood Heating, Inc. proves to have better debt leverage and borrowing power. Times interest earned ratio indicates the ability of the company to meet its interest requirements from earnings. Because Eads Heaters, Inc. has a higher times interest earned ratio than Glenwood Heating, Inc., Eads Heaters, Inc. appears to have more debt leverage.

Glenwood Heating, Inc.						
Chart of Accounts						
Part A	Cash	Accounts Receivable	Allowance for Bad Debts	Inventory	Land	Building
A1	\$160,000					
A2	\$400,000					
A3	-\$420,000				\$70,000	\$350,000
A4	-\$80,000					
A5				\$239,800		
A6		\$398,500				
A7	\$299,100	\$299,100				
A8	-\$213,360					
A9	-\$41,000					
A10	-\$34,200					
A11	-\$23,200					
A12						
Totals	\$47,340	\$99,400	\$0	\$239,800	\$70,000	\$350,000
Part B						
B1			\$994			
B2				-\$177,000		
B3						
B4	-\$16,000					
B5	-\$30,914					
Totals	\$426	\$99,400	\$994	\$62,800	\$70,000	\$350,000

Figure 1-1 Glenwood Heating, Inc. Chart of Accounts

Glenwood Heating, Inc.					
Chart of Accounts (continued 1)					
Part A	Accumulated Depreciation- Building	Equipment	Accumulated Depreciation- Equipment	Leased Equipment	Accumulated Depreciation- Leased Equipment
A1					
A2					
A3					
A4		\$80,000			
A5					
A6					
A7					
A8					
A9					
A10					
A11					
A12					
Totals	\$0	\$80,000	\$0	\$0	\$0
Part B					
B1					
B2					
B3	\$10,000		\$9,000		
B4					
B5					
Totals	\$10,000	\$80,000	\$9,000	\$0	\$0

Figure 1-1 (continued 1) Glenwood Heating, Inc. Chart of Accounts

Glenwood Heating, Inc.							
Chart of Accounts (continued 2)							
Part A	Accounts Payable	Interest Payable	Notes Payable	Lease Payable	Common Stock	Retained Earnings	Dividends
A1					\$160,000		
A2			\$400,000				
A3							
A4							
A5	\$239,800						
A6							
A7							
A8	\$213,360						
A9			\$20,000				
A10							
A11							\$23,200
A12		\$6,650					
Totals	\$26,440	\$6,650	\$380,000	\$0	\$160,000	\$0	\$23,200
Part B							
B1							
B2							
B3							
B4							
B5							
Totals	\$26,440	\$6,650	\$380,000	\$0	\$160,000	\$0	\$23,200

Figure 1-1 (continued 2) Glenwood Heating, Inc. Chart of Accounts

Glenwood Heating, Inc.						
Chart of Accounts (continued 3)						
Part A	Sales	Cost of Goods Sold	Bad Debt Expense	Depreciation Expense	Interest Expense	Other Operating Expense
A1						
A2						
A3						
A4						
A5						
A6	\$398,500					
A7						
A8						
A9					\$21,000	
A10						\$34,200
A11						
A12					\$6,650	
Totals	\$398,500	\$0	\$0	\$0	\$27,650	\$34,200
Part B						
B1			\$994			
B2		\$177,000				
B3				\$19,000		
B4						
B5						
Totals	\$398,500	\$177,000	\$994	\$19,000	\$27,650	\$34,200

Figure 1-1 (continued 3) Glenwood Heating, Inc. Chart of Accounts

Glenwood Heating, Inc.		
Chart of Accounts (continued 4)		
Part A	Rent Expense	Provisions for Income Taxes
A1		
A2		
A3		
A4		
A5		
A6		
A7		
A8		
A9		
A10		
A11		
A12		
Totals	\$0	\$0
Part B		
B1		
B2		
B3		
B4	\$16,000	
B5		\$34,914
Totals	\$16,000	\$34,914

Figure 1-1 (continued 4) Glenwood Heating, Inc. Chart of Accounts

Glenwood Heating, Inc.	
Multistep Income Statement	
For the Year Ended December 31, 20X1	
Sales Revenue	\$398,500
Cost of Goods Sold	\$177,000
Gross Profit	\$221,500
Selling and Administrative Expenses	\$70,194
Income from Operations	\$151,306
Interest Expense	\$27,650
Income before Taxes	\$123,656
Income Tax	\$30,914
Net Income	\$92,742

Figure 1-2 Glenwood Heating, Inc. Multistep Income Statement

Glenwood Heating, Inc.	
Statement of Retained Earnings	
For the Year Ended December 31, 20X1	
Retained Earnings, January 1	\$0
Add: Net Income	\$92,742
	\$92,742
Less: Dividends	-\$23,200
Retained Earnings, December 31	\$69,542

Figure 1-3 Glenwood Heating, Inc. Statement of Retained Earnings

Glenwood Heating, Inc.		
Classified Balance Sheet		
December 31, 20X1		
Assets		
Current Assets		
Cash		\$426
Accounts Receivable	\$99,400	
Less: Allowance for doubtful accounts	\$994	\$98,406
Inventory		\$62,800
Total Current Assets		\$161,632
Property, Plant, Equipment		
Land		\$70,000
Building	\$350,000	
Less: Accumulated Depreciation- Building	\$10,000	\$340,000
Equipment	\$80,000	
Less: Accumulated Depreciation- Equipment	\$9,000	\$71,000
Total Property, Plant, and Equipment		\$481,000
Total Assets		\$642,632
Liabilities and Stockholders' Equity		
Current Liabilities		
Accounts Payable		\$26,440
Interest Payable		\$6,650
Lease Payable		\$0
Total Current Liabilities		\$33,090
Long-Term Debt		
Twenty-year 7% Debentures, due September 30, 20X1		\$380,000
Total Liabilities		\$413,090
Stockholders' Equity		
Common Stock	\$160,000	
Retained Earnings	\$69,542	
Total Stockholders' Equity		\$229,542
Total Liabilities and Equity		\$642,632

Figure 1-4 Glenwood Heating, Inc. Classified Balance Sheet

Glenwood Heating, Inc.		
Statement of Cash Flows		
For the Year Ended December 31, 20X1		
Cash Flows from Operating Activities		
Net Income		\$92,742
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense	\$19,000	
Increase in Accounts Receivable	-\$98,406	
Increase in Inventory	-\$62,800	
Increase in Accounts Payable	\$26,440	
Increase in Interest Payable	\$6,650	
Net Cash Used by Operating Activities		\$16,374
Cash Flows from Investing Activities		
Purchase of Equipment	-\$80,000	
Purchase of Land	-\$70,000	
Purchase of Building	-\$350,000	
Net Cash Used by Investing Activities		\$500,000
Cash Flows from Financing Activities		
Payment of Cash Dividends	-\$23,200	
Issuance of Common Stock	\$160,000	
Redemption of Bonds	-\$380,000	
Net Cash Used by Financing Activities		\$243,200
Net Decrease in Cash		\$759,574

Figure 1-5 Glenwood Heating, Inc. Statement of Cash Flows

Glenwood Heating, Inc.	
Financial Ratios	
For the Year Ended December 31, 20X1	
Liquid Ratios	
Current Ratio	3.04
Acid-Test Ratio	1.88
Accounts Receivable Turnover	4.01
Days to Collect Receivables	91.02
Inventory Turnover	2.82
Days to Sell Inventory	129.43
Operating Cycle	219.55
Profitability Ratios	
Gross Profit Margin	56%
Profit Margins	23%
Return on Assets (ROA)	14%
Return on Owners' Equity (ROE)	40%
Earnings per Share (EPS)	28.98
Long-Term Solvency Ratios	
Debt Ratio	64%
Times Interest Earned	5.47

Figure 1-6 Glenwood Heating, Inc. Financial Ratios

Eads Heaters, Inc.						
Chart of Accounts						
Part A	Cash	Accounts Receivable	Allowance for Bad Debts	Inventory	Land	Building
A1	\$160,000					
A2	\$400,000					
A3	-\$420,000				\$70,000	\$350,000
A4	-\$80,000					
A5				\$239,800		
A6		\$398,500				
A7	\$299,100	-\$299,100				
A8	-\$213,360					
A9	-\$41,000					
A10	-\$34,200					
A11	-\$23,200					
A12						
Totals	\$47,340	\$99,400	\$0	\$239,800	\$70,000	\$350,000
Part B						
B1			\$4,970			
B2				-\$188,800		
B3						
B4	-\$16,000					
B5	-\$23,505					
Totals	\$7,835	\$99,400	\$4,970	\$51,000	\$70,000	\$350,000

Figure 1-7 Eads Heaters, Inc. Chart of Accounts

Eads Heaters, Inc.					
Chart of Accounts (continued 1)					
Part A	Accumulated Depreciation- Building	Equipment	Accumulated Depreciation- Equipment	Leased Equipment	Accumulated Depreciation- Leased Equipment
A1					
A2					
A3					
A4		\$80,000			
A5					
A6					
A7					
A8					
A9					
A10					
A11					
A12					
Totals	\$0	\$80,000	\$0	\$0	\$0
Part B					
B1					
B2					
B3	\$10,000		\$20,000		
B4				\$92,000	\$11,500
B5					
Totals	\$10,000	\$80,000	\$20,000	\$92,000	\$11,500

Figure 1-7 (continued 1) Eads Heaters, Inc. Chart of Accounts

Eads Heaters, Inc.							
Chart of Accounts (continued 2)							
Part A	Accounts Payable	Interest Payable	Notes Payable	Lease Payable	Common Stock	Retained Earnings	Dividends
A1					\$160,000		
A2			\$400,000				
A3							
A4							
A5	\$239,800						
A6							
A7							
A8	-\$213,360						
A9			-\$20,000				
A10							
A11							\$23,200
A12		\$6,650					
Totals	\$26,440	\$6,650	\$380,000	\$0	\$160,000	\$0	\$23,200
Part B							
B1							
B2							
B3							
B4				\$83,360			
B5							
Totals	\$26,440	\$6,650	\$380,000	\$83,360	\$160,000	\$0	\$23,200

Figure 1-7 (continued 2) Eads Heaters, Inc. Chart of Accounts

Eads Heater, Inc.						
Chart of Accounts (continued 3)						
Part A	Sales	Cost of Goods Sold	Bad Debt Expense	Depreciation Expense	Interest Expense	Other Operating Expense
A1						
A2						
A3						
A4						
A5						
A6	\$398,500					
A7						
A8						
A9					\$21,000	
A10						\$34,200
A11						
A12					\$6,650	
Totals	\$398,500	\$0	\$0	\$0	\$27,650	\$34,200
Part B						
B1			\$4,970			
B2		\$188,800				
B3				\$30,000		
B4				\$11,500	\$7,360	
B5						
Totals	\$398,500	\$188,800	\$4,970	\$41,500	\$35,010	\$34,200

Figure 1-7 (continued 3) Eads Heaters, Inc. Chart of Accounts

Eads Heater, Inc.		
Chart of Accounts (continued 4)		
Part A	Rent Expense	Provisions for Income Taxes
A1		
A2		
A3		
A4		
A5		
A6		
A7		
A8		
A9		
A10		
A11		
A12		
Totals	\$0	\$0
Part B		
B1		
B2		
B3		
B4		
B5		\$23,505
Totals	\$0	\$23,505

Figure 1-7 (continued 4) Eads Heaters, Inc. Chart of Accounts

Eads Heaters, Inc.	
Multistep Income Statement	
For the Year Ended December 31, 20X1	
Sales Revenue	\$398,500
Cost of Goods Sold	\$188,800
Gross Profit	\$209,700
Selling and Administrative Expenses	\$80,670
Income from Operations	\$129,030
Interest Expense	\$35,010
Income before Taxes	\$94,020
Income Tax	\$23,505
Net Income	\$70,515

Figure 1-8 Eads Heaters, Inc. Multistep Income Statement

Eads Heaters, Inc.	
Statement of Retained Earnings	
For the Year Ended December 31, 20X1	
Retained Earnings, January 1	\$0
Add: Net Income	\$70,515
	\$70,515
Less: Dividends	\$23,200
Retained Earnings, December 31	\$47,315

Figure 1-9 Eads Heaters, Inc. Statement of Retained Earnings

Eads Heaters, Inc.		
Classified Balance Sheet		
December 31, 20X1		
Assets		
Current Assets		
Cash		\$7,835
Accounts Receivable	\$99,400	
Less: Allowance for Doubtful Accounts	\$4,970	\$94,430
Inventory		\$51,000
Total current assets		\$153,265
Property, Plant, Equipment		
Land		\$70,000
Building	\$350,000	
Less: Accumulated Depreciation- Building	\$10,000	\$340,000
Equipment	\$80,000	
Less: Accumulated Depreciation- Equipment	\$20,000	\$60,000
Leased Equipment	\$92,000	
Less: Accumulated Depreciation- Leased Equipment	\$11,500	\$80,500
Total Property, Plant, and Equipment		\$550,500
Total Assets		\$703,765
Liabilities and Stockholders' Equity		
Current Liabilities		
Accounts Payable		\$26,440
Interest Payable		\$6,650
Lease Payable		\$83,360
Total Current Liabilities		\$116,450
Long-Term Debt		
Twenty-year 7% Debentures, due September 30 20X1		\$380,000
Total Liabilities		\$496,450
Stockholders' Equity		
Common Stock	\$160,000	
Retained Earnings	\$47,315	
Total Stockholders' Equity		\$207,315
Total Liabilities and Equity		\$703,765

Figure 1-10 Eads Heaters, Inc. Classified Balance Sheet

Eads Heaters, Inc.		
Statement of Cash Flows		
For the Year Ended December 31, 20X1		
Cash Flows from Operating Activities		
Net Income		\$70,515
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense		\$41,500
Increase in Accounts Receivable	-\$94,430	
Increase in Inventory	-\$51,000	
Increase in Accounts Payable	\$26,440	
Increase in Interest Payable	\$6,650	
Net Cash Used by Operating Activities		\$325
Cash Flows From Investing Activities		
Purchase of Equipment	-\$80,000	
Purchase of Land	-\$70,000	
Purchase of Building	-\$350,000	
Net Cash Used by Investing Activities		\$500,000
Cash Flows from Financing Activities		
Payment of Cash Dividends	-\$23,200	
Issuance of Common Stock	\$160,000	
Lease payable	\$83,360	
Redemption of Bonds	-\$380,000	
Net Cash Used by Financing Activities		\$159,840
Net Increase in Cash		\$660,165

Figure 1-11 Eads Heaters, Inc. Statement of Cash Flows

Eads Heaters, Inc.	
Financial Ratios	
For the Year Ended December 31, 20X1	
Liquid Ratios	
Current Ratio	2.48
Acid-Test Ratio	1.65
Accounts Receivable Turnover	4.22
Days to Collect Receivables	86.49
Inventory Turnover	3.70
Days to Sell Inventory	98.65
Operating Cycle	185.14
Profitability Ratios	
Gross Profit Margin	53%
Profit Margins	18%
Return on Assets (ROA)	10%
Return on Owners' Equity (ROE)	34%
Earnings per Share (EPS)	22.04
Long-Term Solvency Ratios	
Debt Ratio	71%
Times Interest Earned	3.69

Figure 1-12 Eads Heaters, Inc. Financial Ratios

CASE 2: RELEVANT INCOME AND ASSETS

Before investing in a company, investors and other capital-market participants need to analyze and interpret the entity's current financial position and financial trends to create a good prediction of future income. In order to make a reasonable estimate on future income, analysts must classify current factors related to profitability as operating, non-operating, recurring, and/or non-recurring. Factors that are classified as operating and recurring are the most influential in estimating future period profitability.

For Molson Coors Brewing Company, operating activities are processes that relate directly to the production or sale of beer. Determining the effect of operating activities on profitability is essential to investors because increased appreciation in stock price does not come from financing or investing activities, but rather from income from operations. Operating activities for Molson Coors include items such as sales, cost of goods sold, and general and administrative expenses. Through operating activities, analysts can predict the stock price or present value of expected cash flows for future periods.

Non-operating activities include processes that do not relate directly to the production or sale of beer for Molson Coors Brewing Company. Three of the more influential non-operating activities for Molson Coors are special items, other income (expense), and equity income in MillerCoors. Other income (expense) is non-operating partly because it includes money gained in the sale of a partnership in the Colorado

Rockies Baseball Club, Ltd. Gains or losses on the sale of investments that do not relate to the operations of the entity are classified as non-operating. Equity income in MillerCoors represents the amount of investment gain or loss that Molson Coors Brewing Company received through financing in MillerCoors. Special items are also considered non-operating because Molson Coors does not believe them to be indicative of their core operations. Although these items are non-operating activities, they are still factors in determining the expected future profitability and stock value of Molson Coors Brewing Company depending on their likelihood of recurring.

While operating and non-operating are essential classifications to make when determining the factors that go into a company's net income, persistent and transitory organizing is just as crucial. To determine a company's future value, investors must look at persistent items. These items include operating and non-operating activities that are expected to recur in future periods. When transitory items are taken out of the income statement, an estimated partial income statement for the future can be created using trends. Through showing a calculation of net income without transitory items, an estimation of the value of the company can be produced. Items such as other income (expense) and income from discontinued operations are considered transitory because they are not expected to recur.

By classifying the items in the income statement and balance sheet as recurring, transitory, operational, and/or non-operational, the future profitability can be estimated. In order to predict the most accurate value of future stock prices, recurring, operational items are considered most significant. After taking out the non-operating activities, return on net operating assets can be used to compare the operating profit to the net operating

resources invested. By separating return on net operating assets into two formulas, operating profit margin and net operating asset turnover, investors can see net operating profit in relation to net sales and net sales in relation to average net operating assets. Return on net operating assets, operating profit margin, net operating asset turnover, and return on net operating assets using persistent income are slightly higher in 2013 than in 2012. Because return on net operating assets, operating profit margin, and net operating income do not include non-operating activities, these values are a fair determinant for the future value of the company. Secondly, because return on net operating assets for persistent income does not include transitory items, this value is a good factor for estimating the future value of Molson Coors Brewing Company. Because the trends are improving from 2013 to 2012, investing in Molson Coors would be advisable.

Appendix

- a. The major classifications on an income statement are sales, cost of goods sold, gross profit, selling expenses, administrative expenses, income tax, income from operations, other revenues and gains, other expenses and losses, gains and losses from discontinued operations, gains and losses from extraordinary items, and net income.
- b. Companies are required to provide classified income statements because through classified income statements, users can assess the amounts, timing, and uncertainty of future cash flows. These classifications make it easier for users to evaluate the company's liquidity, financial flexibility, probability, and risk.
- c. Financial statement users would be interested in a measurement of persistent income because it is the most stable and predictable measure when considering the future value of a company or stock.
- d. Comprehensive income results from a change in equity (net assets) of an entity during a period from transactions and other events and circumstances from nonowner sources. It includes all changes in equity during a period except those resulting from investments by owners and distributions to owners.
- e. For Molson Coors Brewing Company, the difference between sales and net sales is excise tax. Excise taxes are taken out of sales to show the impact they have on net sales. Excise taxes are shown explicitly because only the company has to pay excise taxes, so the amount directly affects the worth of the company without concerning customers.
- f. Molson Coors Brewing Company's special items represent charges incurred or benefits realized that they do not believe to be indicative of their core operations.

- i. Special items include infrequent or unusual items, impairment or asset abandonment-related losses, restructuring charges and other atypical employee-related costs, or fees on termination of significant operating agreements and gains (losses) on disposal of investments.
 - ii. Because these items are not indicative of their core operations, but they are not necessarily non-recurring Molson Coors classifies them as operating, due to the possibility of recurrence.
- g. Other Income (expense) are gains or losses on sales of non- operating assets and activities not directly related to brewing selling beer. Difference between Other income (expense) and Special items is other income (expense) is more unlikely to recur and less related to operating activities. Molson Coors Brewing Company became a limited partner in the Colorado Rockies Baseball Club, Ltd. Because the sale of the baseball club and the other gains (losses) have little to nothing to do with selling beer, they are not considered in the normal operating activities of the company. The reason that Special items is included in operating expenses and Other income (expense) is classified as non-operating is because the sale of something, such as the baseball club is not going to recur.
- h. Statement of comprehensive income:
 - i. Comprehensive income in 2013 is \$760.2. Net income in 2013 is \$567.3.
 - ii. Comprehensive income increased because of a decrease in foreign currency translation adjustments, increase in unrealized gain on derivative instruments, decrease in reclassification of derivative loss to income, increase in pension and other postretirement benefit adjustments, increase in amortization of net prior service, and increase in ownership share of unconsolidated subsidiaries. These items are related because they are recurring but non-operating activities.
- i. Although Special items, net could recur, the likelihood that the amounts will vary causes the item to be classified as non-persistent. Other income (expense), net has elements included in it that have a very low chance of recurring and all prices could vary, classifying it as non-persistent. Income from discontinued operations is a non-persistent item because it is not expected to recur in the future.
- j. Income taxes:
 - i. Molson Coors' effective tax rate is 12.8%.

$$\begin{aligned} \text{Effective Tax Rate} &= \text{income tax expense} / \text{pretax income} \\ &= 84 / 654.5 \\ &= 12.8\% \end{aligned}$$
 - ii. In 2012, Coors changed their foreign operations, which resulted in a higher foreign tax rate. If Coors continues to trade with the same foreign country, then the effective tax rate should remain ultimately the same at 12.8%
- k. \$723.44

Molson Coors	
Income Statement	
Persistent Income	(in millions)
Sales	5999.6
Excise Tax	(1793.5)
Net Sales	4206.1
Cost of Goods Sold	(2545.6)
Gross Profit	1660.5
General and Admin Expenses	(1193.8)
Equity Income	539.0
Other Income	1005.7
Interest Expense	(183.8)
Interest Income	13.7
Income from cont. operations	835.6
Income Tax Expense	106.96
Net Income	728.64
Less: non-controlling interests	(5.2)
Net (persistent) income	723.44

Figure 2-1 Molson Coors Income Statement

- I. Financial statements and notes
 - i. Special items are non-operating because these values have nothing to do with the company's everyday business activities. Because equity income represents the proportionate share for the period of net income of Molson Coors' investment in MillerCoors, this adjustment to eliminate intercompany gains and losses is not considered an operational activity. As stated in the notes, other income (expense) is also non-operating because it includes gains and losses associated with activities not directly related to brewing and selling beer. Discontinued operations and loss from non-controlling interest are also non-operating processes because neither bring revenue to the company through everyday operations.
 - ii. The total after-tax amounts of the non-operating items for the years 2013 and 2012 are \$290.60 and \$282.82 (in millions).

Molson Coors		
Comparison of Non-Operating Items for the Years 2012 and 2013		
Non-operating Items	2013	2012
Special items, net	(200)	(81.4)
Equity income in MillerCoors	474.32	449.59
Other income (expense), net	18.9	(90.3)
Income from discontinued Operations	2	1.5
Income attributable to non-controlling interests	(4.576)	3.43
Total non-operating items	\$290.64	\$282.82

Figure 2-2 Molson Coors Comparison of Non-Operating Items

- iii. Net operating profit after tax for 2013 is \$258.63. Net operating profit after tax for 2012 is \$220.53 (in millions).

Molson Coors		
Comparison of Operating Profit for the Years 2012 and 2013		
Net Operating Profit	2013	2012
Sales	5999.6	5615
Excise Tax	(1793.5)	(1698.5)
Net Sales	4206.1	3916.5
Cost of Goods Sold	(2545.6)	(2352.5)
Gross Profit	1660.5	1564
General and Admin Expenses	(1193.8)	(1126.1)
Interest Expense	(183.8)	(196.3)
Interest Income	13.7	11.3
Net profit before tax	296.6	252.9
Income tax expense (12.8%)	(37.96)	32.37
Net operating profit	\$258.63	\$220.53

Figure 2-3 Molson Coors Comparison of Operating Profit

- m. Non-operating assets and liabilities
- i. Non-operating assets include affiliates of \$30.8 million. Affiliates are non-operating because they come from Molson Coors' ownership of less than the majority of another company's stock. Molson Coors' investment of \$2,506.5 million in MillerCoors is also non-operating because it is not included in the daily processes of brewing and selling beer. Non-operating liabilities include affiliates payable, discontinued operations, and pension and postretirement benefits. These liabilities are considered non-operating because the debt they bring to the balance sheet does not relate to the daily activities on Molson Coors' brewing company.

- ii. Net operating assets for 2013 and 2012 are respectively \$13,042.80 and \$13,728.20

Molson Coors		
Comparison of Total Net Operating Assets for 2012 and 2013		
Net Operating Assets	2013	2012
Total Assets	15,580.1	16,212.2
Affiliates	30.8	52.2
Investment in MillerCoors	2,506.5	2,431.8
Total net operating assets (in millions)	\$13,042.80	\$13,728.20

Figure 2-4 Molson Coors Comparison of Total Net Operating Assets

- n. Molson Coors' return on net operating assets for 2013 and 2012 are .0198 and .0161. Because return on net operating assets compares the amount of net income attributable to continuing core operations to the net operating resources invested in the company, 2013 appears to show more profitability in relation to net operating assets.

$$\begin{aligned}
 \text{RNOA} &= \text{Net Operating Profit after Tax} / \text{Average Net Operating Assets} \\
 &= \$258.63 / 13,042.80 \\
 &= .0198 \text{ (year 2013)} \\
 &= \$220.53 / 13,728.20 \\
 &= .0161 \text{ (year 2012)}
 \end{aligned}$$

- o. Molson Coors' operating profit margin for the years 2013 and 2012 are .0615 and .0563. The fact that the operating profit margin for 2013 is slightly greater than that of 2012 coincides with the previous calculation of RNOA because 2013 had a slightly higher RNOA. Net operating asset turnover for the years 2013 and 2012 are .322 and .285. Similar to operating profit margin, the net operating asset turnover for 2013 is slightly greater than that of 2012, showing another reason why RNOA is slightly higher for 2013.

$$\begin{aligned}
 \text{Operating Profit Margin} &= \text{Net Operating Profit after Tax} / \text{Sales} \\
 &= \$258.63 / 4206.10 \\
 &= .0615 \text{ (year 2013)} \\
 &= \$220.53 / 3916.5 \\
 &= .0563 \text{ (year 2012)}
 \end{aligned}$$

$$\begin{aligned}
 \text{Net Operating Asset Turnover} &= \text{Sales} / \text{Average Net Operating Assets} \\
 &= \$4206.1 / 13,042.8 \\
 &= .322 \text{ (year 2013)} \\
 &= \$3916.5 / 13,728.2 \\
 &= .285 \text{ (year 2012)}
 \end{aligned}$$

- p. Using persistent income numbers, Molson Coors' return on net operating assets for 2013 is .055. The RNOA using persistent income numbers is a better predictor of future profitability than RNOA only using net operating profit because some of the non-operating activities are persistent, causing these items to recur, which will affect profitability for future years.

$$\begin{aligned}\text{Persistent RNOA} &= \text{Persistent Income} / \text{Average Net Operating Assets} \\ &= \$723.44 / 13,042.80 \\ &= .055\end{aligned}$$

CASE 3: STATEMENT OF CASH FLOWS

The purpose of the statement of cash flows is to report cash receipts (inflows) and cash payments (outflows) during a period. The statement of cash flows is the detailed disclosure of individual cash flows. The statement of cash flows is important to financial statement users because it can influence decision makers in significant ways. Information about cash flows aids users in determining if a company has enough cash to pay existing debts and allows users to decide if a company is financing expenditures with cash from operating activities or from selling its current and non-current assets. To begin creating a statement of cash flows, activities must be separated in operating, investing, or financing.

Operating activities include transactions and events that determine net income. Examples of operating activities are the sale of goods and services to customers, the production and purchase of merchandise, and the expenditures to administer the business. Cash inflows or receipts include cash from customers for cash sales, cash from borrowers for interest, cash from collections on credit sales, cash from lawsuit settlements, and cash from dividends received. Cash outflows or payments include cash paid for salaries and wages, cash paid to suppliers for goods and services, cash paid to lenders for interest, cash paid to governments for taxes and fines, and cash paid to charities.

Investing activities include transactions and events that affect long-term assets, such as the purchase and sale of long-term assets, the purchase and sale of short-term investments in the securities of other entities, and lending and collecting money for notes

receivable. Cash inflows from investing activities include cash from collecting principal on loans, cash from selling investments in securities, cash from selling long-term productive assets, and cash from the selling of notes. Cash outflows from investing activities include cash paid to make loans, cash paid to purchase long-term productive assets, and cash paid to purchase investments in securities.

The last section of the statement of cash flows is classified as financing activities. Financing activities include transactions and events that affect long-term liabilities and equity. Cash inflows from financing activities include cash from issuing its own equity stock, cash from contributions by owners, cash from issuing short-term and long-term debt, and cash from issuing notes and bonds. Cash outflows from financing activities include cash payments for loans, cash dividends paid to shareholders, cash paid for withdrawals from owners, and cash paid to purchase treasury stock.

Cash flows provided by operating activities can be reported in the direct method or indirect method. The direct method separately lists each major item of operating cash receipts and each major item of operating cash payments. The indirect method reports net income and then adjust it for items necessary to obtain net cash provided or used by operating activities. This case focuses on the indirect method for reporting cash flows from operating activities. In order to determine the change in cash during the period, the balance sheet is analyzed and t-charts are created. The balance sheet is used to show the change in accounts between two time periods. The t-charts are used to decide if the change was a decrease or increase and to determine if other factors affected the change.

After the t-charts are created from the balance sheet, the adjustments to net income can be made. Adjustments for changes in current assets and current liabilities to

reconcile net income to net cash provided are decreases in noncash current assets are added, increases in noncash current assets are subtracted, increases in current liabilities are added, and decreases in current liabilities are subtracted. Adjustments for operating items not providing or using cash are done by adding depreciation, depletion, and amortization. Adjustments for non-operating items are done by adding losses from disposal of long-term assets and retirement of debt and subtracting gains from disposal of long-term assets and retirement of debt. Using these guidelines, the net cash provided by operating activities can be calculated.

After the net cash provided by operating activities is computed, the net cash provided by investing and financing activities are analyzed and calculated. Similar to operating activities, the balance sheet and t-charts are used to determine the change (increase or decrease) in the accounts for the period. For the investing and financing activities sections of the statement of cash flows, no specific guidelines, such as the ones above, are required for reconciling net income to net cash. First, cash payments and receipts are listed under their correct section (investing or financing), then the amounts are added or subtracted to the net cash provided by operating activities to determine net decrease or increase in cash and cash equivalents. Lastly, the net increase or decrease in cash and cash equivalents over the period is added or subtracted to cash and cash equivalents at the beginning of the year to determine the ending cash amount.

Appendix

- a. A statement of cash flows provides relevant information about the cash receipts and cash payments of an enterprise during a period. The statement of cash flows reports the cash effects of operations during a period, investing transactions, financing transactions, and the net increase or decrease in cash during the period. The information provided in the statement of cash flows differs from the information contained in the income statement because the statement of cash

- flows measures the source of the company’s cash and the income statement measures the company’s financial performance.
- b. The two methods for preparing the statement of cash flows are the indirect method and the direct method. Golden Enterprises uses the indirect method. Because the statement starts with net cash provided by operating activities, it is clear that the indirect method is used. Most companies use the indirect method because it allows the reader to analyze the changes in the cash balance more easily.
 - c. The three sections of the statement of cash flows are operating activities, investing activities, and financing activities.
 - d. The information in the statement of cash flows comes from the changes in the balance sheet. When assets increase during a period, cash flow decreases. When liabilities decrease during a period, cash flow decreases. When assets decrease during a period, cash flows increase. When liabilities increase during a period, cash flow increases.
 - e. Cash equivalents are assets that are readily convertible into cash. Examples of cash equivalents include U.S. Treasury bills, bank certificates of deposit, bankers’ acceptances, and corporate commercial paper.
 - f. Net income is the first item on the statement of cash flows for the indirect method because the following information in the statement are adjustments to change the accrual-based net income. Net income is adjusted in the operating section by adding back all non-cash charges to net income and subtracting all non-cash income from net income.
 - g. Cash flows
 1. Fixed asset accounts
 - i. Depreciation Expense: \$3,538,740
 - ii. Capital expenditures: \$4,149,678
 - iii. Cash proceeds: \$74,514
 - iv. Gain from the sale: \$61,040

Golden Enterprises	
Property, Plant, and Equipment T-Account	
89,285,723	
4,149,678	
	412,958
Total: 9,3022,443	

Figure 3-1 Golden Enterprises Property, Plant, and Equipment T-Account

Golden Enterprises	
Accumulated Depreciation T-Account	
	62,788,133
	3,538,740
399,484	
	Total: 65,927,389

Figure 3-2 Golden Enterprises Accumulated Depreciation T-Account

Golden Enterprises	
Calculation of Book Value of Sold Assets	
Cost of Disposed Property	412,958
Less: Related Accumulated Depreciation	(399,484)
Book Value of Sold Assets	13,474

Figure 3-3 Golden Enterprises Calculation of Book Value of Sold Assets

Golden Enterprises	
Calculation of Gain on Sale of Assets	
Cash Received	74,514
Less: Book Value	(13,474)
Gain on Sale of Assets	61,040

Figure 3-4 Golden Enterprises Calculation of Gain on Sale of Assets

Golden Enterprises Statement of Cash Flows (Indirect) For the Year Ended May 31, 2013	
Net Income	1,134,037
Adjustments to reconcile net income to net cash provided by operating activities:	
Depreciation expense	3,538,740
Deferred income taxes	(185,939)
Gain on sale of property and equipment	(61,040)
Decrease in accounts receivable, net	106,367
Decrease in inventory	200,985
Decrease in prepaid expenses	200,137
Decrease in cash surrender value of insurance	62,906
Increase in other assets	(191,298)
Decrease in accounts payable	(1,216,399)
Increase in accrued expenses	954,938
Decrease in salary continuation plan	(49,774)
Decrease in accrued income taxes	113,369
Net cash provided by operating activities	4,607,029
Cash flows from investing activities	
Cash received from sale of plant assets	74,514
Cash paid for purchase of plant assets	(4,149,678)
Net cash used in investing activities	(4,075,164)
Cash flows from financing activities	
Debt proceeds	38,361,200
Debt repayments	(38,287,529)
Change in checks outstanding in excess of bank balance	(267,502)
Purchases of treasury shares	(6,860)
Cash dividends paid	(1,467,879)
Net cash used in financing activities	(1,668,570)
Net decrease in cash and cash equivalents	(1,136,705)
Cash and cash equivalents at beginning of year	1,893,816
Cash and cash equivalents at end of year	757,111

Figure 3-5 Golden Enterprises Statement of Cash Flows

- h. No, depreciation expense does not actually generate cash for Golden Enterprises. Even though it does not generate cash, depreciation expense does have an indirect affect on cash flow. Depreciation expense reduces the amount of tax that a company must pay on an asset, causing it to indirectly affect cash flow.

- i. According to the statement of cash flows for the years 2012 and 2013, cash and cash equivalents at the end of the year was significantly lower in 2013 than in 2012. This dramatic decrease is due to a decrease in net cash provided by operating activities and an increase in cash used in financing activities. According to the income statement, net sales in 2013 was greater than net sales in 2012, but net income is significantly lower. The decrease in net income is due to an increase of almost \$3,000,000 in selling, general, and administrative expenses. Also, the income statement for 2012 shows how gain on sale of assets was greater, interest expense was lower, and other income was higher. These three expenses contribute to net income in 2012 being higher than net income in 2013. The gross margin ratio, profit margin ratio, return on asset ratio, and return on equity ratio can be used to determine Golden Enterprises' profitability.

Golden Enterprise		
Profitability Ratios		
	2012	2013
Gross Margin Ratio	.4813	.4846
Profit Margin Ratio	.0162	.0083
Return on Assets	.0453	.0237
Return on Equity	.0905	.0471

Figure 3-6 Golden Enterprises Profitability Ratios

- Gross margin ratio is more favorable in 2013, meaning that the company sold inventory at a higher profit percentage. Profit margin ratio measures the percentage of sales made up of net income. According to the profit margin ratio, the profitability of Golden Enterprise was higher in 2012. Return on assets and return on equity measure the return of the elements based on net income. Because both ratios were higher in 2012, this year appears to have a higher profitability.
- j. Although Golden Enterprise has increased its cash received from customers from 2012 to 2013, the company's expenses have significantly increased as well. This increase in cost of goods sold and other expenses caused net cash provided by operating activities to be lower in 2013. If the decrease in net cash provided by operating activities and decrease in net cash used in investing activities is considered, then Golden Enterprises has decreased its productive capacity over the time period.
- k. Although it is beneficial for a company to invest in new assets, the benefit of the capital expenditure needs to outweigh the cost. In 2012 and 2013, the company invested a significant amount of money into equipment, property, and plant asset, but did not change anything to increase net income or cash flow from operations. The likely sources of cash to fund the increased level of investment in property and equipment are the \$38,361,200 of new debt obtained in 2013 and cash revenues saved for investment opportunities. Because of the company's decrease in net income and increase in expenses, the risk of spending \$5,000,000 on more investments could potentially outweigh Golden Enterprises capacity for making capital expenditures.

CASE 4: ACCOUNTS RECEIVABLE AND ESTIMATIONS

When companies sell goods on account, they are essentially extending credit to the customer. For Pearson, the trade receivables account represents the amount owed to the company by customers. Receivables are claims held against customers and others for money, goods, or services. Companies classify receivables as either current or noncurrent. Current receivables are collected within a year or during the current operating cycle, whichever is longer. All other receivables are classified as noncurrent. Companies further classify receivables as either trade or nontrade in the balance sheet. Trade receivables occur when customers owe a company amounts for goods bought or services rendered. Trade receivables can be further classified as accounts receivable and notes receivable. Accounts receivable are oral promises to pay the company the amount owed, and notes receivable are written promises to pay a certain sum of money on a specified future date.

When a companies estimates that some of its receivables will be uncollected, an allowance for doubtful accounts is developed. The allowance for doubtful accounts is a contra asset account associated with accounts receivable. The net realizable value of the accounts receivable is the credit balance of the allowance for doubtful accounts subtracted from the debit balance in accounts receivable. The credit balance occurs when bad debts expense is debited and allowance for doubtful accounts is credited.

The sales returns and allowances account is another contra account used by companies to estimate a change in past transactions. The sales returns and allowances

account is a contra revenue account that represents merchandise returned by a customer and the allowances granted to a customer for defective merchandise. When sales returns and allowances is debited and allowance for sales returns is credited, the estimated account is established. The sales returns and allowances will be subtracted from sales to arrive at net sales in the income statement. The allowance for sales returns, a contra asset, will be subtracted from accounts receivables in the balance sheet.

Because a company cannot know the exact amount of receivables uncollectible during the period, the bad debts expense must be estimated. In addition to the estimations, companies can predict the percentage of uncollectible receivables from past experiences, present market conditions, and an analysis of the outstanding balances. In the percentage-of-sales method, the company estimates what percentage of credit sales will be uncollectible based on past experience and anticipated credit policy. In the percentage-of-receivables method, companies can estimate the percentage of its outstanding receivables that will become uncollectible. Pearson uses this method by setting up an aging schedule of accounts receivable, which applies a different percentage based on past experiences to the various age categories. An example of the aging schedule is presented in Section I of the appendix.

In order to further analyze the receivables account, a company evaluates the time it takes for a company to collect its average accounts receivable balance. The accounts receivable turnover ratio reveals how many times receivables are collected during the period. A high turnover is favorable because it means the company is collecting outstanding credit continuously and efficiently. The average collection period corresponds with the accounts receivable turnover ratio. The average collection period reveals how

many days it takes for receivables to be collected during the period. A smaller average collection period is preferred because it shows receivables are being collected more quickly. By implementing these ratios, companies can see how effectively and efficiently they are collecting on receivables.

Appendix

- a. Accounts receivable are oral promises of the purchaser to pay for goods and services sold. Accounts receivable represent “open accounts,” resulting from short-term extensions of credit. Accounts receivable can be classified as current, noncurrent, trade, and nontrade receivables.
- b. Notes receivable differ from accounts receivable because notes receivable are written promises to pay, while accounts receivable are oral promises. Accounts receivable are normally collected within 30 to 60 days, while notes receivable can be collected at a time further in the future.
- c. A contra account is a general ledger account, which is intended to have its balance be the opposite of the normal balance for that account classification. A contra asset account is intended to have a credit balance instead of the debit balance normally found in an asset account. Provision for bad and doubtful debts and anticipated future sales returns are the two contra accounts associated with Pearson’s trade receivables. The allowance for bad and doubtful debts accounts are the estimated uncollectible items from transactions made with customers for goods or services. Anticipated future sales returns accounts are estimated expected purchase returns to be made over the time period for the company. Managers can either consider the percentage of sales or percentage of receivables to estimate the expected amount for allowance for doubtful accounts and sales return accounts. Management estimates what percentage of credit sales will be uncollectible based on past experiences and anticipated credit policy.
- d. The percentage of sales procedure results in a better matching of expenses with revenues, which is considered the income statement viewpoint. Management of the company should use past experience and anticipated credit policy to estimate the percentage of the sales uncollectible. The company applies this percentage to either total credit sales or net credit sales of the current year. A company can estimate the percentage of its outstanding receivables by using an aging schedule. An aging schedule of account receivable applies a different percentage based on past experience to the various age categories. This approach for estimating uncollectible accounts receivable identifies which accounts require special attention by indicating the extent to which certain accounts are past due. The aging schedule approach results in a more accurate estimate of net accounts receivable because it determines the composition of receivables and identifies delinquent accounts.
- e. Although Pearson anticipates that some percentage of accounts will be uncollectible, there is no way of knowing which customer will be the one to get laid off or file for bankruptcy, causing he or she to be unable to pay his or her expenses. If a company assumes that a specific customer will be unable to pay his or her debt,

then the company will be developing a poor relationship with the customer, which could result in a negative reputation.

- f. Activity in the provision for bad and doubtful debts account
 - i. According to Note 22, the beginning balance for the bad and doubtful debts account at the start of 2009 is £72 million. Exchange differences of £5 million occurred because of the time difference between when the sale was made and when the payment was received, resulting in a decrease in the provision for bad and doubtful debts account. Income statement movements increased the provision for bad and doubtful debts account by £26 million, as more bad debts were expensed. Also, an uncollectible account was written off, which decreased the provision for bad and doubtful debts account by £20 million. Lastly, the provision for bad and doubtful debts account increased by £3 million because of an acquisition through business combination. This increase occurred because Pearson took on the uncollectible accounts from the company that they acquired.

Provision for Bad and Doubtful Debts in 2009 T-Account	
All figures in £ millions	
	72
5	
	26
	76
20	
3	
	76

Figure 4-1 Provision for Bad and Doubtful Debts T-Account

- ii. Below are the journal entries that Pearson recorded during 2009 to capture the provision for bad and doubtful debts account activities. Journal entry number two captures the bad and doubtful debts expense for 2009. Journal entry number three captures the write-off of trade (accounts) receivable during 2009. Each account in the journal entries is either a balance sheet or income statement account. The provision for bad and doubtful debts account is a contra asset account on the balance sheet. The provision for bad and doubtful debts expense account is an expense on the income statement. The trade receivable account is an asset on the balance sheet. Gain on exchange differences is noted as an earning in the income statement. Loss on business acquisition is noted in the balance sheet.

Journal Entries for the Provision for Bad and Doubtful Debts Account Activities for 2009			
All figures in £ millions			
(1) Provision for Bad and Doubtful Debts		5	
	Gain on Exchange		5
(2) Bad and Doubtful Debt Expense		26	
	Provision for Bad and Doubtful Debts		26
(3) Provision for Bad and Doubtful Debts		20	
	Trade Receivable		20
(4) Loss on Business Acquisition		3	
	Provision for Bad and Doubtful Debts		3

Figure 4-2 Journal Entries for the Provision Bad and Doubtful Debts Activities

- iii. The provision for bad and doubtful debts expense is placed under operating expenses in the income statement.
- g. Activity in the provision for sales returns account
 - i. Shown below is a T-account displaying the activity in the provision for sales returns account during the year.

Provision for Sale Returns in 2009 T-Account	
All figures in £ millions	
	372
	425
443	
	354

Figure 4-3 Provision for Sale Returns T-Account

- ii. Two journal entries are recorded to capture the 2009 estimated sales returns and the amount of actual book returns during 2009. The sales return and allowances account is a contra revenue account on the income statement. The provision for sales returns account is a contra asset account on the balance sheet.

Journal Entries for the Provision for Sales Returns Account Activities for 2009			
All figures in £ millions			
Sales Returns and Allowances		425	
	Provision for Sales Returns		425
Provision for Sales Returns		443	
	Trade Receivable		443

Figure 4-4 Journal Entries for the Provision for Sales Returns Activities

- iii. The estimated sales returns account appears below the sales line in the income statement. Sales returns and allowances is subtracted from sales in the income statement to reach net sales.
- h. After the beginning balance of the trade receivable account is noted in the T-account, trade receivables of £20 million are credited to account for a write-off of bad debts. The second credit to gross trade receivables occurs because of a sales return of £443 million. Next, sales are debited, increasing trade receivables. Lastly, cash collections result in a decrease in the trade receivables account.

Gross Trade Receivables in 2009 T-Account	
All figures in £ millions	
1,474	
	20
	443
6,049	
	5,641
1,419	

Figure 4-5 Gross Trade Receivables T-Account

Journal Entries to Record Trade Receivables Activity in 2009			
All figures in £ millions			
Trade Receivable		6,049	
	Sales		6,049
Cash		5,641	
	Trade Receivable		5,641

Figure 4-6 Journal Entries to Record Trade Receivables Activity

- i. Displayed below is the aging-of-account procedure for estimating trade receivables uncollectible. Because the balance of the provision for bad and doubtful debts account is £76 million and the accounts estimated uncollectible is £74.19 million, the auditor would be comfortable with the results. The estimate in Note 22 of £76 million is slightly higher than the estimate found through the aging-of-account method, but the balance is enough to cover the estimate; therefore, it is adequate.

Estimation of Total Uncollectible Accounts at December 31, 2009			
All figures in £ millions			
	Trade Receivables Balance	Estimated % Uncollectible	Accounts Estimated Uncollectible
Within due date	1,096	2%	21.92
Up to three months past due date	228	4%	9.12
Three to six months past due date	51	25%	12.75
Six to nine months past due date	20	50%	10
Nine to 12 months past due date	4	60%	2.4
More than 12 months past due date	20	90%	18
Total	1,419		74.19

Figure 4-7 Estimation of Total Uncollectible Accounts

- j. Analysts can evaluate the time it takes for a company to collect its average accounts receivable balance through the accounts receivable turnover method and the average collection period method. As shown in the table below, receivables are collected approximately 3.888 times during the period in 2009 and 3.750 times during the period in 2008. The average collection period is 93.878 days for 2009 and 97.338 for 2008. The two ratios show that during 2009 receivables were collected more quickly than during 2008. The average collection period could possibly be shorter for 2009 than 2008 because the company has been around a year longer, allowing for collection policies to be altered and corrected. The company could have changed its approach for requesting payment from 2008 to 2009. Another possibly reason for the decrease in days could be an increase in the stability of the economy from 2008 to 2009. If more customers are retaining stable jobs and maintaining solid incomes, then they are more likely to be able to pay off their expenses within a shorter period.

Average Collection Period for 2009 and 2008		
	2009	2008
Credit sales, net (in £ millions)	5,624	4,811
Average gross trade receivables (in £ millions)	1,447	1,283
Account receivable turnover (in £ millions)	3.888	3.750
Average collection period (in days)	93.878	97.338

Figure 4-8 Average Collection Period

- k. In order to reduce Pearson's average collection period to align more with McGraw Hill Publishing, Pearson's Chief Financial Officer could implement benefits to customers who pay off their expenses within a certain time period. By giving out sales discounts to those customers who pay off their accounts within a certain time, Pearson will be able to decrease their average collection period and increase positive relationships with customers. Also, a sales discount would encourage more customers to purchase goods from Pearson, which would create new relationships.

CASE 5: INVENTORY AND REVENUE RECOGNITION

Although the current ratio, according to the 2014 financial statements, is within the range required by the bank, GAC is breaking the loan agreement because the current ratio is incorrect. Three major accounts, accounts receivable, inventory, and unearned revenue, have been calculated incorrectly. Through the following adjustments to the balance sheet and income statement, the correct current ratio can be estimated and relative solutions to change current ratio can be implemented.

Accounts receivable will be affected by three inventory accounts, plain shirts and inks, graphic design shirts, and custom shirts in production. Because new customers complain that it is too difficult to comply with GAC's sales terms on plain shirt purchases, an allowance for doubtful accounts of \$3,000 is created. In the balance sheet, allowance for doubtful account will decrease accounts receivable by \$3,000. Graphic design shirts (shirts at retailer) will decrease accounts receivable by \$7,500. At the end of the summer, the retail stores were unable to sell GAC's summer shirts; therefore, the unsold inventory is returned to GAC. Then, the company turns around and sells the shirts for 50 percent less, resulting in a decrease of \$7,500 for accounts receivables. Custom shirts in production will decrease accounts receivable because of the implementation of the revenue recognition principle. Revenue will be recognized once the service has been completed and earned. \$2,500 worth of custom shirts in production have yet to be earned; therefore, accounts receivable will decrease by \$2,500 until the revenue has been earned. Total accounts

receivable at the end of the adjustments equals \$22,500 less \$3,000 allowance for doubtful accounts, resulting in a debit balance of \$19,500.

Inventory will be affected by sales returns from retail stores and water damage from the warehouse leak. Shirts that do not sell during the season will be returned to GAC to be sold at a discount to another store. \$7,500 worth of graphic shirts at selling price were returned to GAC after the season ended, resulting in an increase in inventory of \$4,900, at cost. Water damage resulted in a loss of almost half of the plain shirts, which caused a decrease in inventory of \$5,100, at cost. This loss is declared an impaired inventory loss and is stated in the income statement under other gains and losses. Total inventory at the end of the adjustments equals \$24,300, at cost.

The unearned revenue account is affected by the custom shirt inventory. When the revenue recognition principle is implemented, unearned revenue considered a current liability in the balance sheet. Unearned revenue of \$10,000 has been included in the current liability adjustments and is included in the current ratio. The ending balance of unearned revenue at period end is a credit balance of \$10,000.

After adjustments have been made, the current ratio decreases from 1.35 to .866, which breaks the loan agreement of a current ratio of at least one. In order to bring current ratio back to one, GAC needs to either increase current assets or decrease current liabilities. The most beneficial way to decrease current liabilities is for GAC to complete unearned revenue orders. Once \$7,380 worth of unearned revenue has been recognized as earned, current ratio will no longer be less than one.

Appendix:

1. The key changes affecting GAC this year include Nicki taking over GAC, altering the look of GAC's 2014 graphic shirts, and making the shirts edgier as fashions

changes. Nicki loses some old customers and gains new ones. Nicki made an exception to GAC's policy of requiring payment in advance and instead recorded the sale as accounts receivable. After Nicki took over, the company shifted from equity financing to debt financing, which required GAC to submit its annual financial statements to the bank in accordance with GAAP.

- a. Nicki currently owns GAC.
 - b. Initially, the IRS was the only external financial statement user. Now that GAC has long-term debt, the bank will use the financial statements.
 - c. The bank requires GAC to submit its annual financial statements, prepared in accordance with generally accepted accounting principles (GAAP). Now, Nicki must analyze her financial statements to make sure that they are created correctly, so that the bank will continue its loan.
2. Because Nicki begins to sell shirts on account, the accounts receivable account is changed due to the creation of an allowance for doubtful accounts.
 - a. The custom shirt business increased significantly from year 2013 to 2014.
 - b. GAC's customer base before Nicki obtained ownership was stable. When she made the graphics edgier, many of Nicki's customers dropped her, but she was able to pick up new customers. These new customers are not willing to comply with GAC's sales terms of n/30. Nicki was able to replace several of GAC's reliable, longstanding customers with new start-up clothing stores.
 - c. The new look of GAC's 2014 graphic shirts has drawn the attention of bloggers and fashion critics, but GAC's base of conservative retailers cut back their orders for the 2014 season.
 - d. GAC's warehouse roof was leaking, but was repaired easily. Nicki was able to remove the majority of the stains that occurred to the shirts because of this leak, but was left with shirts that were beyond repair. Instead of throwing out these shirts, Nicki believed the stains presented a hidden "grittiness" that made the designs even edgier and used the shirts in the 2014 graphic design shirts.
 3. The revenue recognition principle requires that companies recognize revenue in the accounting period in which the performance obligation is satisfied. The company should record the revenue when it performed the service.
 4. GAC reports its revenue from custom orders when a signed order and payment is received. This is not an acceptable approach because these orders should be considered unearned revenue rather than earned revenue.
 5. The alternative point in time for reporting revenue from custom orders would be when the orders (services) have been completed.
 6. Revenue recognition principle is best for recognizing revenue from customs shirts because revenue should not be recognized until the company has satisfied the performance obligation. When the revenue recognition principle is not used, the company does not take into account the liability that resulted from paying in advance. When unearned revenue is not taken into account, current liabilities will be too low.
 7. Changing to the revenue recognition principle will affect the balance sheet because accounts receivable will decrease, the amount of inventory will change, and

unearned revenue will increase. In the income statement, bad debts expense will increase and sales returns and allowances will change. GAC's current ratio in 2014 is 1.35. After the revenue recognition principle is implemented, the current ratio will decrease due to an increase in liabilities.

$$\begin{aligned}\text{Current ratio} &= \text{current assets} \div \text{current liabilities} \\ &= 61,000 \div 45,180 \\ &= 1.35\end{aligned}$$

8. GAAP requires accounts receivable to be reported at their net realizable value. Net realizable value is the net amount the company expects to receive in cash.
9. GAC accounts for uncollectible receivables using the direct write-off method, whereby bad debts are accounted for when uncollectible accounts are written-off. The direct write-off method records facts and assumes that a good account receivable resulted from each sale, and that later events will reveal certain accounts to be uncollectible and worthless. The direct write-off method is often used for tax purposes. The direct write-off method is considered appropriate when the amount uncollectible is immaterial.
10. The direct write-off method does not record expenses in the same period as associated with revenue, which breaks the revenue/expense recognition principle. Also, the direct write-off method does not state receivables at net realizable value on the balance sheet. Because GAC must now submit its annual financial statements in accordance with GAAP, it is not acceptable to use the direct write-off method. The average number of days to collect receivables in 2013 was 33.28 days, but increased to 48.17 days in 2014. This change is negative because it shows that the days in which the company is collecting its outstanding credit is increasing; therefore, the company's efficiency in collecting receivables is decreasing.

Accounts receivable turnover = credit sales, net \div avg. gross accounts receivable

$$\begin{aligned}2013 &= 170,000 \div 15,500 \\ &= 10.968\end{aligned}$$

$$\begin{aligned}2014 &= 179,950 \div 23,750 \\ &= 7.577\end{aligned}$$

Avg. collection period = 365 days \div accounts receivable turnover

$$\begin{aligned}2013 &= 365 \div 10.968 \\ &33.28 \text{ days}\end{aligned}$$

$$\begin{aligned}2014 &= 365 \div 7.577 \\ &48.17 \text{ days}\end{aligned}$$

11. GAC should use the allowance method of accounting for bad debts. This approach involves estimating uncollectible accounts at the end of each period. One reason that suggest the allowance method is better than the direct write-off method is that the former method ensures that companies state receivables on the balance sheet at their net realizable value. The allowance method would be good for GAC because it is appropriate in situations where it is probable that an asset has been impaired,

such as the shirts that have been damaged in the warehouse leak. Also, the FASB requires the allowance method for financial reporting purposes when bad debts are material in amount.

12. GAC should use the allowance method of accounting for bad debts. Although the direct write-off method is simple and convenient to apply, it is deficient. GAC needs to use the allowance method so that its financial statements can be in accordance with GAAP. Also, as stated above, the allowance method is useful in situations where it is likely that an asset has been impaired and that the amount of the loss can be reasonably estimated. It would not be beneficial for GAC to use the direct write-off method because receivables are not recorded at net realizable value in this approach.
13. By changing to the allowance method, GAC would develop an allowance for doubtful accounts contra asset account. The allowance account would be subtracted from accounts receivable in the current assets section of the balance sheet. Because the allowance for doubtful accounts will decrease the amount of current assets, the current ratio will decrease.
14. GAC reports sales returns in the month that goods are returned by retail customers. This method is acceptable only if the sales return will be authorized in the same period that the original sale transaction was completed. If the sales return is authorized in a different time period, there will be an excessive amount of revenue recognized in the original reporting period, with the offsetting sales reduction appearing in a later reporting period.
15. In 2014, GAC's roof began to leak, which caused damages to inventory. Because the inventory is impaired, GAC should expect more sales returns and should update their accounting methods to support these changes. Due to the increase in expected sales returns, the amount is no longer immaterial to financial statement users.
16. Because of an increase in impaired inventory at the retailer, GAC needs to begin debiting sales returns and allowances and crediting allowance for sales returns to develop a contra revenue and contra asset account to cover the expected returns. GAC can no longer use the direct write-off method when accounting for sales returns because the estimated returns is material in amount. GAC should use the allowance method in accounting for sales returns in order to estimate the amount of returns for upcoming periods.
17. Yes, GAC should switch from the direct write-off method to the allowance method for accounting for sales returns. The direct write-off method overstates profit in the first period and understates profit in the later period, when a sales return is not authorized in the same period in which the original sales transaction was completed. GAC needs to use the allowance method now because the bank is requiring annual financial statements. Before GAC changed ownership, external financial statements were not critical to the company's survival. Now that the bank is requesting annual reports, the amount of sales returns is material to the key external users; therefore, crucial in the end of period adjustment process.
18. The allowance method is a better approach than the direct write-off method for accounting for sales returns and allowances because it shows financial statement users the actual amount of money that the company expects to get from sales at the end of each period. By developing a sales returns and allowances account and an

allowance for sales returns account, a company will not be backtracking when an item is returned, but rather simply adjusting the allowance for sales returns account.

19. The allowance method for estimating sales returns and allowance will change inventory because of a decrease due to water damage and an increase due to acknowledgement of shirts at retailers. This change in inventory will affect the current asset section of the balance sheet. The change in allowance for sales returns will decrease accounts receivable, which will decrease the current asset section of the balance sheet. Also, sales returns and allowances will decrease the amount of net sales revenue in the income statement.
20. Under the new guidelines, the lower of cost or market test for measuring inventory will be replaced with a lower of cost and net realizable value test. This guidance applies to inventories for which cost is determined by methods other than last-in first-out and retail inventory method.
21. GAC has been reporting its inventories of shirts at the lower of cost and market. Market value is defined as net realizable value for finished goods and replacement cost for raw materials and goods in production. The cost principle and the revenue recognition principle prevent the reporting of inventory at more than cost; therefore, the lower of cost and market measurement would be inappropriate if the amount is greater than the cost.
22. Because of the damage that resulted because of the leak in the warehouse roof, replacement cost will be a key figure in determining the lower of cost and net realizable value measurement. Also, according to the number of days to sell inventory ratio, in 2013 it only took 40.56 days to convert inventory at the end of a period into accounts receivable or cash. In 2014, the number of days to sell inventory increased to 96.16 days. This increased days' sales in inventory suggest that GAC needs to aim for ways to increase inventory turnover and reduce inventory levels.

$$\begin{aligned}
 \text{Days to sell inventory} &= (\text{ending inventory} \div \text{cost of goods sold}) \times 365 \\
 2013 &= (9,000 \div 81,000) \times 365 \\
 &= 40.56 \text{ days} \\
 2014 &= (24,500 \div 93,000) \times 365 \\
 &= 96.16 \text{ days}
 \end{aligned}$$

23. Nicki estimates that GAC's total selling price for all shirts held by retail stores at the end of August was \$15,000. This number is too high to be beneficial because retail stores are already moving Nicki's shirts to the clearance racks to make room for fall attire. Nicki is going to have to put her shirts on sale in order to sell them. GAC will most likely have to decrease its estimated total selling price in retail stores to \$7500, which would mark selling price below cost. The gross profit percentage in 2013 and 2014 was 52.35% and 48.32% respectively. The gross profit percentage indicates that the company could reduce the selling price of its products by 52.35% in 2013 and 48.32% in 2014 without incurring any loss. In 2014, the margin of difference between the selling price and cost decreased in comparison to the 2013 amount. This change in gross profit percentage is most likely the result of a decline in prices, increase in bad debts and an increase in production costs.

Gross profit percentage	= (gross profit ÷ net sales) x 100
2013	= (89,000 ÷ 170,000) x 100
	= 52.35%
2014	= (86,950 ÷ 179,950) x 100
	= 48.32%

24. GAC is going to have to show the loss from the water damage in the financial statements at the end of the period because it is very unlikely that Nicki will receive the full \$15,000 from retailers. Retailers will begin returning or discounting the shirts in order to make room for new pieces. GAC is going to have to implement an impairment loss account. By debiting impairment loss and crediting inventory, the decrease in selling price because of the damage will be apparent to financial statement users. Also, the impairment loss will be included in the income statement.
25. Changing to the alternative method would change the amount of inventory and decrease the amount of receivables in the current assets section of the balance sheet. As a result of the change, GAC's current ratio would decrease.
26. After all the changes are implemented, current ratio will decrease from 1.350 to .866.

$$\begin{aligned}\text{Adjusted current ratio} &= 47,800 \div 55,180 \\ &= .866\end{aligned}$$

27. Current assets would need to increase by \$7,380 to bring current ratio to 1. Current liabilities could decrease by \$7,380 to return GAC to a current ratio of 1. Once Nicki has prepared \$7,380 worth of unearned revenue, she will be able to decrease the liability account, which would return current ratio to 1.
28. Nicki made a good decision when she chose to hire an outsider to look into the financials of her business, but her company needs much more to survive. Nicki needs to use an actual auditing firm to make sure that her financial statements are in accordance with GAAP. Currently, the bank is not going to accept her loan because her current ratio is too low, but Nicki was unaware of this because of her accounting mistakes in calculating inventory, accounts receivable, and unearned revenue. Nicki needs to stick to the guidelines and methods previously mentioned in order to develop consistent, comparable, and accurate financial statements.

CASE 6: DEPRECIATION

Depreciation is the process by which a company allocates an asset's cost over the duration of its useful life. When three airlines, Northwest, Delta, and United, purchased a new Boeing 757 for \$75 million, it could be falsely expected that all three would depreciate their new asset at the same rate. The estimated useful life and annual depreciation will determine the financial period during which the company wishes to expense the majority of its cost. For Northwest, Delta, and United, the depreciable amount (book value less residual value) was the same, but the useful life differed. Northwest estimated the shortest useful life of 14.50 years and the highest annual depreciation of \$4.91 million. A short useful life and high annual depreciation allows for a company to expense its asset more quickly, but at the cost of a higher expense. If a company is confident in the level of its net earnings, then it could handle a high annual depreciation rate. In contrast, if a company's net earnings are low, then it may want to spread depreciation costs over a longer period in order to decrease the annual expense. With an estimated useful life of 27.5 years and an annual depreciation expense of \$2.59 million, United seemed to take advantage of the latter approach to expensing depreciation. Delta's estimated useful life and annual depreciation expense fell within Northwest's and United's range, with an estimated useful life of 20 years and annual depreciation of \$3.56 million. Although GAAP allows companies to use different approaches and methods for estimating depreciation expense, cost must be

allocated over the asset's life in the period in which the depreciation occurred and the value of the asset should decrease as it is used during its estimated lifetime.

Waste Management did not adhere to the guidelines for reporting depreciation expense in accordance with GAAP. The CEO and other executives of Waste Management set net earnings goals that they wanted the company to reach, but instead of altering the estimated net earnings, they distorted the allocation of cost. Similar to United Airlines, Waste Management could have spread the costs of assets to be allocated across a longer estimated useful life in an ethical way to decrease annual depreciation expense. In contrast, Waste Management eliminated or deferred expenses on assets that it did not wish to recognize because of the effect it would have on net earnings for the current period. Waste Management's financial statements were neither fair nor complete because several expenses were absent, which overstated net earnings to reach the executives' set amount. Waste Management simultaneously extended the estimated useful lives of the garbage trucks and increased the trucks' residual value. According to Waste Management's financial statements, the trucks were gaining value as they became older. Although Waste Management executives seemed to believe that they could get away with the falsely stated net earnings because of their relationship with Arthur Andersen LLP, the SEC was not fooled.

The SEC ruled that six executives of Waste Management made untrue statements of material facts or omitted to state material facts which led to fraud and deceit. Waste Management filed materially false and misleading annual reports on Form 10-k and Form 10-Q. Also, Waste Management failed to keep books, records, and accounts that accurately reflected their transactions and lied to auditors concerning these books. Arthur Andersen

knowingly and recklessly issued materially false and misleading audit reports on Waste Management's annual financial statements.

Appendix:

I. Airlines

1.

Estimated Gain (Loss) On Sale			
Values in USD millions			
Book Value January 1, 2005	Northwest	Delta	United
Residual	\$75.00	\$75.00	\$75.00
Depreciable amount	\$3.75	\$3.75	\$3.75
Useful life (in years)	\$71.25	\$71.25	\$71.25
Annual depreciation	14.50	20.00	27.50
Accumulated Depreciation on December 31, 2008	\$4.91	\$3.56	\$2.59
Book Value at December 31, 2008	\$19.66	\$14.25	\$10.36
Sale Price I	\$55.34	\$60.75	\$64.64
Gain (Loss) on Sale I	\$55.00	\$60.00	\$65.00
Sale Price II	\$0.34	\$0.75	\$0.36
Gain (Loss) on Sale II	\$60.00	\$60.00	\$60.00

Figure 6-1 Estimated Gain (Loss) on Sale

2. Northwest uses the shortest useful life, which will cause the equipment to depreciation more quickly in their reports, compared to Delta and United. In the next 14.5 years, depreciation expense will be higher for Northwest, which will cause a decrease in net earnings. Once the 14.5 years have passed and the asset has been fully expensed, then Northwest's net earnings will be maximized. United has the longest useful life, which will allow depreciation expense to be spread out over many years. Net earnings will not be affected for United as much as it is for Northwest at the beginning, but United will have to keep expensing the asset for 13 more years. If a company has a stable net income before acquiring the asset, then they can afford to expense its asset significantly for 14.5 years. If a company wants to be conservation with expensing net income, then a longer useful life would be safer because the expense will be spread over a longer period.
3. The varying sale price is more realistic because due to different appreciation rates, the carrying value of the equipment is different for each company. Because carrying value for Northwest is the lowest at December 31, 2008, it makes since that the sale price is the lowest.

II. Garbage Trucks

1. The charges against Waste Management, Inc. include falsifying their earnings and other measures of financial performance to investors, the public, and the Commission to meet predetermined earnings targets. The company overstated its profit by \$1.7 billion and avoided millions in losses by eliminating or deferring expenses. Waste Management's CEO and other executives manipulated the company's financial results in order to keep their executive positions, collect significant performance-based bonuses, and increase retirement benefits. Then, the executives unloaded inflated company stock on investors, resulting in a loss of \$6 billion for shareholders. Waste Management's executives disregarded current period expenses in order to overstate earnings. To cover-up Waste Management's acts of fraud, the executives used netting to erase \$490 million in current period expenses by offsetting one-time gains against current expenses.
2. Waste Management eliminated or deferred depreciation expense in order to reach the set earnings goal. Waste Management avoided depreciation expense by simultaneously extending the useful lives of the garbage trucks and increasing the trucks' salvage values. Rather than decreasing the trucks' worth as they became older and used, Waste Management falsely increased their worth. Also, the executives failed to document expenses for decreases in the value of landfills as they were filled with waste, failed to write off the costs of impaired and abandoned landfill development projects, and improperly capitalized a variety of expenses. By increasing their gains and eliminating their expenses, Waste Management managed their earnings to reach the set goal.
3. The leaders of Waste Management wanted to manage earnings because they would benefit from substantially increasing earnings, such as bonuses based on the inflated earnings, stock options, high-paying jobs, enhanced retirement benefits, and lucrative employee contracts. Managing Waste Management's earnings allowed for the executives to control the stock price. Executives who sold their inflated stock acquired significant gains on shares of stock that were not worth nearly as much as the buyer believed. While stock prices were inflated, managers cashed in their stock or receive accolades for donating worthless stock.
4. Arthur Andersen "knowingly or recklessly" issued materially false and misleading audit reports on Waste Management's annual financial statements. The audit reports falsely claimed that the financial statements were created in accordance with GAAP and GAAS. Andersen agreed to the first antifraud injunction in more than 20 years and agreed to be censured under the SEC's rules of practice. Four Andersen partners were punished and agreed to a bar from appearing or practicing before the commission as an accountant, with the right to request reinstatement after five, two, or one years. The SEC's Director

of Enforcement stated, “Arthur Andersen and its partners failed to stand up to company management and thereby betrayed their ultimate allegiance to Waste Management’s shareholders and the investing public.” The terms of Arthur Andersen’s settlement with the SEC included, consenting to the entry of a permanent injunction enjoining it from violating the Securities Exchange Act of 1934, consenting to pay a civil money penalty of seven million dollars, and consenting to a censure pursuant to rule 102(e) because the firm engaged in improper professional conduct.

CASE 7: INTERNATIONAL ACCOUNTING STANDARDS**Environmental Liabilities in 2007**

US GAAP: In 2007, at the time of the purchase, Construct should not record a liability for environmental liabilities because the company did not know of any. For a liability to be recorded, there must be probability that the liability occurred and the amount of the liability must be reasonably estimated, according to Section 410-30-25-4 and Section 410-30-25-7 of the Accounting Standards Codification. Because Construct was unaware of the liability, it can be assumed that the company would have little reason to expect an environmental liability had occurred and reasonable estimation would not be possible.

IFRS: At the time of the purchase, Construct should not record a liability for environmental liabilities because the company was unaware of the contamination. Construct would not recognize a provision because a present obligation has not arisen as a result of past events, probability of payment is unknown, and the amount cannot be reasonably estimated.

Liabilities due to BigMix's Bankruptcy in 2008

US GAAP: Construct was not affected by BigMix filing under Chapter 11 of the United States Bankruptcy Code; therefore, Construct has no reason to believe an environmental liability exists. If BigMix was also unaware of the contaminated soil and potential water contamination, then the fact that the company filed for bankruptcy is unrelated to the upcoming environmental liability. If BigMix speculated that the water and soil were contaminated and feared the costs of dealing with the liability, then filing for bankruptcy would have affected Construct. Nevertheless, in both situations, Construct is uninformed on the topic pertaining to a potential environmental liability; and therefore, should not recognize any liability.

IFRS: Similar to US GAAP, because Construct was unaffected by BigMix filing for bankruptcy, the company should not record any liability.

Environmental Liabilities in 2009

US GAAP: In 2009, Construct should not recognize a potential loss of \$250,000. Section 310-30-25-4 of the Accounting Standards Codification states that two situations must be met for an incurred liability to be probable. The first element states that it has to have been “asserted (or it is probable that it will be asserted) that the entity is responsible for participating in a remediation process because of a past event.” Because the environmental agency, contacted by Construct, estimated that there was a 60 percent chance of the EPA assessing Construct penalties, the first element of determining probability that a liability had incurred was not met. The second element states that it has to be probable that the outcome of the assessment will be unfavorable. The agency estimated that the costs associated would be \$250,000, resulting in a loss. Because the agency estimated the probability at 60 percent, the liability should not be recorded.

IFRS: In 2009, Construct should recognize a contingent liability because according to the agency, a present obligation has arisen from past events that will more likely than not result in payment which can be reasonably estimated. Although in US GAAP, 60 percent is not considered probable, IFRS defines probable as more likely than not; therefore, it is probable that Construct will have to pay the estimated \$250,000.

Environmental Liabilities in 2010

US GAAP: In 2010, EPA placed the property acquired from BigMix on the National Priorities list and named Construct as one of the responsible parties. Also, Construct was made to undertake the remedial investigation and feasibility study. The previously mentioned circumstances result in both elements of probability being met because claims stating that the property has been contaminated have been made and Construct is responsible for participating in the remediation process. Although Construct was unable to estimate the total cost of the remediation effort, the liability should still be recognized, according to Section 410-30-25-11. Because the amount of the liability could not be estimated, \$400,000 of legal fees and RI/FS costs should be reported. Construct should not recognize an amount potentially received by BigMix in the future because the legal proceedings were ongoing at the end of 2010.

IFRS: In 2011, Construct should recognize a provision of \$400,000 for the potential environmental remediation. Because there is no range to determine the amount of the liability, the midpoint cannot be chosen as the amount to be recognized. For that reason, Construct should recognize \$400,000 in 2011. Because the amount of the payment is unknown and it is not virtually certain that the payment will be received from BigMix, Construct cannot recognize a recovery.

Environmental Liabilities in 2011

US GAAP: In 2011, Construct should record an additional liability of \$1.5 million to implement the remediation plan because Construct is being held responsible for the contamination and because the cost of the liability can be reasonably estimated.

IFRS: In 2011, Construct should record an additional liability of \$1.5 million because it is probable that an outflow of resources will be required to settle the obligation and the amount can be estimated reliably.

Gain Contingency/Contingent Asset in 2012

US GAAP: Although Construct's attorneys believe that a \$1 million settlement may be obtained from BigMix's former shareholders, the company should not record any gain contingency for the potential settlement. According to Section 450-30-25-1 of the Accounting Standards Codification, a gain contingency "should not be reflected in the financial statements because to do so might be to recognize revenue before its realization."

IFRS: Although the attorneys believe that they have a 75 percent chance of obtaining the gain, Construct should not recognize the contingent asset because realization is not virtually certain.

CASE 8: LONG-TERM DEBT

Bonds represent a promise to pay a sum of money at a designated maturity date, plus periodic interest at a specific rate on the face value. The main purpose of bonds is to borrow for the long term when the amount of capital needed is too large for one lender to supply. Rite Aid uses both secured and unsecured bonds. Secured bonds are backed by collateral. Collateral consists of real estate for mortgage bonds and stocks and bonds of other corporations for secured trust bonds. Unsecured bonds are not backed by collateral, such as debenture bonds. Unsecured bonds are usually very risky and pay high interest rates. Bonds can also be categorized as guaranteed. When a debt is guaranteed, a guarantor must assume the debt obligation if the borrower defaults on the note. Lastly, bonds can be categorized as convertible, senior, and fixed-rate. Convertible bonds are convertible into other securities of the corporation for a specified time after issuance. A fixed-rate bond is a long-term debt that carries a predetermined interest rate. Senior bonds are the first liabilities to be paid out, making it among the safest form of financing for the investor.

Rite Aid Corporation has many different kinds of debt with differing maturity dates. Rite Aid's financial statements show that the company uses the straight-line method to amortize the discounts on bonds payable. Although effective interest method is a more accurate method for amortizing discounts, it is acceptable for Rite Aid to use the straight-line method because the differences are immaterial, as shown in part e(vii) of the Appendix. Because the interest expense under the straight-line amortization method is the same each

year and the interest expense under the effective interest method increases each year, the difference when subtracting straight-line interest expense from effective interest interest expense starts negative and ends positive.

Regardless of the method of discount amortization used, Rite Aid's numbers result in more liabilities than assets and greater expenses than revenues. As shown in part h(i) of the Appendix, Rite Aid's ratios for fiscal year 2009 and fiscal year 2008 are unfavorable in comparison to the industry average. The most alarming numbers are the common-size debt ratio, which compares total liabilities to total assets, and the long-term debt to equity ratio, which compares total long-term debt to total shareholders' equity. In fiscal year 2009 and fiscal year 2008, the percentages for common-size debt and long-term debt to equity ratios were alarmingly high because of the company's large amount of debt. By analyzing Rite Aid's ratios, it becomes apparent that the company will more than likely not be able to repay its debts. Rite Aid's credit rating is CCC, which describes the company as vulnerable and dependent on favorable business, financial, and economic conditions to meet financial commitments. A low credit rating, such as CCC, shows investors that Rite Aid is a high risk company, and therefore loan agreements should be carefully considered.

Appendix: (all dollar values in calculations and tables are in thousands)

- a.
 - i. Secured debt is backed by a pledge of some sort of collateral. Mortgage bonds are secured by a claim on real estate. Collateral trust bonds are secured by stocks and bonds of other corporations. Debt not backed by collateral are unsecured, such as debenture bonds and junk bonds. Rite Aid distinguishes between these two types of debt because although the company has accumulated a large amount of debt, the majority is secured which is less risky.
 - ii. If a debt is guaranteed, then the guarantor assumes the debt obligation of the borrow if the borrower defaults on the note. Right Aid was the guarantor of unsecured debt to the company's subsidiaries.

- iii. Senior debt takes priority over other unsecured debts and has greater seniority in the issuer's capital structure than subordinated debt. A fixed-rate bond is a long term debt that carries a predetermined interest rate. Convertible bonds are convertible into other securities of the corporation for specified time after issuance.
 - iv. Rite Aid has several different types of debt with a range of interest rates because the company has many subsidiaries with differing levels of riskiness. Also, Rite Aid needs investments that mature at different times in the future, which requires the need for multiple kinds of debt.
- b. Rite Aid's total debt at February 27, 2010 is \$6,370,899. The total debt comes from current maturities of long-term debt and lease financing obligations of \$51,502 and long-term debt, less current maturities of \$6,185,633 and lease financing obligations, less current maturities of \$133,764. Current maturities of long-term debt and lease financing obligations of \$51,502 is due within the coming fiscal year.
- c.
- i. The face value of the 7.5% senior secured notes due March 2017 is \$500,000. The given amount is the face value because there is no mention of a discount or premium on bonds payable. Also, the balance of the notes stays the same from year 2009 to 2010.

Issuance of the Note Journal Entry

Cash	\$500,000	
	Bond Payable	\$500,000

Annual Interest Expense Journal Entry

Interest Expense	\$37,500	
	Cash	\$37,500

Note at Maturity Journal Entry

Bond Payable	\$500,000	
	Cash	\$500,000

- d.
- i. Face value of the note is \$410,000. Carrying value of the note is \$405,951. The two values differ because only a portion of the discount has been amortized.
 - ii. Rite Aid paid \$38,437.5 interest on the notes during the fiscal 2009. (410,000*.09375)
 - iii. The total amount of interest expense for the year ended February 27, 2010 is \$39,142.5.

$$\begin{aligned} \$405,951 - \$405,246 &= \$705 \\ \$38,437.50 + \$705 &= \$39,142.50 \end{aligned}$$

iv.

Interest Expense for Fiscal Year 2009	
Interest Expense	\$39,142.50
Discount on Bond	\$705.00
Cash	\$38,437.50

$$\begin{aligned} \text{v. Total Rate of Interest} &= \$39,142.50 / \$405,951 \\ &= 9.6422\% \end{aligned}$$

e.

$$\begin{aligned} \text{i. Cash} &= \$410,000 * 98.2\% \\ &= \$402,620 \end{aligned}$$

Journal Entry for Issuance of Note

Cash	\$402,620	
Discount on Bond	\$7380	
	Bond Payable	\$410,000

$$\begin{aligned} \text{ii. Effective annual rate of interest} &= \$40,749.98 / 402,620 \\ &= 10.1212\% \end{aligned}$$

$$\begin{aligned} \text{iii. Interest expense} &= \$40,749.98 * (8/12) \\ &= \$27,166.65 \\ \text{Interest Payable} &= \$39,975 * (8/12) \\ &= \$26,650 \end{aligned}$$

Journal Entry for Interest Expense February 27, 2010

Interest Expense	\$27,166.65	
	Discount on Bond	\$516.65
	Interest Payable	\$26,650.00

Rite Aid					
Amortization Schedule- Effective Interest Method					
Date	Interest Payment	Interest Expense	Bond Discount Amortization	Net Book Value of Debt	Effective Interest Rate
6/30/09	-	-	-	\$402,620	10%
6/30/10	\$39,975	\$40,750	\$775	\$403,395	10%
6/30/11	\$39,975	\$40,828	\$853	\$404,248	10%
6/30/12	\$39,975	\$40,915	\$940	\$405,188	10%
6/30/13	\$39,975	\$41,010	\$1,035	\$406,223	10%
6/30/14	\$39,975	\$41,115	\$1,140	\$407,363	10%
6/30/15	\$39,975	\$41,230	\$1,255	\$408,618	10%
6/30/16	\$39,975	\$41,357	\$1,382	\$410,000	10%

Figure 8-1 Rite Aid Amortization Schedule- Effective Interest Method

CASE 9: STOCKHOLDERS' EQUITY

Dividends are distributed to common stockholders when a company has accumulated earnings that do not have to be reinvested in the company. Usually, if a company is starting out, the majority of profits need to be reinvested into the company, in order for the company to grow. In contrast, companies that have consecutively produce substantial earnings, often pay dividends because they do not need to reinvest as much back into the company. While the majority of stockholders are mainly concerned with an increased in the market price, some are more focused on the dividends paid each quarter. These investors are attracted to the reliability of a quarterly income from dividends. Once a company begins to pay dividends to its common shareholders, it is unfavorable for the company to decrease or eliminate the dividends because investors would see this as a decrease in profitability. On the other hand, if a company increases its cash dividends, stockholders would see this as an increase in the company's overall profitability. In addition to spending profits on cash dividends, companies can use their earnings to purchase treasury stock.

Treasury stock is obtained when a company repurchases shares of its own common stock. Purchasing treasury stock is beneficial for a company for several reasons. First, if the stock is undervalued, then a company can repurchase its stock for a profit by buying low now and selling high in the future. Also, through purchasing its own stock, a company can increase earnings per share. Earnings per share is found by dividing net income by the

number of shares outstanding. When a company buys treasury stock, the number of shares outstanding is decreased by the number of treasury shares repurchased, which will result in an increased earnings per share. Lastly, if a company is feeling threatened by potential takeover attempts, then the company should repurchase shares of its common stock to decrease outside control.

Treasury stock can be accounted for in the stockholders' equity section of the balance sheet by two different methods. The cost method is the more common of the two. Through the cost method, all entries to the treasury stock account are made at the repurchase price. In accordance with the cost method, treasury stock is subtracted from total contributed capital and retained earnings at the bottom of the stockholders' equity section of the balance sheet. In the par value method, treasury stock is debit at par value, instead of at cost. Another difference between the two methods is that treasury stock is deducted from common stock in the capital stock section of the balance sheet. In the case on financial reporting, Merck uses the cost method. In accordance with IFRS, GlaxoSmithKline uses the movements in equity statement instead of the statement of stockholders' equity. Although these methods are presented differently, the resulting values can be compared through ratio analysis.

Merck's dividend yield ratio decreased from 3.65 percent in 2006 to 2.64 percent in 2007. The dividend yield ratio indicates how much a company pays out in dividends each year in comparison to its market price per share. Through the dividend yield ratio, stockholders can see the amount of cash flow received for each dollar invested in the stock, or the return on the investment. Although stockholders want a high return on their investment, this return should not come at cost to the market price. Therefore, an increase

in dividends per share is more beneficial to the company than a decrease in market price of the share. Another ratio to consider between the years 2006 and 2007 is the dividend payout ratio, which indicates how much money the company is returning to shareholders. An increase in the dividend payout ratio for a mature company is expected because only a smaller portion of the earnings is needed in investments; therefore, the company can spread the profits to its shareholders. The dividend payout for GlaxoSmithKline was 45.53 percent in 2007. GlaxoSmithKline's net income in 2007 was significantly higher than Merck's net income, resulting in a lower dividend payout ratio.

Appendix:

a.

- i. Merck is authorized to issue 5,400,000,000 shares of common stock.
- ii. Merck has actually issued 2,983,508,675 shares of common stock at December 31, 2007.
- iii. The total dollar value of common stock reported on the balance sheet on December 31, 2007 is \$29.8 million. The common stock has a par value of one cent and 2,983,508,675 shares issued, resulting in a total dollar value of \$29.8 million.
- iv. Merck holds 811,005,791 shares of treasury stock at December 31, 2007.
- v. 2,172,502,884 shares of common stock are outstanding at December 31, 2007.

Issued stock – treasury stock =	outstanding stock
2,976,223,337 – 811,005,791 =	2,172,502,884
- vi. Total market capitalization of Merck on December 31, 2007 is \$125,157,900,000

Shares outstanding (market price) =	Total market capitalization
2,172,502,884 x \$57.61 =	\$125,157,900,000

b.

- i. GlaxoSmithKline is authorized to issue 10,000,000,000 shares of ordinary shares.
- ii. GlaxoSmithKline has actually issued 6,012,587,026 shares at December 31, 2007.
- iii. 5,743,587,026 shares are in free issues as of December 31, 2007.

Issued shares – treasury stock =	shares in free issue
6,012,587,026 – 269,000,000	= 5,743,587,026 shares
- iv. 269,000,000 common shares are held in treasury at December 31, 2007.
- v. For GlaxoSmithKline, share capital makes up the common stock of the company. Share premium account is another name for the paid-in excess of par. Therefore, share capital would be equal to the number of shares at par

value, and share premium would be equal to the difference between what the stock purchaser paid for the stock and the par value of the stock.

- c. When a company has a solid stream of earnings that they do not need to reinvest into the company, dividends are usually paid out. Dividends make the stock more attractive to investors because they will see return not only on an increase in market price of their stock holdings, but also on periodic dividend distributions. Also, dividends are proof that the company is doing well enough to share some of the wealth. At the ex-dividend date or the day after the date of record, the market price of dividend paying stock goes down because the company has lost the amount paid out in dividends, which reduces the company's total market capitalization. Although the market price should go down, unless the dividend is considerably large, the change in price will not be noted in the ups and downs of a normal trading day.
- d. Companies repurchase their own shares for several reasons. First, if the stock is undervalued, then the company might purchase it low in order to sell high. Secondly, a company might purchase back its own shares to increase earnings per share. EPS is net income divided by the number of shares outstanding; therefore, if a firm decreases the number of shares outstanding and net income remains constant, then EPS will increase. Lastly, if a company feels that there is potential for a takeover, treasury stock might be purchased to limit outside control.
- e. Journal Entry: Merck's Common Dividend Activity for 2007 (in millions)
- | | | | |
|----|--------------------|------------|------------|
| i. | Dividends Declared | \$3,310.70 | |
| | Dividends Payable | | \$3.40 |
| | Cash | | \$3,307.30 |
- f. Journal Entry: GlaxoSmithKline's Dividend Activity for 2007 (in millions)
- | | | | |
|----|--------------------|-----------|-----------|
| i. | Dividends Declared | £2,793.00 | |
| | Cash | | £2,793.00 |
- ii. Dividends declared in 2007 were £2,905,000,000, and dividends paid were £2,793,000,000. The difference between these two values is due to the fact that GlaxoSmithKline normally pays a dividend two quarters after the quarter to which it relates and one quarter after it is declared. Therefore, the dividends paid in 2007 consist of the third and fourth quarters of 2006 and the first and second quarters of 2007.
- g.
- | | |
|------|--|
| i. | Because the treasury shares are deducted at the bottom of the stockholders' equity section of the balance sheet, it is clear that Merck uses the cost method to account for its treasury stock transactions. |
| ii. | Merck repurchased 26.5 million shares on the open market in 2007. |
| iii. | Merck paid \$1,429.70 million in total and \$53.95 per share to buy back its stock during 2007. Purchasing treasury stock is classified as an investing cash flow. |

- iv. Merck does not disclose its treasury stock as an asset because treasury stock is a contra equity account. Treasury stock is not considered an asset because it represents the amount of money a company paid to buy back its own stock.
- h.
 - i. GlaxoSmithKline repurchased 285,034,000 shares of common stock on the open market in 2007. Of the 285,034,000 shares repurchased, 269 million shares are held as treasury and 16 million shares have been cancelled.
 - ii. GlaxoSmithKline paid, on average, £13.09 per share repurchase during 2007.
 - iii. The movements in equity statement for IFRS is comparable to the statement of retained earnings for U.S. GAAP. The journal entry differs from the U.S. GAAP treatment because the retained earnings account is debited.

Journal Entry: GlaxoSmithKline's Share Repurchases of 2007 (in millions)

Retained Earnings	£3,750	
Cash		£3,750

- i. Dividends per share decreased slightly from 2006 to 2007. Although a decrease in dividends per share seems unfavorable for the company and stockholders, the decrease is due to an increase in shares outstanding not to a decrease in dividends paid. Dividend yield decreased from 2006 to 2007 because of a decrease in dividends per share and an increase in the market price of stock. A decrease in dividend yield is usually unfavorable because it implies a decreasing return on investment. Normally, an increase in dividend payout would be profitable, but the increase occurred because of a significant decrease in net income, which is unfavorable. The dividends to total assets and dividends to operating cash flows ratios show a decrease from 2006 to 2007. This decrease is mostly due to an increase in assets and an increase in operating cash flows. Compared to Merck, GlaxoSmithKline's dividends paid is significantly lower, even though net income and market price per share are higher. With a substantially larger number of shares outstanding and an increase in income, dividends paid and dividends per share are expected to be higher, but this is not the case in GlaxoSmithKline's situation.

j.

Comparison of Values and Ratios			
	Merck		GlaxoSmithKline
	2007	2006	2007
Dividends paid	\$3,307,300,000	\$3,322,600,000	£2,793,000,000
Shares outstanding	\$2,172,502,884	\$2,167,785,445	£5,743,587,026
Net income	\$3,275,400,000	\$4,433,800,000	£6,134,000,000
Total assets	\$48,350,700,000	\$44,569,800,000	£31,003,000,000
Operating cash flows	\$6,999,200,000	\$6,765,200,000	£6,161,000,000
Year-end stock price	\$57.61	\$41.94	£97.39
Dividends per share	\$1.52	\$1.53	£0.49
Dividend yield	2.64%	3.65%	0.50%
Dividend payout	100.97%	74.94%	45.53%
Dividends to total assets	0.0684	0.0745	0.0901
Dividends to operating cash flows	0.4725	0.4911	0.4533

Figure 9-1 Merck and GlaxoSmithKline Comparison of Ratios and Values

CASE 10: SECURITIES

In the asset section of State Street Corporation's unclassified balance sheet, three different securities are listed. The first account listed is the trading account assets, which is presented at fair value. This investment is the most liquid of the three because it is frequently bought and sold in the market. Because of the frequent transfer of ownership, trading securities are reported at fair value. State Street Corporation uses trading securities to generate profits from short-term price differences. Trading securities are usually held for less than three months, and can even be held for just a few days. A holding gain or loss on trading securities is recorded when the fair value of the security differs from one period to the next. Unrealized holding gains or losses on trading securities are recorded in net income. State Street Corporation amortizes any discount or premium resulting from the purchase of a security over the life of that security.

The second investment listed on State Street Corporation's balance sheet is the investment securities available for sale account. Similar to trading securities, available-for-sale securities are reported at fair value. Instead of reporting changes in the fair value of the security as an addition (deduction) to net income, unrealized holding gains or losses from available-for-sale securities are recorded in an unrealized holding gain or loss account. Then, this amount is added (subtracted) from other comprehensive income, which is included in accumulated other comprehensive income in the stockholders' equity section of the balance sheet. State Street Corporation does not report changes in the fair value as

part of net income until after selling the security in order to reduce the volatility of net income. The fair value adjustment account is used when recording an unrealized holding gain or loss from available-for-sale security in the ledger.

The third investment found on State Street Corporation's balance sheet is the investment securities held to maturity account. Held-to-maturity securities can only be made up of debt because equity securities have no maturity date. Debt should be classified as a held-to-maturity security only if it has the positive intent and the ability to hold those securities to maturity. To further explain, debt securities that State Street Corporation expects may need to be sold due to changes in interest rates, foreign currency risk, or liquidity needs should not be classified as held-to-maturity. Unlike trading securities and available-for-sale securities, held-to-maturity securities are accounted for at amortized cost. Because State Street Corporation does not intend to sell the security, the market value of the security is irrelevant for evaluating the cash flows associated with the security. Although the three securities listed above have similarities, the differences among them allows for State Street corporation to spread its debt amongst differing maturity dates and various valuation methods.

Appendix:

a.

- i. Trading securities are debt and equity securities purchased in connection with trading activities and are expected to be sold in the near term. Companies hold trading securities with the intention of selling them in a short period of time. Companies use trading securities to generate profits from short-term differences in price. Companies report trading securities at fair value. Unrealized holding gains or losses represent the net change in the fair value of a security from one period to another. Companies recognize unrealized holding gains or losses as part of net income. Trading securities are adjusted to fair value at each reporting date.
- ii. Journal Entry: Record \$1 of Dividends from Trading Securities

Dividend Receivable	\$1.00
---------------------	--------

	Dividend Income	\$1.00
	Cash	\$1.00
	Dividend Receivable	\$1.00
iii.	Journal Entry: Record \$1 Increase in Market Value of AFS Securities	
	Fair Value Adjustment (AFS)	\$1.00
	Unrealized Holding Gain- Equity	\$1.00
iv.	Journal Entry: Record \$1 Increase in Market Value of Trading Securities	
	Fair Value Adjustment (Trading)	\$1.00
	Unrealized Holding Gain- Income	\$1.00.

- b.
- i. Securities available-for-sale are those that the company intends to hold for an indefinite period of time. Companies report available-for-sale securities at fair value and record unrealized gains and losses related to changes in the fair value in an unrealized holding gain or loss account. The unrealized holding gains or losses are added (subtracted) to other comprehensive income for the period. Other comprehensive income is added (subtracted) to accumulated other comprehensive income, which is shown as a component of stockholders' equity. Companies report available-for-sale securities at fair value on the balance sheet, but do not report changes in fair value as part of net income until the security is sold.

- ii. Journal Entry: Record \$1 of Dividends from AFS Securities

Dividend Receivable	\$1.00	
Dividend Income		\$1.00
Cash	\$1.00	
Dividend Receivable		\$1.00

- c.
- i. Securities held to maturity are debt securities that management has the intent and the ability to hold to maturity. Equity securities are never classified as held-to-maturity because equity securities have no maturity date. Held-to-maturity securities are accounted for at amortized cost because if management has no plans to sell the security, then the fair values are not relevant for measuring the cash flows associated with the security. Hold-to-maturity securities are not adjusted to fair value.
 - ii. No entry because held to maturity securities are recorded at cost; therefore, only account for changes in book value through discount or premium amortization.

- d.
- i. The balance in the trading account assets account on December 31, 2012 is \$637,000,000. The market value of the securities is also \$637,000,000. The balance presented on the balance sheet is equal to the market value because trading securities are adjusted to fair value at the end of the reporting period.
 - ii. Journal Entry: Record the Adjustment to Market Value of Trading Securities (in millions)

Fair Value Adjustment (Trading)	\$85
Unrealized Holding Gain- Income	\$85

- e.
- i. The year-end balance of investment securities held to maturity is \$11,379,000,000.
 - ii. The market value of State Street’s investment securities held to maturity is \$11,661,000,000.
 - iii. Investment securities held to maturity are accounted for at amortized cost, meaning the value is adjusted for the amount of premium or discount amortized, but is not adjusted for fair value changes. The amortized cost equals \$11,379,000,000 at December 31, 2012. Depending on whether the investment is purchased at a discount or premium, the amortized cost will be less than (premium) or greater than (discount) the original cost.
 - iv. The difference between the market value and the amortized cost represents the difference between the price at which the investment is valued in the books and the price for which the investment would sell in the market. The interest rate was not the same from 2011 to 2012 because the difference in the book value and fair market value of the security is much larger in 2012. This change suggests that the interest rate decreased in 2012.
- f.
- i. The 2012 year-end balance in investment securities available for sale is \$109,682,000,000. This balance represents the fair market value of the account.
 - ii. The amount of net unrealized gains on the available-for-sale securities held by State Street Corporation at December 31, 2012 is \$1,119,000,000. This amount is calculated by subtracted the gross losses of \$822,000,000 from the gross gains of \$2,001,000,000 to find a net gain of \$1,119,000,000.
 - iii. The amount of net realized gains from sales of available-for-sale securities for 2012 is \$55,000,000. This amount is calculated by subtracting gross realized losses from sales of available-for-sale securities of \$46,000,000 from gross realized gains from sales of available-for-sale securities of \$101,000,000 to find a net realized gain of \$55,000,000. A realized gain from sales of available-for-sale securities would be classified under other revenues and gains on the income statement. A realized gain from sales of available-for-sale securities would increase the amount in investing activities section of the statement of cash flows.
- g.
- i. Journal Entry: Record the Purchase of AFS Securities (in millions)

Debt Investments	\$60,812	
Cash		\$60,812
 - ii. Journal Entry: Record the Sale of AFS Securities (in millions)

Cash	\$5,399
------	---------

Unrealized Holding Gain- Equity	\$67
Net Gain on Sale of Investments	\$55
Equity Investment	\$5,111

- iii. The original cost of the available-for-sale securities sold in 2012 is \$5,411,000,000.
- iv. Journal Entry: Adjust AFS Securities to Market Value (in millions)

Fair Value Adjustment (AFS)	\$1,119
Unrealized Holding Gain- Equity	\$1,119

CASE 11: INCOME AND REGULATION

- A. Business Model: Groupon's business model is based on selling coupons for a product or service, and collecting cash prior to the merchant providing the product or service. The product or service is provided by a separate merchant. Consumers use Groupon because Groupon features a generous right of return for its subscribers at least on par with the vendor's own right of return. Amazon aims to be Earth's most customer-centric company. This goal is guided by four principles: customer obsession rather than competitor focus, passion for invention, commitment to operational excellence, and long-term thinking. Not only does Amazon serve its primary customer sets, but the corporation also provides advertising services and co-branded credit card agreements. Similar to Amazon's corporate goal, Wal-Mart strives to create a customer-centric experience that integrates digital and physical shopping while also saving the consumer money. Wal-Mart's strategy is to lead on price, invest to differentiate on access, be competitive on assortment, and deliver a great experience. Wal-Mart's operations are comprised of three reportable segments: Walmart U.S., Walmart International, and Sam's Club.
- B. Risks: Groupon's main risk is concern of not attracting enough customers because the business plan states that the vouchers are issued only after a critical number of people express interest. If the cost of the service or product that Groupon is selling increases, then Groupon's costs will increase as well. These two risks could potentially decrease Groupon's sales and increase costs. Amazon considers four risk factors when determining what could have a materially adverse affect on the corporation's business, financial condition, operating results, and cash flows. The first risk that Amazon faces is intense competition. Amazon has competitors in several different industries, including retail, e-commerce services, and digital content and electronic devices. Because these industries differ, competitors could potentially present their financial data in a different way that Amazon, which could impact the attractive of the corporation in relation to its competitors. Another risk Amazon faces is the concern of experiencing significant fluctuations in their operating results and growth rate. Fluctuations in results and growth rate cause Amazon to not be able to accurately forecast their growth rate in the financial statements. This risk could scare away investors who desire a clear vision of how successful the corporation will be in the future. Wal-Mart's risks include economic instability, unemployment and underemployment levels globally, customer traffic and average ticket in stores and online, commodity prices, such as crude oil and natural gas, and the cost of the goods sold. These risks can affect earnings per share, reporting of net sales, comparability among segments, and effective tax rate.
- C. I agree with the statement "revenue and revenue growth are more important than income and income growth for new businesses, especially in the new-age economy."

For new businesses to succeed, they need to have a substantial cash inflow. New companies tend to require large expenses in order to develop an inventory stock, continue research and development ventures, and invest in assets, such as factories and computer systems. From 1997 to 2002, Amazon was operating at a net loss. The unexperienced investor could potentially look at this loss and believe that the company was operating unsuccessfully, but Amazon's success was shown through its increase in sales. In order to increase revenue at the beginning, Amazon had to increase expenses which ultimately decreased net income. Therefore, to determine success for a start-up company, percent increase in net sales should be addressed before net income.

Amazon			
Revenue, Income, and Stock Price 1997-2010			
Year	Net Sales	Net Income	Stock Price
1997	\$147,787	\$31,020	\$5.02
1998	\$609,996	\$124,546	\$53.54
1999	\$1,639,839	\$719,968	\$76.13
2000	\$2,761,983	\$1,411,273	\$15.56
2001	\$3,122,433	\$567,277	\$10.82
2002	\$3,932,936	\$149,132	\$18.89
2003	\$5,263,699	\$35,282	\$52.62
2004	\$6,921,000	\$588,000	\$44.29
2005	\$8,490,000	\$359,000	\$47.15
2006	\$10,711,000	\$190,000	\$39.46
2007	\$14,835,000	\$476,000	\$92.64
2008	\$19,166,000	\$645,000	\$51.28
2009	\$24,509,000	\$902,000	\$134.52
2010	\$34,204,000	\$1,152,000	\$180.00

Figure 11- 1 Amazon Revenue, Income, and Stock Price Comparison

D.

- a. Gross margin percentage shows the proportion of each dollar of revenue that the company retains as gross profit. Companies desire for their gross margin percentages to increase over time. Gross margin percentage is found by subtracting cost of sales from revenue, then dividing this value by total revenue. A larger gross margin percentage is favorable because that means that either the cost of sales decreased or revenue increased. According to the gross method of revenue recognition, gross margin percentage increased by 3.39% from 2009 to 2010. This change in gross margin percentage is due to an increase in revenue of \$683 million. According to the net method of revenue recognition, gross margin percentage increased by 19.96% from 2009 to 2010. This change in gross margin percentage is due to an increase in revenue of \$298.4 million.
- b. Asset turnover ratio represents the value of a company's revenues relative to its total average assets. Asset turnover ratio is found by dividing total revenue by

total average assets. From 2009 to 2010 under the gross method of revenue recognition, the asset turnover ratio increased by 156.64%. Under the net method of revenue recognition, the asset turnover ratio increased by 60.91%. Although both revenue and assets increased during this period, revenue had a greater increase, which resulted in the asset turnover ratio increasing.

Amazon				
Common Size Income Statements for 2009 and 2010				
	2009		2010	
	Gross	Net	Gross	Net
Income Statement Account				
Revenue	100%	100%	100%	100%
Cost of Sales	64.14%	30.34%	60.75%	10.39%
Gross Margin	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	0.00%	0.00%	28.48%	64.94%
Net Loss	4.41%	7.52%	57.95%	134.26%
Gross Margin Percentage	35.86%	69.66%	39.25%	89.61%
Asset Turnover Ratio	203.18%	96.91%	359.82%	157.82%

Figure 11-2 Amazon Common Size Income Statement Comparison

E.

- a. Revenue reported in 2009 under the net method was \$14.5 million. Revenue reported under the gross method was \$30.4 million. The difference between these two values occurs because of the differences between how revenue is recognized under the two methods. Under the gross method, Groupon records the entire amount from the customer as revenue and a corresponding cost of sales to account for the payment made to the supplier for the merchandise. Under the net method, Groupon records revenue as the difference between the amount of cash received from the customer and the payment due to the supplier of the product or service. Under the gross method the amount of revenue and cost of goods sold recorded is higher.
- b. Groupon most likely preferred the gross method for recognizing revenue for several reasons. As stated earlier, revenue is an important value to acknowledge when determining the value of a corporation; therefore, Groupon would prefer to use the gross method because the amount of revenue stated is significantly higher under this method. Also, in 2009 and 2010 the gross method produced a higher gross margin than the net method. Although the cost of sales under the gross method is higher, Groupon financial statements appear stronger under the gross method due to the increase in revenue and subsequent increase in gross margin.
- c. Groupon states the purpose of a voucher in its response, explaining that the voucher gives the customer the option to purchase goods or service at a specific

price in the future. Groupon included in the response the fact that it is not selling the goods or services, but rather the voucher to obtain the goods or services in the future.

- d. According to the FASB codification, eight indicators may support reporting gross revenue. These indicators are the entity is the primary obligor in the arrangement, the entity has general inventory risk, the entity has latitude in establishing price, the entity changes the product or performs part of the service, the entity has discretion in supplier selection, the entity is involved in the determination of product or service specifications, the entity has physical loss inventory risk, and the entity has credit risk. Groupon initially claims that it is the primary obligor in the transaction, causing the SEC to ask “why is it appropriate for the company to recognize revenue prior to delivery of the underlying product or service by the merchant to the customer.” The argument that Groupon is the primary obligor in the transaction is weak because the company is providing a discount to the product or service but not the actual product or service itself. It was clear that Groupon was not the primary obligor because the company stated that it does not accept responsibility for the delivery of goods or services and does not deliver the goods or services underlying the voucher to the customer.

F.

- a. According to the FASB codification, if an entity sells its product but gives the buyer the right to return the product, revenue from the sales transaction should be recognized only if six specific conditions are met. The SEC stated that the “Groupon Promise” is unconditional because the sixth condition was not met. Section 605-15-25-1f states that “the amount of future returns can be reasonably estimated.” At the beginning of Groupon’s development, the company might have been able to reasonably estimate returns, but once the company increased the size of its ticket items, the amount of return could no longer be reasonably estimated.
- b. I do not agree with Groupon’s accounting because the company was not familiar with the markets it was entering and had various ticket item sizes; therefore, Groupon was unable to reasonably estimate the amount of return.
- c. Rather than entering markets in which Groupon had little or no historical experience, the company could have focused all of its attention on small-ticket items. Trying to implement a Groupon voucher for customers to receive significant services, such as Lasik eye surgery, seemed like a risky move for Groupon. The company could have specialized in smaller ticket items and found success in that market. Alternatively, Groupon could have increased its accounting efforts and created different return policies depending on the dollar value of the service or product in the voucher.

- G. Operating cash flow was unaffected by the restatement of 2011 fourth-quarter financials because the amount of actual cash that the company was receiving did not change. The amount of revenue recognized differed between the two methods, but the amount of cash that Groupon was receiving from the customers and paying to the suppliers remained the same.

CASE 12: DEFERRED TAXES

- a. Book income is also referred to as income before taxes, income for financial reporting purposes, or pretax financial income. This amount is used for financial reporting. The purpose of measuring book income is to provide useful information to investors and creditors. Book income is determined in accordance to GAAP. Through GAAP, pretax financial income is used to determine income tax expense. Alternatively, through the Internal Revenue Code (the tax code), taxable income is used to determine income taxes payable. Income tax expense and income taxes payable differ between years, but will equal in total. The difference arises because for financial reporting, companies use the accrual method, and for tax purposes, companies use a modified cash basis. This difference is referred to as the deferred tax amount. For fiscal year 2012, the book income is \$23,898,000.
- b.
- i. A permanent tax difference results from items that enter into pretax financial income but never into taxable income or enter into taxable income but never into pretax financial income. Interest received on state and municipal obligations would be recognized for financial reporting purposes but not for tax purposes. Percentage depletion of natural resources in excess of their cost would be recognized for tax purposes but not for financial reporting purposes.
 - ii. A temporary tax difference is the difference between the tax basis of an asset or liability and its carrying amount in the financial statements. This difference will result in a future taxable amount or future deductible amount. A temporary tax difference can be caused by depreciation on the tax return exceeding depreciation on the income statement.
 - iii. The statutory tax rate is the percentage of income that should be paid according to the law. For ZAGG Inc., the statutory tax rate is 35%, but as shown in Note 8 to the financial statements, the statutory tax rate is a starting point to the actual amount of taxes that will be paid.
 - iv. The effective tax rate is the percentage of income that is actually paid in taxes. As shown in Note 8 to the financial statements, additions or deductions are made to the tax amount at the statutory rate to calculate income tax provision. In 2012, the tax amount at the statutory rate was \$8,364,000 or \$23,898,000*35%. Figures were added to this amount to determine an income tax provision of \$9,393,000. This amount is used to calculate the effective tax rate.

$$\begin{aligned} \text{Effective tax rate} &= \text{Income tax expense} / \text{Income before tax expense} \\ &= \$9,393,000 / \$23,898,000 \end{aligned}$$

$$= 39.30\%$$

- c. Companies report deferred income taxes as part of their total income tax expense in order to match revenues to expenses in the books. Because of the accrual method of accounting, temporary and permanent differences occur when calculating the amount of tax expense and the amount of taxes payable. These differences cause the amount of expenses to differ in the tax return and the financial statements. The financial statements show all the revenue recognized in the period with the expenses that match. Alternatively, the tax return only shows the amount of cash received.
- d. A deferred income tax asset is the deferred tax consequence attributable to deductible temporary differences. A deferred tax asset represents the increase in taxes refundable in future years as a result of deductible temporary differences existing at the end of the current year. A deferred income tax asset would arise if a company accrued a loss and a related liability in one year (2013) for financial reporting purposes, but could not deduct this amount for tax purposes until the period (2014) it pays the liability. Therefore, a deferred income tax asset would be reported on the 2013 balance sheet, and an income tax deductible would occur in 2014 when the company settles the liability.

A deferred income tax liability is the deferred tax consequences attributable to taxable temporary differences. A deferred income tax liability represents the increase in taxes payable in future years as a result of taxable temporary differences existing at the end of the current year. If the MACRS depreciation system is used for tax purposes, and the straight-line depreciation method is used for financial reporting purposes for plant assets, then a deferred income tax liability will occur on the balance sheet.

- e. If a company believes that it is more likely than not that it will not realize some portion or all of the deferred tax asset, then the company should reduce a deferred tax asset by a valuation allowance. More likely than not means a level of likelihood of at least slightly more than 50 percent. The deferred income tax valuation allowance is a contra account to deferred tax assets, recorded in the balance sheet of the year that the company determines that it is more likely than not that it will not realize an amount of the related deferred tax asset.
- f.

- i. Journal Entry: Record Income Tax Provision in 2012 (in thousands)

Income Tax Expense	\$9,393	
Net Deferred Tax Asset	\$8,293	
		Income Tax Payable
		\$17,686

- ii. The amount of net deferred tax assets in fiscal year 2011 is \$5,214,000. The amount of net deferred tax assets in fiscal year 2012 is \$13,508,000. Therefore, the amount of net deferred tax asset recorded in the income tax journal entry is \$8,293,000. This amount is the change in the net deferred tax asset from fiscal year 2011 to fiscal year 2012.
- iii. ZAGG's 2012 effective tax rate is 39.30% and is found by dividing the income tax provision figure by the income before provision for income

taxes. Both of these amounts are found on ZAGG's Consolidated Statements of Operations.

Income Tax Provision	\$9,393,000
Income Before Provision	\$23,898,000
Effective Tax Rate	39.30%

- iv. The difference between the statutory rate (35%) and the effective tax rate (39.30%) is due to several components listed in Table 2 of Note 8 to the financial statements. The first addition is a state tax expense of \$663,000, which is added to the federal tax expense of \$8,364,000. A non-deductible expense and a return to provision adjustment are added to the federal and state tax expenses. Because ZAGG Inc. conducts some production activities domestically, a deduction applied to reduce tax expense by \$676,000. Lastly, in 2012, ZAGG Inc. recorded a full valuation allowance against a deferred tax asset generated by losses on its equity method investment in HzO, which required the company to recognize an increase in the valuation allowance account for \$652,000.

ZAGG, Inc.			
Income Tax Calculation			
	Addition (deduction) to tax at federal statutory rate	Income tax expense	Tax rate
Tax at federal statutory rate		\$8,364,000	35.00%
State tax	\$663,000	\$9,027,000	37.77%
Non-deductible expense	\$341,000	\$9,368,000	39.20%
Domestic production activities deduction	-\$676,000	\$8,692,000	36.37%
Return to provision adjustment	\$49,000	\$8,741,000	36.58%
Increase in valuation allowance	\$652,000	\$9,393,000	39.30%

Figure 12-1 ZAGG, Inc. Income Tax Calculation

- v. A portion (\$6,912,000) of the net deferred income tax asset balance appears under the current asset section of the balance sheet. The remaining portion

(\$6,596,000) of the net deferred income tax asset balance appears under the noncurrent asset section of the balance sheet.

- g.
- i. Depreciation expense on the tax return is greater than depreciation on the income statement. With the temporary difference arising from depreciation, the value of the asset in the books is greater than the value of the asset in the tax return, which gives rise to future taxable amounts. Deferred tax liabilities will be established in years of origination and decreased in years of reversal.
 - ii. The dollar magnitude of the cumulative depreciation expense between the two systems as of December 31, 2012 is \$2,089,473.68. This amount was found by dividing the deferred income tax liability relating to property and equipment by the statutory income tax rate.

$$\begin{aligned} \$2,089,473.68 &= \$794,000/38\% \\ &\text{or} \\ \$794,000 &= \$2,089,473.68*38\% \end{aligned}$$
 - iii. The balance in "Property and equipment, net" on the balance sheet would be \$2,773,000 at December 31, 2012 if tax depreciation had been used throughout the assets' lives instead of the reported method. This amount is calculated by taking the balance of property and equipment on the balance sheet (\$4,862,000) less the cumulative difference in book and tax depreciation expense (\$2,089,473.68).
- h.
- i. The book system recognized a greater expense for doubtful accounts. The amount of the allowance expense for the books is shown as a contra asset to accounts receivable in the current asset section of the balance sheet. This amount is \$2,974,000. The amount of the allowance for doubtful accounts expense in the tax return is shown in Table 3 of Note 8 as \$1,020,000.
 - ii. The dollar magnitude of the difference in bad debt expense between the book and tax system for the year ended December 31, 2012 is \$602,632. This amount was found by dividing the change in the deferred income tax asset relating to the allowance for doubtful accounts by the statutory income tax rate.

$$\begin{aligned} \$602,632 &= \$229,000/38\% \\ &\text{or} \\ \$229,000 &= \$602,632*38\% \end{aligned}$$
 - i. The company recorded a full valuation allowance against a deferred tax asset generated by losses on its equity method investment in HzO. Management determined that it is more likely than not that the deferred tax asset will not be realizable, so a full valuation allowance of \$713,000 was recorded against the deferred tax asset. The amount of the valuation allowance is \$713,000 because that is the value of the HzO deferred tax asset, and the valuation allowance was on the entire asset.
 - j. If the Internal Revenue Service changed the federal statutory tax rate from 35% to 30%, then the journal entry related to the net deferred income tax asset would consist of a debit to the income tax expense account and a credit to the deferred tax

asset account. The amount to record is calculated by dividing the amount of the deferred income tax asset account (\$13,508,000) by the total statutory tax rate (38%). Then, this amount (\$35,547,368) is multiplied by the new total statutory rate of 33% to equal \$11,730,632.

- i. Journal Entry: Record Net Deferred Tax Asset at Tax Change
- | | | |
|--------------------|--------------|--------------|
| Income Tax Expense | \$11,730,632 | |
| Deferred Tax Asset | | \$11,730,632 |

CASE 13: PENSIONS AND RETIREMENT PLANS

a. Defined contribution plans and defined benefit plans

- i. In a defined contribution plan, the employer agrees to contribute to a pension trust a certain sum each period, based on a formula. The facts considered in the formula include age, length of employee service, employer's profits, and compensation level. A defined compensation plan defines only the employer's contribution to the account. An example of a defined compensation plan is a 401(k) plan. The size of the pension benefits that the employee collects depends on factors, such as the amounts originally contributed to the trust, the income accumulated in the trust, and the treatment of forfeitures of funds caused by early terminations. Usually, an independent third party trustee holds the amount originally contributed to the fund and assumes ownership and responsibility of the pension assets.

In a defined benefit plan, the benefits that employees will receive when they retire are outlined. Factors determining the amount of the benefit are employee's years of service and compensation level in the years approaching retirement. Companies must determine what the contribution would be today to meet the commitments that will arise at retirement. The employees are the beneficiaries of a defined contribution trust, but the employer is the beneficiary of a defined benefit trust. The trust assets and liabilities belong to the employer, who pays employees an amount of the benefits at retirement. Employers are at risk with defined benefit plans because they must contribute enough to meet the cost of benefits that the plan defines.

Note 13 to the financial statements explains that Johnson & Johnson's retirement plan benefits are primarily based on the employee's compensation during the last three to five years before retirement and the number of years of service; therefore, the company uses a defined benefit plan.

- ii. For a defined contribution plan, the employee takes on the gain or the risk of loss from the assets contributed to the pension plan. If the employer does not make the contribution in full, then a liability must be reported on the balance sheet. Alternatively, the employer reports an asset if it contributes more than the required amount. For a defined benefit plan, the employer must make up any shortfall in the accumulated assets held by the trust. Because the employer is obligated to contribute enough to meet the cost of the benefits that the plan defines, they record a liability. An

employer's pension obligation is the deferred compensation obligation it owes to its employees for their service.

- iii. The liability pertaining to the pension obligations is based on assigning probabilities to future events and their financial effects. In order to develop, implement, and fund pension plans, predictions are made regarding mortality rates, employee turnover, interest and earnings rates, early retirement frequency, and future salaries. Pension measures that affect the financial statements include pension obligation, annual cost of servicing the plan, and the cost of amendments to the plan.
- b. Service costs are the expenses caused by the increase in pension benefits payable to employees because of their services rendered during the current year. Actuaries compute service cost as the present value of the new benefits earned by employees during the year. Service costs increase pension obligations.

Because a pension is a deferred compensation arrangement, it is recorded on a discounted basis- its actuarial present value. Interest expense accrues each year on the projected benefit obligation based on the settlement rate. Interest cost increase a company's pension obligation.

Volatility in pension expense can result from sudden and large changes in the fair value of plan assets and by changes in the projected benefit obligation. These changes occur when actuaries modify assumptions or when actual experience differs from expected experience. The difference between the actual return and the expected return on plan assets and amortization of the net gain or loss from previous periods comprise actuarial gains or losses. Actuarial gains decrease pension obligations. Alternatively, actuarial losses increase pension obligations.

Benefits paid to retired employees will decrease a company's pension obligation.

- c. Actual return on pension investments increases plan assets at the beginning of the year. Company contributions to the plan increases plan assets at the beginning of the year. Benefits paid to retired employees decreases plan assets at the beginning of the year.
- d. Pension expense contains the expected return on plan assets component, while pension plan assets contains the actual return on plan assets component. If actual return is positive, then plan assets increases and pension expense decreases. If actual return is negative, then pension expense increases and plan assets decreases. If actual return is greater than expected return, then pension expense increases due to a gain, which is reported in other comprehensive income. If actual return is less than expected return, then pension expense decrease due to a loss.
- e. There are three major differences between the company's other-benefits plans and its retirement plans including the funding benefit, the beneficiary, and the benefit payable predictability. Pensions are funded through a well-defined and level dollar amount, but other-benefits plans are generally not funded, uncapped, and variable. The beneficiary in retirement plans is the retiree, but the beneficiary of other-benefits plans could be the retiree, spouse, or other dependents. In retirement plans, benefits are paid monthly and variables are reasonably

estimated, but in other-benefits plans utilization of payables is difficult to predict and the level of cost varies geographically and fluctuates over time.

- f. Pension expense details
- i. Johnson & Johnson reported \$646 million of pension expense on its 2007 income statement.
 - ii. Journal Entry: Record Service Cost and Interest Cost (in millions)

Pension Expense	\$597	
Projected Benefit Obligation		\$597
Pension Expense	\$656	
Projected Benefit Obligation		\$656
- g. Retirement plan obligation
- i. The value at December 31, 2007 of the company's retirement plan obligation is \$12,002 million. This number represents the amount of funds needed in 2007 to complete the obligations of the retirement plan. This value is somewhat reliable, but could change depending on changes in the market.
 - ii. The pension-related interest cost for the year is \$656 million. The average interest rate the company must have used to calculate interest cost during 2007 is 5.60 percent. This rate does seem reasonable considering how large the pension obligation is. This rate is found by dividing \$656 million by \$11,660 million.
 - iii. \$481 million was paid to retirees during the year. Benefits paid decreases the retirement plan obligation and the retirement plan assets. The company paid a portion of the benefits in cash.
- h. Retirement plan assets
- i. The value at December 31, 2007 of the retirement plan assets held by Johnson & Johnson's retirement plan was \$10,469 million. This value represents the assets of the funded defined benefit plan. The value of the plan assets increased due to additional contributions received from the employer and due to returns earned by the assets. The value of the plan asset decreased due to benefits paid out to employees.
 - ii. The expected return on plan assets was \$809 million in 2007 and \$701 million in 2006. The actual return on plan assets was \$743 million in 2007 and \$966 million in 2006. In 2006, these differences produce a gain of \$265 million, which is reported in other comprehensive income. In 2007, the differences produce a loss of \$66 million. The actual return better reflects the economics of the company's pension expense.
 - iii. Johnson & Johnson contributed \$317 million in 2007 and \$259 million in 2006 to the retirement plan. Employees contributed \$62 million in 2007 and \$47 million in 2006 to the retirement plan. The total amount contributed to the retirement plan during 2007 was \$379 million. The total amount contributed in 2016 was \$306 million.
 - iv. In 2007, 79 percent of Johnson & Johnson's U.S. retirement plan assets consisted of equity securities. 21 percent of the U.S. retirement plan assets consisted of debt securities. International retirement plans consisted of 67 percent equity securities, 32 percent debt securities, and 1 percent real

estate and other. Johnson & Johnson aims for its U.S. retirement plans to be 75 percent equity securities and 25 percent debt securities.

- i. In 2007, Johnson & Johnson's retirement plan was underfunded because the pension obligation benefit was larger than the fair value of the plan assets. Because the retirement plan was underfunded, a pension liability of \$1,533 million was recorded on the balance sheet. In 2006, Johnson & Johnson's retirement plan was underfunded because the pension obligation benefit was larger than the fair value of the plan assets. Because the retirement plan was underfunded, a pension liability of \$2,122 million was reported on the balance sheet.