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A Comprehensive Analysis of Financial Reporting through Case Studies

Cole Conner
University of Mississippi

A Comprehensive Analysis of Financial Reporting through Case Studies

by

Cole Tyler Conner

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Approved by:

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Advisor: Dr. Victoria Dickinson

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Reader: Dean Dr. Mark Wilder

ABSTRACT

COLE CONNER: A Comprehensive Analysis of Financial Reporting through Case Studies
(Under the direction of Dr. Victoria Dickinson)

This paper serves as an investigation and analysis of the financial reporting practices of publicly traded companies, in addition to addressing a number of other selected accounting topics. This was accomplished through the analysis of a number of accounting case studies. Each of these studies addresses a specific topic related to financial reporting such as the accounting for income taxes, the treatment of plant property and equipment, and the treatment of investments in securities. The cases provide background related to the topic and organization(s) discussed as well present a series of questions which guide in the discussion and analysis of the specific topic presented. This hands-on problem solving, using the actual financial statements of real publicly traded companies, allows for a more comprehensive understanding of the topics addressed than would otherwise be possible through the typical accountancy course work alone.

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Case 1:
Glenwood Heating, Inc. and Eads Heaters, Inc.

Executive Summary and Analysis:

Glenwood Heating, Inc. and Eads Heaters, Inc. are two nearly identical companies. Glenwood and Eads are both Colorado based businesses and specialize in the sale of home heating units. These two companies operate in very similar economic conditions and undergo the exact same operations throughout the year 20X1. Despite this mirroring in operations, Glenwood and Eads' financial statements are not identical at year end. These discrepancies are not due to an accounting error, but instead, they are the result of the different ways each company applies generally accepted accounting principles (GAAP), when preparing their financial statements. GAAP allows management to make a variety of accounting decisions and choices, each of which has an impact on the financial statements. This flexibility provides companies a certain amount of control over some of their numbers. For example, a manager may choose to capitalize an expense. Although nothing is physically different within the company as a result of this, choosing to capitalize an expense and record it as a long-term asset will result in a higher net income, and likely an increase in the perceived value of the company. The incongruities between Glenwood and Eads' applications of GAAP also allow these two otherwise identical businesses to be effectively compared and contrasted so that investors can make an informed decision between the two companies.

Glenwood Heating, Inc. and Eads Heaters, Inc. performed identical business operations throughout the year 20X1. Due to several managerial decisions that varied between the two companies, they each have distinct financial statements (see appendix). This makes it possible for an investor to analyze each company and determine which may be a better investment. In this particular case, Glenwood Heating, Inc. seems to be the

more valuable of the two companies. This can first be seen in the income statements of each company (Fig. 1-1, 1-2) Glenwood has a net income $22,227 higher than that of Eads. This difference in net income also accounts for Glenwood's superior retained earnings (Fig. 1-3, 1-4). Choosing to use the FIFO inventory method generally results in the lowest value for cost of goods sold because prices generally increase with time. This makes it likely that the oldest goods in inventory were also the cheapest. By using FIFO, Glenwood has decreased cost of goods sold in comparison to Eads resulting in a higher gross profit margin and net income. The balance sheet (Fig. 1-5, 1-6) also shows Glenwood's advantage over Eads. Glenwood has a small amount of current liabilities on its books in comparison to Eads. This low value for current liabilities makes Glenwood more credible as a borrower due to its high level of liquidity in comparison to Eads. Glenwood's advantage appears as though it may stem from what seems to be more conservative accounting on the part of Eads. For example, Eads estimated five percent of accounts receivable was uncollectable in comparison to Glenwood's estimate of only one percent. The use of the LIFO inventory method and double declining balance depreciation both yield considerably more conservative estimates than Glenwood will using FIFO and straight-line depreciation. Due to this conservatism on the part of Eads, Glenwood is the better of the two investments currently as well as being a more credible borrower.

Appendix:

Glenwood Heating, Inc. Multistep Income Statement For the Year Ended December 31, 20X1		
Sales		$398,500
Cost of Goods Sold		($177,000)
Gross Profit		$221,500
Operating Expenses		($70,194)
Income From Operations		$151,306
Interest Expense		($27,650)
Income Before Income Tax		$123,656
Income Tax		($30,914)
Net Income		$92,742

Fig. 1-1

Eads Heaters, Inc. Multistep Income Statement For the Year Ended December 31, 20X1		
Sales		$398,500
Cost of Goods Sold		($188,800)
Gross Profit		$209,700
Operating Expenses		($80,670)
Income From Operations		$129,030
Interest Expense		($35,010)
Income Before Income Tax		$94,020
Income Tax		($23,505)
Net Income		$70,515

Fig. 1-2

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

Fig. 1-3

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

Fig. 1-4

Glenwood Heating, Inc. Classified Balance Sheet For the Year Ended December 31, 20X1		
Assets		
Current Assets		
Cash	$426	
Accounts Recievable	$99,400	
Less: Allowance for Bad Debts	($994)	
Inventory	$62,800	
Total Current Assets		$161,632
Noncurrent Assets		
Land	$70,000	
Building	$350,000	
Accumulated Depreciation - Building	($10,000)	
Equipment	$80,000	
Accumulated Depreciation - Equipment	($9,000)	
Total Noncurrent Assets		$481,000
Total Assets		$642,632
Liabilities and Stockholders' Equity		
Current Liabilities		
Accounts Payable	$26,440	
Interest Payable	$6,650	
Total Current Liabilities		$33,090
Long Term Debt		
Notes Payable	$380,000	
Total Long Term Debt		$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

Fig. 1-5

Eads Heaters, Inc. Classified Balance Sheet For the Year Ended December 31, 20X1		
Assets		
Current Assets		
Cash	$7,835	
Accounts Recievable	$99,400	
Less: Allowance for Bad Debts	($4,970)	
Inventory	$51,000	
Total Current Assets		$153,265
Noncurrent Assets		
Land	$70,000	
Building	$350,000	
Accumulated Depreciation - Building	($10,000)	
Equipment	$80,000	
Accumulated Depreciation - Equipment	($20,000)	
Leased Equipment	$92,000	
Accumulated Depreciation - Leased Equipment	($11,500)	
Total Noncurrent Assets		$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		
Notes Payable	$380,000	
Total Long Term Debt		$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

Fig. 1-6

Glenwood Heating, Inc. - Chart of Accounts

Account Title	Cash	Accounts Receivable	Allowance for Bad Debts	Inventory	Land	Building	Accumulated Depreciation, building	Equipment	Accumulated Depreciation, equipment	Leased Equipment	Accumulated Depreciation, leased equipment	Accounts Payable	Interest Payable	Notes Payable	Lease Payable
Capital Stock Issuance	$160,000														
Borrowed Note Payable	$400,000													$400,000	
Purchased Land and Building	($420,000)				$70,000	$350,000									
Purchased Delivery Equipment	($80,000)							$80,000							
Purchased Heating Units				$239,800								$239,800			
Sold 160 Units		$398,500													
Collected Sales Revenue	$299,100	($299,100)													
Paid for Previous Purchases	($213,360)											($213,360)			
Payment on Notes Payable	($41,000)													($20,000)	
Payment on Other Operating Expenses	($34,200)														
Dividends Paid	($23,200)														
Adjusting Entry Accrual of Interest													$6,650		
Totals	$47,340	$99,400	$0	$239,800	$70,000	$350,000	$0	$80,000	$0	$0	$0	$26,440	$6,650	$380,000	$0
Writing of Bad Debts			$994												
Adjusted Sale of Inventory				($177,000)											
Adjusting Depreciation - Building							$10,000								
Adjusting Depreciation - Equipment									$9,000						
Lease of Equipment	($16,000)														
Provision for Income Taxes	($30,914)														
Totals	$426	$99,400	$994	$62,800	$70,000	$350,000	$10,000	$80,000	$9,000	$0	$0	$26,440	$6,650	$380,000	$0

Fig. 1-7

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

Account Title	Common Stock	Retained Earnings	Dividends	Sales	Cost of Goods Sold	Bad Debt Expense	Depreciation Expense	Interest Expense	Other Operating Expenses	Rent Expense	Provision for Income Taxes
Capital Stock Issuance	$160,000										
Borrowed Note Payable											
Purchased Land and Building											
Purchased Delivery Equipment											
Purchased Heating Units											
Sold 160 Units				$398,500							
Collected Sales Revenue											
Paid for Previous Purchases											
Payment on Notes Payable								$21,000			
Payment on Other Operating Expenses									$34,200		
Dividends Paid			$23,200								
Adjusting Entry Accrual of Interest								$6,650			
Totals	$160,000	$0	$23,200	$398,500	$0	$0	$0	$27,650	$34,200	$0	$0
Writing of Bad Debts						$994					
Adjusted Sale of Inventory					$177,000						
Adjusting Depreciation - Building							$10,000				
Adjusting Depreciation - Equipment							$9,000				
Lease of Equipment										$16,000	
Provision for Income Taxes											$34,914
Totals	$160,000	$0	$23,200	$398,500	$177,000	$994	$19,000	$27,650	$34,200	$16,000	$34,914

Fig. 1-7 (continued)

Eads Heaters Inc - Chart of Accounts

Account Title	Cash	Accounts Receivable	Allowance for Bad Debts	Inventory	Land	Building	Accumulated Depreciation, building	Equipment	Accumulated Depreciation, equipment	Leased Equipment	Depreciation, leased equipment	Accounts Payable	Interest Payable	Note Payable	Lease Payable
Capital Stock Issuance	$160,000														
Borrowed Note Payable	$400,000													$400,000	
Purchased Land and Building	($420,000)				$70,000	$350,000									
Purchased Delivery Equipment	($80,000)							$80,000							
Purchased Heating Units				$239,800								$239,800			
Sold 160 Units		$398,500													
Collected Sales Revenue	$299,100	($299,100)													
Paid for Previous Purchases	($213,360)											($213,360)			
Payment on Notes Payable	($41,000)													($20,000)	
Payment on Other Operating Expenses	($34,200)														
Dividends Paid	($23,200)														
Adjusting Entry Accrual of Interest													$6,650		
Totals	$47,340	$99,400	$0	$239,800	$70,000	$350,000	$0	$80,000	$0	$0	$0	$26,440	$6,650	$380,000	$0
Writing of Bad Debts			$4,970												
Adjusted Sale of Inventory				($188,800)											
Adjusting Depreciation - Building							$10,000								
Adjusted Depreciation - Equipment									$20,000						
Lease of Equipment	($16,000)									$92,000	$11,500				$83,360
Provision for Income Taxes	($23,505)														
Totals	$7,835	$99,400	$4,970	$51,000	$70,000	$350,000	$10,000	$80,000	$20,000	$92,000	$11,500	$26,440	$6,650	$380,000	$83,360

Fig. 1-8

Eads Heaters Inc - Chart of Accounts (continued)

Account Title	Common Stock	Retained Earnings	Dividends	Sales	Cost of Goods Sold	Bad Debt Expense	Depreciation Expense	Interest Expense	Other Operating Expenses	Rent Expense	Provision for Income Taxes
Capital Stock Issuance	$160,000										
Borrowed Note Payable											
Purchased Land and Building											
Purchased Delivery Equipment											
Purchased Heating Units											
Sold 160 Units				$398,500							
Collected Sales Revenue											
Paid for Previous Purchases											
Payment on Notes Payable								$21,000			
Payment on Other Operating Expenses									$34,200		
Dividends Paid			$23,200								
Adjusting Entry Accrual of Interest								$6,650			
Totals	$160,000	$0	$23,200	$398,500	$0	$0	$0	$27,650	$34,200	$0	$0
Writing of Bad Debts						$4,970					
Adjusted Sale of Inventory					$188,800						
Adjusting Depreciation - Building							$10,000				
Adjusted Depreciation - Equipment							$20,000				
Lease of Equipment							$11,500	$7,360			
Provision for Income Taxes											$23,505
Totals	$160,000	$0	$23,200	$398,500	$188,800	$4,970	$41,500	$35,010	$34,200	$0	$23,505

Fig. 1-8 (continued)

Case 2:

Molson Coors Brewing Company

Executive Summary:

Prior to 2005, Adolph Coors Company and Molson Inc. were each separate companies in the beer production industry. On February 9, 2005, the two companies merged in order to form Molson Coors Brewing Company. Due to this merger, the newly formed Molson Coors Brewing Company must produce consolidated financial statements, which consider the previously two companies as a single economic entity. In this case, Molson Coors' consolidated financial statements and notes to the financial statements for the year 2013 are examined. The first financial statement provided is the consolidated income statement. Molson Coors uses a classified income statement rather than a simplified single step income statement. For a company like Molson Coors, which has formed through the merging of other once separate companies, the use of a classified income statement is the best option. This is because a classified income statement shows much greater detail than a single step income statement, allowing readers to gain a better understanding of concepts, such as gains and losses from discontinued operations, which are very common when mergers take place. On Molson Coors' consolidated income statement, sales revenue is represented by sales net of excise tax. This excise tax is better known as a sin tax. The tax is collected from consumers at the time of sale of items such as beer (the primary product produced by Molson Coors), and then paid to the government by Molson Coors. This practice of using sales revenue net of tax is commonplace in the alcoholic beverage industry as it represents the amount of sales that a company truly expects to be transferred to revenue. Molson Coors lists a number of items as "special items" on its income statement. These special items are gains and losses that the company does not believe are indicative of its central operations. These items are

not necessarily non-recurring and are listed as operating expenses by Molson Coors. Items considered special items include: infrequent of unusual items, restructuring fees, impairment or asset-abandonment related losses, and fees on termination of significant operating agreements. In contrast, Molson Coors recognized a number of expenses as "other income (expense)", such as gains or losses on foreign exchange. The items categorized in this way are gains and losses that are associated with activities other than producing and selling beer. These expenses are categorized as non-operating expenses by Molson Coors. Unlike special items, the items in other income (expense) cannot be loosely connected with central operations (producing and selling beer) and are instead attributed to the company's peripheral operations. The bottom line of the income statement for Molson Coors gives us the company's net income. The statement immediately following the income statement is the statement of comprehensive income, which results in a different value than is shown in net income. Comprehensive income is the sum of net income and any gains or losses not already included in net income because they have not yet been realized. For Molson Coors reports a comprehensive income that is much higher than its net income. This is because the sum of unrealized gains (such as gain from pension and post-retirement benefit adjustments) included in Molson Coors' Comprehensive income are greater than the sum of unrealized losses (such as loss from foreign currency translation adjustments). The consolidated financial statements of Molson Coors Brewing Company offer a variety of insights about the operations of the business. Analysis of these statements for Molson Coors reveals items such as the use of "special items" and "other income (expense)" accounts in the treatment of unusual expenses. Yet another insight to be gained from the company's financial statements is the

ability to analyze the causes of the difference between net income and comprehensive income.

Appendix:

a. The income statement is classified into operating, non-operating, income tax, discontinued operations, non-controlling interest, and earnings per share sections. The operating section reports revenues and expenses that result from a company's central operations. The non-operating section reports revenues, expenses, gains and losses that result from a company's secondary activities such as investments or sale of equipment. The income tax section records the federal and state taxes that are imposed upon a company based upon the company's income. The Discontinued operations segment of the income statement records gains and losses that result from the sale of a component of a business. The non-controlling income section allocates the amount of income that is due to non-controlling shareholders. The earnings per share section gives a measure of the company's performance over the period.

b. Companies are required to provide classified income statements because they offer a greater depth of information regarding a company's income than is provided by single-step income statements. Distinguishing between different sources of income and providing intermediate income figures allows readers to better asses the amounts, timing, and uncertainty of future cash flows. Also, the separation of operating and non-operating incomes allows investors to assure that profits are the result of central business operations, and not due to a non-recurring gain resulting from peripheral operations such as the sale of equipment.

c. Financial Statement users are interested in measures of persistent income because of their predictive value. Determining the portion of income that can be counted on to recur in the following years can help investors and creditors in determining the future value of a company.

d. Comprehensive income is a measure of all changes in the equity that occur over the course of a given period, aside from changes that result from investments by owners or distributions to owners. The difference between net income and comprehensive income is that comprehensive income includes certain gains and losses that bypass net income. An example of one such gain would be an unrealized holding gain.

e. The difference between sales and net sales on Molson Coors' income statement is that net sales has accounted for an excise tax. These items are reported separately because net sales is a more accurate measure of sales revenue for Molson Coors. This is because an excise tax is collected from the customer at the point of sale. The amount of this tax is to be paid to the government rather than actually being recognized as revenue. Because of this reporting only sales, rather than net sales, would overstate revenues.

f.

    i. Molson Coors includes gains and losses that it does not attribute to its ordinary, day-to-day operations and are not necessarily non-recurring as "special items". Examples of these special items include infrequent or unusual items, impairment or asset abandonment related losses, and atypical employee-related costs.

ii. These special items, by definition, are not directly attributed to Molson Coors' central operations. Because of this they are listed separately on the income statement. The majority of the special items listed by Molson Coors seem to be tied in some way to operations, despite not being the direct result of normal operating activity. Because of this, it is reasonable for Molson to classify these special items as operating expenses.

g. Unlike special items, which are tied into Molson Coors' operations, "other income (expense), net" are gains and losses attributed to activities not directly related to producing and selling beer.

h.

i. Molson Coors' comprehensive income in 2013 was $760.2 million. In comparison, net income for Molson was $567.3 million, in 2013.

ii. The difference between net income and comprehensive income for Molson Coors in 2013 is the result of foreign currency translation adjustments, unrealized gain (loss) on derivative instruments, reclassification of derivative (gain) loss to income, pension and other post-retirement benefit adjustments, amortization of net prior service (benefit) cost and net actuarial (gain) loss to income, and ownership share of unconsolidated subsidiaries' other comprehensive income (loss). These items are all related because they are all the result of Molson Coors peripheral operations rather than primary or central operations.

j) Effective Tax Rate = Income Tax Expense / Pre-tax Income

84.0 / 654.5 = 12.8% = Effective Tax Rate

Case 3:

Pearson plc

Executive Summary:

Pearson plc is an international company that focuses its efforts in the fields of education, business information, and consumer publishing. Pearson is based out of London, England, but operates in over sixty countries around the globe, including the United States. Despite the fact that Pearson operates in the United States and is traded on the New York Stock Exchange (in addition to the London Stock Exchange), the company prepares its financial statements according to International Financial Reporting Standards (IFRS). This differs from American companies, which are required to observe Generally Accepted Accounting Principles (GAAP) in the creation of their financial statements. Because of this use of IFRS, some of the terminology used by Pearson in its financial reporting differs from the terminology typically used in GAAP. For Example, the term provision under IFRS accounting is equated to the term allowance under GAAP. This is to say that Pearson's provision for bad and doubtful debts account is named the allowance for doubtful accounts in GAAP. In order for a user that is accustomed to GAAP to analyze Pearson's financial statements, an understanding of the differences between IFRS and GAAP is essential. This case presents a portion of Pearson's financial statements for the year 2009. The portions of the financial statements that are provided focus on trade receivables (GAAP: accounts receivable), with an emphasis on estimated allowances such as the provision for bad and doubtful debts (GAAP: allowance for doubtful accounts) and the provision for sales returns (GAAP: allowance for sales returns). The provision for bad and doubtful debts is a contra account that decreases trade receivables on the balance sheet. This account reflects activities such as the estimation of the uncollectable portion of trade receivables and the actual writing off of bad debts for a

period. The activity in the provision for bad and doubtful debts can be seen in part f of the appendix in the form of a t-account. Journal entries for the estimation of bad debts and the writing off of bad debts are also shown in part f. The first journal entry shown illustrates the estimation of bad debts. In this entry, Pearson debits bad debt expense and credits the provision for bad and doubtful debts. This entry increases both accounts and is made at the beginning of a period. Throughout the period, Pearson determines which of its trade receivables are truly uncollectable. The writing off of these bad debts is done by debiting (decreasing) the provision for bad and doubtful debts and crediting (decreasing) trade receivables. This journal entry records the provision being "used up" and the removal of the trade receivables from the books. Like the provision for bad and doubtful debts, the provision for sales returns is also a contra-trade receivables account. This account reflects activities such as the estimation of sales returns made at the beginning of a period and actual sales returns during a period. The activity in the provision for sales returns account for Pearson is shown in part g of the appendix in the form of a t-account and journal entries. The first entry in part g debits sales returns and credits the provision for sales returns, increasing both accounts. This entry demonstrates Pearson's estimation of sales returns for the period. Actual returns made during the period are accounted for by journal entry two in part g. This entry debits (decreases) the provision for sales returns, which reflects the "using up" of the provision. The credit is made to trade receivables, decreasing the trade receivables account by the value of returns. The activity in the two contra accounts discussed above, as well as various other items, result in changes Pearson's gross trade receivables account during the period. As is discussed above, the writing off of bad debts and recording of actual sales returns both decrease the gross trade

receivables account. The gross trade receivables account also decreases as a result of Pearson's cash collections during the period. This denotes the collection of cash for sales that were made on credit at a prior date and is shown in the second journal entry in part h of the appendix. Increases in Pearson's gross trade receivables account are a result of gross credit sales during the period. This is demonstrated in the first journal entry in part h of the appendix by debiting accounts receivable and crediting gross sales. There are a variety of different interrelated accounts that enter into the calculation of gross trade receivables. An understanding of these accounts and how they are related to one another is essential to understanding the trade receivables account.

Appendix:

a. The accounts receivable account represents promises on the part of a purchaser to pay for the goods and services purchased. Trade receivables is an example of an alternative name for accounts receivable.

b. Notes receivable differ from accounts receivable in that they are written agreements, rather than spoken, and have a specified payment date. Accounts receivable are oral promises rather than written, and do not have a specified date for payment.

c. A contra account is an account that reduces an asset, liability or stockholder's equity account. The normal balance of a contra account is opposite of the normal balance of the balance sheet account it reduces. The two contra accounts associated with Pearson's trade receivables are the provision for bad and doubtful debts and the provision for sales returns. The provision for bad and doubtful debts reflects the estimation of uncollectable trade receivables and the writing off of individual uncollectable trade receivables. The provision for sales returns reflects the estimation of sales returns for the upcoming year, as well as the actual return of products. Managers may consider prior results when calculating these estimates. Current conditions and forecasts may also aid management in estimating provisions as accurately as possible.

d. The percentage-of-receivables method of estimating a provision is calculated by taking a percentage of the total value of trade receivables and creating a provision in the amount of that percentage. In the aging-of-accounts method of estimating provisions, companies categorize their receivables based upon age and then

calculate a different percentage of each category that they will consider uncollectable. A provision account is then created representing the sum of the amounts calculated for each category. To determine account activity and balance using the percentage-of-receivables approach, managers must know the balance of trade receivables, and have information based off of past events, current conditions, and reasonable forecasts. This information is vital in the calculation of the percentage that will be used to estimate the uncollectable portion of trade receivables. The same information is necessary when using the aging-of-receivables method, as well as some additional information regarding the age of specific receivables. This information is used to create the specific age categories. The aging of receivables method is likely more accurate in the estimation of bad debt expense. This method generally estimates that, as trade receivables age, a larger percentage will be uncollectable. By applying different percentages based upon the age of receivables, a company gets a more accurate estimate of bad debt than it would by applying a general percentage to all receivables.

e. Pearson extends credit to customers despite its assumption that a portion of trade receivables will be uncollectable. This is because a company does not know which receivables will be uncollectable at the time of sale. For a company to realistically eliminate all risk for bad debts, it would need to stop making sales on credit entirely. This is to say that risk is inherent when a company makes credit sales. Despite this innate risk, most companies still choose to make credit sales. This is because the loss of business that would result from offering only cash

payment methods would likely be far more detrimental to the company than the expenses related to uncollectable trade receivables.

f. Provision for Bad and Doubtful Debts

   i. The beginning balance in the provision for bad and doubtful debts for Pearson in 2009 is £72,000,000. There was a £5,000,000 decrease in the balance of the account as a result of currency exchange differences. The £26,000,000 increase in the provision account shows Pearson's estimation of bad debt expense for the following period. A £20,000,000 debit to the provision for bad and doubtful debts decreases the account balance. This decrease accounts for Pearson's writing off of uncollectable trade receivables as bad debt expense. There is also a £3,000,000 credit to the provision account reflecting Pearson's estimation of bad debts for a company that it acquired during the period. After these changes during the period, the final balance in the provision for bad and doubtful debts account is £76,000,000.

Provision for Bad and Doubtful Debts (in millions of £)	
	72
5	
	26
20	
	3
	76

Fig. 3-1

ii.

Journal Entries (in millions of £)				
1)	I/S	Bad Debt Expense	26	
	B/S	Provision for Bad and Doubtful Debts		26
2)	B/S	Provision for Bad and Doubtful Debts	20	
	B/S	Accounts Recievable		20

Fig. 3-2

iii. The provision for bad and doubtful debts is accounted for in the income statement by bad debt expense. Bad debt expense is found in the operating section of the income statement.

g. Provision for Sales Returns

i.

Provisions for Sales Returns (in millions of £)	
	372
	425
443	
	354

Fig. 3-3

ii.

Journal Entries (in millions of £)				
1)	I/S	Sales Returns	425	
	B/S	Provision for Sales Returns		425
2)	B/S	Provision for Sales Returns	443	
	B/S	Accounts Recievable		443

Fig. 3-4

iii. The provision for sales returns account is a contra-account for trade receivables, making it a balance sheet account. This provision is accounted for on the income statement by the sales returns account, which is found in the operating section of the income statement as a contra-revenue account.

h. Gross Trade Receivables

Gross Accounts Receivable (in millions of £)	
1474	
6049	
	20
	443
	5641
1419	

Fig. 3-5

Journal Entries (in millions of £)			
1)	Accounts Receivable	6049	
	Gross Sales		6049
2)	Cash	5641	
	Accounts Recievable		5641

Fig. 3-6

Case 4:

Balance Sheet Adjustments and Preparation

Case:

In this problem we are given a limited amount of information about Sargent Corporation in the form of its 2017 balance sheet. Also included in the problem are seven events involving Sargent Corp. that will have an impact on the preparation of its classified balance sheet. We are asked to prepare a correct balance sheet for Sargent Corp. by adjusting each balance sheet item for the events provided.

Solution:

A. Before preparing the balance sheet, we will analyze the seven events to determine their effect on the balance sheet accounts. This analysis is as follows (numbered 1-7):
    1. The accounts that make up current assets. Cash, accounts receivable, allowance for doubtful accounts, and inventories are all properly categorized as common assets. However, unearned rent revenue of $5,000 is incorrectly classified as a current asset, so we must make sure this unearned revenue is classified as a current liability.
    2. The investments section incorrectly classifies an $80,000 short term investment in common stock as an investment rather than a current asset. This value must be classified as a current asset on the corrected balance sheet. All other accounts in the investment section are correct.
    3. $270,000 worth of land held for future use is included under PP&E but should be categorized as an investment. This is because the land is not currently being used in operations. All other accounts in the PP&E section are categorized correctly.
    4. Discount on bonds payable of $40,000 is originally included on the balance sheet as an intangible asset. This discount should be categorized as a long-term liability on the corrected balance sheet.
    5. The $120,000 value of long-term notes payable is incorrectly classified as a current liability. Because this payable is not due within one year/one operating cycle it should be classified under long term liabilities.
    6. Discloses the nature of bonds payable, which make up the entirety of the long-term liabilities account on the balance sheet provided.
    7. The stockholder's equity section items have been categorized correctly.
B. Now that we have determined what changes must be made to the balance sheet accounts, we simply apply the changes that are stated above during the preparation of our classified balance sheet.

Case 5:

Palfinger AG

Executive Summary:

In this case, Palfinger AG is examined. Palfinger is an Austrian company that manufactures a variety of different types of heavy equipment and machinery. More specifically, the case focuses on assets included in plant, property, and equipment (PP & E) on the balance sheet, and Palfinger's treatment of these assets. Palfinger, being a manufacturer of mostly heavy equipment and machinery, likely has several examples of PP & E on its books. This PP & E would include items such as land and buildings for the production and storage of its products, equipment and machinery used in production, and land and buildings for corporate offices, amongst other items. Assets that are considered to be part of PP & E are presented on the balance sheet at their historical cost and then depreciated (with the exception of land which is not depreciated). In the analysis of Palfinger's PP & E presented in this case, several unique topics relating to this non-current asset category are addressed. The first of these topics is the use of a prepayments and assets under construction account. This account represents payments made for the future construction of PP & E. It is worth noting that this specific category of PP & E is not depreciated, as it not yet being used in operations. Upon completion of an item in this category, the value of the item is transferred to the PP & E section of the balance sheet, where it is depreciated normally. Another topic of interest addressed in the case was the use of replacement investments and value enhancing investments. These investments represent renovations or improvements to Palfinger's existing PP & E. Palfinger's treatment of these improvements is to capitalize and depreciate them using an adjusted useful life. There is an alternative to this treatment allowable under IASB regulation which is discussed in part f below. Parts i and j of the case essentially compare and

contrast the straight-line and double-declining balance methods of depreciation in the context of Palfinger AG's added other plant, fixtures, fittings, and equipment. The calculation of the depreciation expense of identical assets over the course of their useful lives demonstrates the major differentiation between the two methods. As shown in part i, the depreciation expense calculated using the double-declining balance method is very high in the early years of equipment's useful life and decreases over time until the asset is fully depreciated. This is in contrast to the straight-line method, which applies the same depreciation expense to each period of the asset's useful life. This difference in depreciation expense results in Palfinger recording a different book value at the end of each period for the added PP & E under each of the two methods. This, in turn, results in different values for the gain/loss on sale of these assets under each method, if the sale occurs prior to book value reaching salvage value (this occurs at the end of the PP & E's useful life). For example, part j (below) assumes that the assets added in the other plant, fixtures, fittings, and equipment during fiscal 2007 are sold at the beginning of 2008 for €7,500,000. Following this sale, analysis of the financial statements shows that the net income statement effect of the depreciation expense and gain/loss on sale are equal for both depreciation methods due to a counterbalancing effect. This effect is discussed in more detail in part j. Ultimately, the treatment of the asset category, PP & E, presents a variety of different nuances that accountants must take into consideration. A number of these considerations are presented throughout this case in the context of Palfinger AG's financial statements. A more detailed analysis of the topics discussed above, as well as several other items related to Palfinger's PP & E account are presented in the appendix that follows.

Appendix:

a. Based on the description of Palfinger, the company's PP & E would include the land and facilities used in the production of machinery, as well as warehouses in which to store inventory. Production facilities would likely include a land, building, equipment and machinery component. Corporate offices likely also account for a portion of Palfinger's PP & E.

b. The figure for PP & E shown on Palfinger's balance sheet represents the historical cost of all of Palfinger's plant, property, and equipment less any accumulated depreciation.

c. In the notes to the financial statements, Palfinger reports categories for: land and buildings, undeveloped property, plant and machinery, other plant fixtures fittings and equipment, and prepayments and assets under construction. Of these, plant and machinery and other fixtures, fittings, and equipment would be considered equipment specifically.

d. The prepayments and assets under construction account represents payments made for the future construction of plant property and equipment. Upon completion, this PP & E will be transferred to the appropriate asset category for actual use. Because of this, no depreciation occurs on prepayments and assets under construction. The reclassification that occurs in the prepayments and assets under construction account reflects the completion of PP & E, which is then transferred to an appropriate asset account (where it will be depreciated normally).

e. Palfinger uses the straight-line method of depreciation. Due to the nature of Palfinger's PP & E, the use of straight-line depreciation seems appropriate. Buildings and machinery likely make up a large portion of Palfinger's PP & E. It is logical to depreciate these buildings and machinery by the same amount each year because these assets will lose their value gradually and consistently. The use of a method such as double-declining balance would allow management to decrease their taxes down the line by experiencing higher levels of depreciation expense in the short term. However, in this case, Palfinger choses to use straight-line depreciation despite this possible tax benefit.

f. Replacement investments and value-enhancing investments are capitalized and depreciated using an adjusted useful life. An alternative treatment for these investments would be to charge the investments to accumulated depreciation rather than an asset account. By decreasing accumulated depreciation, the remaining useful life of the equipment is extended.

g.

   i. The purchase of new plant, property, and equipment can be calculated by summing the additions from 2007, less the portion of additions that are from assets under construction and undeveloped land. This value is €38,718,000.

   ii. €733,000 is shown in the notes as government grants. This sum represents government assistance in the purchase of PP & E. This is shown as a deduction in assets accordance with IAS 20. This is because the payments

resulting from the grant are not due to normal operations and should not be matched with operating expenses from the income statement.

iii. The depreciation expense for 2007 was €12,557,000. This value is given in the notes to the financial statements.

iv. The net book value of PP & E that was disposed of in 2007 can be calculated by deducting the accumulated depreciation on the disposed of PP & E from the acquisition cost of the disposed of PP & E. This value is €1,501,000.

h. Palfinger reports a cash inflow of €1,655,000 from the sale of PP & E in fiscal 2007. In order to calculate the loss or gain that the company experiences due to this disposition, the net book value of the disposed of PP & E is deducted from this amount. The net book value of the PP & E dispossessed in 2007 was €1,501,000. This calculation results in a gain of €154,000 on the disposal of PP & E in fiscal 2007.

i.

i. In 2007 Palfinger added €10,673,000 of other plant, fixtures, fittings and equipment. This net PP & E has salvage value of €1,273,000 and an expected useful life of five years. With this information, the yearly depreciation expense charge using straight-line depreciation can be determined by deducting the salvage value from the beginning book value of the added PP & E and then dividing by its useful life. This calculation yields an annual depreciation expense of €1,880,000. The table on the following page shows the straight-line depreciation of the acquired other

plant, fixtures, fittings, and equipment over the course of its expected useful life.

Depreciation of Other Plant, Fixtures, Fittings, and Equipment - Straight Line (All values shown in Thousands of Euros)			
Year	Net Book Value - Beginning of Year	Depreciation Expense	Net Book Value - End of Year
2007	10,673.00	1,880.00	8,793.00
2008	8,793.00	1,880.00	6,913.00
2009	6,913.00	1,880.00	5,033.00
2010	5,033.00	1,880.00	3,153.00
2011	3,153.00	1,880.00	1,273.00

Fig. 5-1

ii. Palfinger's recording of depreciation expense on the added other plant, fixtures, fittings, and equipment would look differently if they chose to depreciate the PP & E using the double-declining balance method. This method results in higher depreciation expenses in the early years of the assets useful life. The depreciation expense will then continually decrease until the point in time at which the assets are fully depreciated to their salvage value. The double-declining balance method is calculated first by finding the double-declining rate. This is accomplished by finding the straight-line rate of depreciation (100% / Expected Useful life). This straight-line rate is then doubled and applied annually by multiplying the rate by the beginning net book value of other plant, fixtures, fittings, and equipment for a given year. This calculation gives the value for

depreciation expense in the given year. The double-declining balance depreciation of the equipment added in fiscal 2007 can be seen below.

Depreciation of Other Plant, Fixtures, Fittings, and Equipment - Double Declining Balance (All values shown in Thousands of Euros)			
Year	Net Book Value - Beginning of Year	Depreciation Expense	Net Book Value - End of Year
2007	10,673.00	4,269.20	6,403.80
2008	6,403.80	2,561.52	3,842.28
2009	3,842.28	1,536.91	2,305.37
2010	2,305.37	922.15	1,383.22
2011	1,383.22	107.22	1,273.00

Fig. 5-2

j.

i. Under the use of straight-line depreciation, Palfinger reports the net book value of the equipment added in part i as €8,793,000 at the beginning of fiscal 2008. If this PP & E were to be sold for €7,500,000 at this point in time, Palfinger would book a loss on sale of equipment of €1,293,000 (8,793,000-7,500,000). Also, a depreciation expense of €1,880,000 is recorded on the income statement for the fiscal year 2007. Because the sale is recorded at the beginning of 2008, no depreciation expenses (related to this PP & E) from fiscal 2008 will hit the income statement. This transaction will impact the income statement through the booking of the loss on sale of equipment that is experienced. This loss (amount stated above) will be charged under Other Expenses and Losses in the non-operating section of the income statement. The net income statement effect resulting from the above stated depreciation expense and loss on

sale of equipment is a €3,173,000 decrease in net income over the course of fiscal 2007 and 2008.

ii. Under the use of double-declining balance depreciation, Palfinger would report a net book value of €6,402,800 for the added equipment, at the beginning of fiscal 2008. If this PP & E were to be sold for €7,500,000 at this point in time, Palfinger would book a gain of €1,097,200 (7,500,000 – 6,402,800). This gain on sale of equipment should be recorded on the income statement for fiscal 2008 in the form of an addition under Other Revenues and Gains in the non-operating section. A depreciation expense of €4,269,200 would be recorded on the 2007 income statement, however no depreciation expense is incurred for fiscal 2008. As was the case above, this sale occurs at the beginning of fiscal 2008. Because of this, the assets have not been depreciated for the year 2008 prior to the sale occurring. The net income statement effect resulting from the above stated depreciation expense and gain on sale of equipment is a €3,172,000 decrease in net income over the course of fiscal 2007 and 2008.

iii. The net income statement effects from part i and part ii above are nearly identical. There is a €1,000 difference between the two values, but this discrepancy is likely due to rounding. This is to say that the use of straight-line depreciation and double-declining balance depreciation each yield the same net income statement effect over the course of fiscal 2007 and 2008. This occurs because under straight-line depreciation Palfinger experiences a lower depreciation expense in 2007, but this lower expense

is counteracted by the fact that a loss is booked due to the high book value of the equipment (this high book value is a direct result of the low depreciation expense in the year prior). Further, under the double-declining balance method of depreciation, a very high depreciation expense is incurred in the fiscal year 2007 for the added PP & E. This high depreciation expense results in a low book value at the beginning of fiscal 2008, causing Palfinger to book a gain on sale of equipment. This gain counteracts the high level of depreciation expense. Essentially, the counterbalancing effect between the depreciation expense and the gain or loss on sale of equipment in each of the above cases results in an identical net income statement effect for both straight-line and double declining balance over the course of the two years.

Case 6:

Volvo Group

Executive Summary:

Volvo Group is a Swedish company that specializes in the production and sales of commercial automobiles. Increasing pressure to create newer, better, and more environmentally friendly vehicles makes constant innovation necessary to stay competitive in the automobile industry. In order to drive their culture of innovation, Volvo Group makes significant investments in research and development each year (roughly SEK 13,000,000,000 annually). Being based in Torslanda, Sweden, Volvo group prepares its financial statements in accordance with International Financial Reporting Standards (IFRS). In the United States under U.S. GAAP, research and development expenses may not capitalized regardless of the situation. IFRS however, allows for the capitalization of research and development expenditures if certain criteria are met. In order for a company, such as Volvo group, to capitalize a research and development expense there must be a very high degree of certainty that the expenditure will result in an economic benefit in the future. Expenses that are capitalized are considered to be intangible assets on the balance sheet, and must be amortized based on an estimated useful life, just as is the case with buildings and equipment. IAS 38 outlines exactly which research and development expenditures may be capitalized. Although the restrictions on capitalization are stringent, the fact that some research and development expenditures may be disclosed as assets encourages companies to invest in R&D. U.S. GAAP standards somewhat discourage research and development by not allowing related expenses to be capitalized under any circumstances. For this reason, internationally based companies such as Volvo Group often participate in more research and development activities than U.S. based companies as is evidenced by the comparison between Volvo

and Navistar. Research and development is essential to success in nearly any industry. Despite the importance of R&D expenditures, the accounting treatment of these costs is complex, as well as differentiated depending on which standards are observed. A more in-depth analysis of capitalized research and development expenditures as they relate specifically to Volvo Group follows in the appendix.

Appendix:

a. Research and development expenses include the costs of materials, equipment, facilities, personnel, purchased intangibles, contract services, and indirect costs that are associated with R & D. For Volvo Group, these costs would likely be related to the automotive industry. For example, the costs of materials would likely include the raw materials necessary to manufacture automobiles, and the cost of equipment would likely relate to the cost of the machines that are necessary in the production of automobiles.
b. Under IFRS development expenses may be capitalized, if they meet a number of criteria in accordance with IAS 38. In order for Volvo group to capitalize a development expense there must be a high degree of certainty that the expense will result in a future benefit for the company, and it must be possible to prove the technical functionality of a new product or software. For this reason, development expenditures are generally capitalized during the industrialization phase of product development (if they are capitalized at all).
c. The useful life of capitalized development expenses is determined by length of time that the asset acquired will represent an economic benefit for the company.
d. I feel that the IFRS standard better reflects the costs and benefits of research and development spending. Although a small percentage of R & D expenses actually result in an economic benefit for a company, I believe that it is still preferable to allow the capitalization of some R & D expenses. The IFRS allows some R & D expenses to be capitalized, but only those that will almost assuredly result an economic benefit. Under U.S. GAAP, no R & D expenses may be capitalized.

This somewhat discourages companies from investing in research and development. IFRS does a good job of limiting the amount of R & D expenses that may be capitalized, while still allowing companies to disclose the economic benefits of sound research and development activities in the financial statements.

e.

i. The net amount of capitalized research and development costs at the end of fiscal 2009 is SEK 11,409,000,000. This capitalized expense is found in the balance sheet item intangible assets. This line item also contains other intangible assets such as goodwill and patents.

ii.

Capitalized Product and Software Development (in Millions SEK)		
Beg. Balance	12,381.00	
Expenditures	2,602.00	
Ammortization		3,126.00
Plug		448.00
End Balance	11,409.00	

Fig. 6-1

The T-account above shows the changes in Volvo's product and software development account in the fiscal year 2009. The beginning balance in the account is SEK 12,381,000,000. During the fiscal year 2009, Volvo had capitalized expenditures on product and software development of SEK 2,602,000,000. These capitalized expenditures increase the balance of the product and software expenditures account. Throughout fiscal 2009

amortization of SEK 3,126,000,000 is recorded in the product and software development account, which decreases the account balance by the same amount. The credit of SEK 448,000,000 corrects the calculated ending balance to the balance that is given in the notes to the financial statements. The correct balance in the product and software development account at the end of fiscal 2009 is SEK 11,409,000,000.

f.

i.

(in SEK millions)	2007	2008	2009
1) Product and software development costs capitalized during the year	2,057	2,150	2,602
2) Total R&D expense on the income statement	11,059	14,348	13,193
3) Amortization of previously capitalized costs (included in R&D expense)	2,357	2,864	3,126
4) Total R&D costs incurred during the year = 1+2+3	15,473	19,362	18,921

Fig. 6-2

ii. OMIT

iii.

2007:
2,075,000,000/11,059,000,000 = 18.6%

Volvo group capitalized 18.6% of total R&D as product and software development in fiscal 2007.

2008:
2,150,000,000/14,348,000,000 = 15.0%

Volvo group capitalized 15.0% of total R&D as product and software development in fiscal 2008.

2009:
2,602,000,000/13,193,000,000 = 19.7%

Volvo group capitalized 19.7% of total R&D as product and software development in fiscal 2009.

g.

i.

(in SEK millions)	2007	2008	
Net Sales, Industrial Operations	276,795	294,932	208,487
Total Assets, from balance sheet	321,647	372,419	332,265

Fig. 6-3

ii. **Navistar:**

2007: 375,000,000/11,910,000,000 = 3.1%

The proportion of Navistar's total R&D to net sales from fiscal 2007 is 3.1%.

2008: 384,000,000/14,399,000,000 = 2.7%

The proportion of Navistar's total R&D to net sales from fiscal 2008 is 2.7%.

2009: 433,000,000/ 11,300,000,000 = 3.8%

The proportion of Navistar's total R&D to net sales from fiscal 2009 is 3.8%.

Volvo:

2007: 15,473,000,000/276,795,000,000 = 5.6%

The proportion of Volvo's total R&D to net sales from fiscal 2007 is 5.6%.

2008: 19,362,000,000/294,932,000,000 = 6.5%

The proportion of Volvo's total R&D to net sales from fiscal 2008 is 6.5%.

2009: 18,921,000,000/208,487,000,000 = 9.1%

The proportion of Navistar's total R&D to net sales from fiscal 2009 is 9.1%.

The proportion of total R&D costs to net sales from operations for Volvo Group is higher than that of Navistar for each of the fiscal years 2007, 2008, and 2009. This is likely because Volvo has the ability to capitalize certain investments in research and development due to their use of IFRS. Navistar, on the other hand, must expense all investments in R&D according to U.S. GAAP. Because of this mandatory treatment under U.S. GAAP, American companies such as Navistar may not be as incentivized to invest as heavily in R&D.

Case 7:

Big Data Processing - Hadoop

Executive Summary:

The late 1990's and early 2000's saw a vast expansion of the World Wide Web, and more specifically, an expansion of the sheer amount of data that was available. The need to be able to sift through this wealth of data efficiently caused the development of the very first search engines. Initially, these search engines used humans to manually produce search results, but the exponential growth of data made the need for a more efficient solution evident. In 2002, Doug Cutting and Mike Cafarella created their own version of this solution in the form a search engine called Nutch. Nutch differentiated itself from other search engines in that it was designed to distribute data and calculations across multiple computers in parallel so that multiple tasks could be performed simultaneously. This distributed computing allowed for faster, more cost-efficient data processing. Interestingly enough, Google was created using a similar concept around this same time. In 2006, Cutting went to work for Yahoo, bringing Nutch right along with him. Two years later, Nutch was divided into two segments. The first of these segments would remain under the name Nutch and would continue to function as a search engine. The second segment contained the distributed computing and processing portion of Nutch. Cutting decided to name this project after his sons stuffed toy elephant, Hadoop. Yahoo released Hadoop on Apache Software Foundation in 2008 as an open-sourced project. This means that access to the data base is free and can be edited by individuals in order to meet their specific needs. The main value that Hadoop offers to its users is the ability to handle incredibly large amounts unstructured data efficiently and cost effectively. Hadoop can be broken down into two basic components: HDFS (Hadoop Distributed File System) and YARN (Yet Another Resource Negotiator). HDFS is used

in data storage and is made up of one Name Node and multiple Data Nodes. The Name Node serves as the master node for the system. It serves as a sort of directory, managing and tracking the locations of specific data blocks within the Hadoop cluster. The Name Node is also responsible for sending requests to and receiving results from the Data Nodes. The Data Nodes store the actual data in the HDFS and are in constant communication with the Name Node. Each data block is saved on multiple Data Nodes within the cluster. YARN handles the all of processing activities in a Hadoop cluster. It is made up of one Resource Manager and multiple Node Managers. The Resource Manager receives requests to process or analyze data and delegates these requests to Node Managers. Node Managers are installed on each individual Data Node and are responsible for the actual execution of requests. This distributed system layout is what allows Hadoop to be quicker and cheaper than competitors. Distributing tasks across a cluster of nodes allows for different processing functions to occur simultaneously, drastically increasing the speed of results. The cost-effective nature of Hadoop stems from several factors. First off, Hadoop operates using commodity hardware that is far less expensive than the specialized hardware used in other databases. In fact, a large number of companies already possess the infrastructure necessary to utilize Hadoop. Hadoop offers even further savings thanks to the fact that it is open-sourced. Because of this, it is entirely free to access and edit Hadoop, unless a company opts to purchase an easier to use, commercial version of Hadoop such as Cloudera. Aside from labor costs related to set-up and maintenance, a company's only other major cost to consider when implementing Hadoop is the cost of the physical hardware that will be used to run the system. The beauty of Hadoop and its distributed processing system is that the required

hardware can simply be a network of desktop computers, making this cost relatively insignificant or even entirely nonexistent if a company already has the necessary infrastructure.

Possible Issues:

A major obstacle to the implementation of Hadoop is that it is based on Java coding language. An understanding of Java programming is necessary in order to effectively utilize Hadoop. This presents a slight issue, as Java coding is seen as more difficult to learn and master than comparable SQL coding. Though it is considered difficult, there are many resources available to help individuals learn Java. In fact, a quick Google search will give thousands of results for different websites that offer courses on Java. Furthermore, college students can take computer science courses to learn necessary skills in an on-campus environment.

Accounting Applications by Practice:

Audit:

- A client has noticed that a number of their estimated items (such as the allowance for doubtful accounts) have been substantially different than their actual results over a number of periods. In order to address this issue, the client wants to base estimations on far more data than ever before. Hadoop offers a solution to this

problem in that it will allow for the collection and processing of an incredibly vast amount of data that is considered to be relevant to the clients estimated items. Consulting a wealth of related information, rather than a few traditional measures, can assure the accuracy of estimations to a greater extent. The processing and analysis of this data would be both timely and inexpensive thanks to Hadoop.

- In the week before a company must submit its 10-K with the SEC, an error is found in their financial statements. It is believed that this error is the result of some relatively small piece of data being omitted. Hadoops ability to handle incredible amounts of data, as well as unstructured data, allows a company to store and access all available data on a subject matter, even data that may have otherwise been considered immaterial. Because of this, the company's auditor is able to quickly search for and find the omitted data, no matter how minute it may be. Once the omission is found and the auditor prepares the correct financial statements in the short amount of time before they are due with the help of Hadoop's fast distributed processing.
- It's the busy season and the amount of time devoted to each project is of vital importance. Members of the accounting firm must be as efficient as possible with their time in order maximize the firm's profits. Hadoop offers the ability to process data at a rate far quicker than that of traditional data bases. By implementing Hadoop, the amount of wait time auditors experience when accessing the data base is slashed, allowing each employee to complete more work in the same amount of time. This saves members of the firm time and frustration. At the same time, the

firm benefits from saving on labor costs, or even having the ability to assign individuals an extra client.

Tax:

- A tax associate is working for a very large client that is new to the firm. The client has vast amounts of documents and other data that are relevant to their tax returns and effective tax rate. Tax season is right around the corner and the associate need to begin work for the client as soon as possible. With traditional databases, the cost of adding this amount of data could be expensive and would take an inordinate amount of time to store, and then later access and analyze, the client's data. Hadoop allows the accounting firm to take the entirety of what is likely heterogeneous data provided by the client and store it in Hadoop quickly. YARN then allows for the timely accessing an analysis of the stored data.
- A client discovers that they have been paying a much higher effective tax rate than other most of its direct competitors, but is unable to determine why this is the case. The client and their tax team decide that the best way to investigate this is by conducting an in-depth analysis of their competitors. Hadoop offers an excellent platform with which to compile and analyze this data. All of the data made available by the client's competitors can be stored quickly and cost efficiently using Hadoop. The tax team can then quickly access and organize the information as it is needed.
- A company feels that they could be doing more to lower their effective tax rate. In order to address this, they hire an accounting firm to make sure that they aren't missing out on any possible tax deductions. The company is unsure of where these deductions could come from but has a staggering amount of relatively unorganized

of data collected regarding the operations of the company. Using Hadoop, a tax accountant is able to store all of the available data, and then search for information on the specific subject matter that he/she feels could result in a previously unrealized tax deduction.

Advisory:

- A client is growing seemingly exponentially and needs to be able to store increasingly larger amounts of data. The client wants to implement a database that can handle their volume of data but is hoping to keep costs as low as possible in order to continue devoting the majority of their resources to expansion. By suggesting the implementation of Hadoop as the company's main database, both the issue of storage and cost are both addressed. Hadoop can more than handle the amount of data that the company requires for little to no cost.
- A client's bottom line has stagnant for the past few years. The company's industry is flooded with competition, and no one firm seems to be out-competing the others. The client wants to compare themselves with their competition in order to determine and address strengths and weaknesses. The client and their consultants agree that they should begin this comparison by looking at the company's financial statements and the statements of their competitors. Hadoop makes it possible to store all necessary data on the company and their competitors, as well as search for and analyze similarities and differences within the financial statements.
- A client is in the retail industry and has been struggling with the volume of inventory to order at each of their locations. The client is a large department store and has many locations all across the world. Because of this, purchasing tendencies

very greatly from location to location. The client wants to collect extensive records of all transactions and have them analyzed to determine inventory estimates for the upcoming quarter. This can be accomplished through the use of Hadoop. The sheer volume of data that must be processed in order to accomplish this would be costly using a traditional database, but Hadoop can easily store the necessary data and also aid in analysis, all for next to nothing.

Why Hadoop?:

The effective use of Big Data is becoming increasingly important to accountancy in today's tech focused world. The fact of the matter is that an accounting firm must have the capability to process big data in order to produce quality of service that clients command. There are a variety of options available to fill our database needs, but I feel that one stands out amongst its competitors when it comes to filling our needs: Hadoop. Hadoop is a Java based, open sourced database that will allow us to tackle big data for a shocking low cost. Hadoop runs using one device as a master node (name node) and then a number of other devices as data nodes. The data nodes hold data blocks and respond to the requests of the master node. The data blocks are stored on multiple data nodes simultaneously. Duplicating the data in such a way works as a sort of failsafe against the loss of information. At the request of the master node, processing is handled by the data nodes, performing multiple operations simultaneously (called distributed processing). Ability to distribute separate tasks to each node simultaneously makes for incredibly fast processing of information. This increase in speed will keep our employees from wasting time waiting for results, allowing them to allocate their time as efficiently as possible. Furthermore, Hadoop

is incredibly cost effective. The open-sourced program is free to use, meaning that our only costs incurred would be related to infrastructure and Java training. Ultimately, the reality is that the firm needs to make a move into Big Data. I feel that at this time our best choice in a database is Hadoop.

Case 8:

Rite-Aid Corporation

Executive Summary:

The Rite-Aid Corporation is one of the largest retail pharmacies in the US, operating stores in over thirty different states. In order to operate efficiently, a corporation the size of Rite-Aid will likely face a variety of circumstances for which it must raise a significant amount of capital. Companies have a variety of means through which they can generate capital. For example, a company can issue shares of capital stock in order to raise funds. Often, in cases where a company must raise a very high amount of capital, a company will issue long-term debt such as a bond or long-term note payable. Essentially this issuance of debt results in a company such as Rite-Aid receiving cash at present, in exchange for its promise to pay back, not only the principle of the debt, but also an amount of interest. Specific issuances of debt may differ from one another in both their assigned interest rate and characteristics. A long-term debt, such as a bond, may be either secured or unsecured, the difference being that secured debts are backed by a pledge of collateral and unsecured debts are not. Because of this, unsecured debts generally present more risk on the part of the creditor, and thus, are susceptible to higher rates of interest. In order to limit this risk, a company may issue guaranteed debt, in which a third party promises to assume the debt in the case that the issuing company is unable to makes its payments. Rite-Aid's subsidiaries often provide this guarantee for their debts, as is evidenced in Note 11. Another classification that long-term debt may carry is "senior" debt. The title of senior denotes the order in which debts must be settled in the case of liquidation. For example, if Rite-Aid were to go bankrupt it is obligated to pay back the creditors of its senior debt before settling its other debts. Long-term debt is recorded at the present value of its cash flows and is often subject to a discount or

premium. The debts examined in this case are either issued at par or at a discount. This discount is treated as a contra-liability to a debt related payable and must be amortized over the life of the debt. This amortization occurs as a reduction in the amount of cash interest paid at interest dates and increases the carrying value (PV of future cash flows at issuance) until it equals the value of the principal. Although interest can make long term debt expensive in the long run, almost all companies must issue debt in order to raise capital at one point or another. In the case of Rite-Aid, the use of long-term debt is essential to their ability to continue operating effectively as one of the United States' largest retail pharmacies.

Appendix:

a.

i) The difference between the secured and unsecured debts recorded by Rite-Aid is that, unlike unsecured debts, secured debts are backed by a pledge of collateral. In the event that Rite-Aid cannot pay back one of its secured debts, the creditor has the legal right to the pledged collateral. It is important for Rite-Aid to separate these two categories of debt so that the company knows which of its debts will result in the loss of collateral if default occurs. Also, there are generally a number of fundamental differences between the two types of debt. For instance, the interest rate on secured debt is generally lower than that of unsecured debt because the pledging of collateral limits the creditors risk.

ii) A guaranteed debt is one for which a third party (aside from the debtor and creditor) promises to assume responsibility for the debt in the event that the debtor is unable to make payments. In the case of Rite-Aid, the company's wholly owned subsidiaries are generally the ones providing this guarantee.

iii) Senior debt is debt which takes highest priority in the event of a liquidation. If a company goes bankrupt, it must pay the creditors of its senior debts first. Fixed rate debt refers to debt which carries a predetermined fixed interest rate for the life of the debt. This is common in the of bonds for financing. Convertible debt offers the

creditor the right to exchange the debt for securities (such as common stock) during a specified period of time while the debt is outstanding. The issuance of convertible debts allows a company, such as Rite-Aid, to raise equity capital, while giving up minimal ownership control. Companies may also offer convertible debt because it is more appealing to possible creditors than straight debt, and therefore tends to yield lower interest rates.

iv) Rite-Aid holds a number of forms of debt which differ both in form, and in their interest rates. It is unrealistic to expect a company (especially a company as large as Rite-Aid) to operate effectively using only one kind of debt instrument. This is because different types of debt best serve different purposes. For instance, Rite-Aid would have the ability to raise far more capital through the issuance of a secured bond than it would if it were to issue an unsecured, unguaranteed note. This is because the bond would represent far less risk for a creditor, resulting in a lower rate of borrowing. Looking beyond the types of debts used by Right-Aid, there is also a great variety of interest rates assigned to debt. This is because the interest rate assigned to a particular debt is based on a number of factors including, but not limited to, the creditworthiness of the debtor. Essentially, these borrowing rates are determined by the amount of risk on the part of the creditor. Different types of debt (and even the same kind of debt at different

points in time) can yield different amounts of risk, and thus, result in different interest rates.

b. At February 27, 2010, Rite-Aid's balance sheet reveals a total of $6,370,899,000. This value is the sum of the current maturities of long-term debt account, the total debt account, and the lease finance obligations account. The current maturities of long-term debt account shows the portion of this total debt that is due within the coming fiscal year. The balance of this account at the above date was $51,502,000. The value for total debt calculated from the balance sheet is identical to the total debt reported by Rite-Aid in note 11.

c. 7.5% Senior Secured Notes due March 2017 (All journal entries in thousands of dollars)

   i) The face value of these notes is the same as its value as stated in note 11: $500,000,000. This is because the notes are issued at par, which is evidenced by the fact that there is no face value disclosed parenthetically for this debt.

   ii) Issuance:

Cash	500,000	
Notes Payable		500,000

   iii) Interest Expense:

Interest Expense	37,500	
Cash		37,500

iv) Maturity:

Notes Payable	500,000	
Cash		500,000

d. 9.375% Senior Notes due December 2015 (All journal entries in thousands of dollars)

i) At February 27, 2010, the face value of these notes is $410,000,000, and their book value is $405,951,000. The two values differ because the note was originally issued at a discount. A portion of this discount has yet to be amortized, resulting in a difference between face value and carrying value in the amount of the unamortized discount ($4,049,000)

ii) During fiscal 2009, Rite-Aid pays an amount of interest equal to the face value of the note multiplied by the stated interest rate of 9.375%. This calculation results in an interest payment of $38,483,000.

iii) The amount of interest expense recorded on these notes in the year ended February 27, 2010, is equal to the sum of the cash interest payment and the portion of the discount that is amortized during the year. The amount of the amortized discount can be calculated as $705,000 by finding the difference in the notes' carrying value between 2009 and 2010. When added to the cash interest payment of $38,438,000, this yields the value for total interest expense for the year which is $39,143,000.

iv) Interest Expense:

Interest Expense	39,143	
Discount on Notes Payable		705
Cash		38,438

v) The total rate of interest for fiscal 2009 can be calculated by taking the total interest expense for the year ($39,143,000) and dividing by the prior year's carrying value ($405,246,000). This calculation yields a total rate of interest of 9.659%.

e. 9.75% Senior Secured Notes due June 2016 (All journal entries in thousands of dollars)

i) Issuance – 6/30/2009:

Cash	402,620	
Discount on Notes Payable	7,380	
Notes Payable		410,000

ii) If the duration, amount of a single cash interest payment, present value, and future value of the note are all known, a time value of money equation can be used to back into the market interest rate. Based on the information provided by Rite-Aid, all four of these values are known or easily calculable. Plugging these values in and solving for the unknown rate of interest reveals a market interest rate of 10.1212%.

iii) Shown below part "e", section "v"

iv) Interest Expense:

Interest Expense	27,167	
Discount on Notes Payable		517
Interest Payable		26,650

v) The net book value of the notes can be calculated by adding the amount of the discount that is amortized during the period to the prior periods carrying value. Because February 27 is between interest dates, only a partial year's worth of amortization occurs is recorded ($517,000). When this value is added to the prior carrying value of $402,620,000 it yields a net book value of $403,137,000 on February 27, 2010.

f.

Amortization Schedule - 9.75% Note (Part e – iii) (All numbers, not including percentages, in thousands of dollars)					
Date	**Interest Payment**	**Interest Expense**	**Bond Discount Amortized**	**Net Book Value of Debt**	**Effective Interest Rate**
6/30/09	0	0	0	402,620	
6/30/10	39,975	40,750	775	403,395	10.1212%
6/30/11	39,975	40,828	853	404,248	10.1212%
6/30/12	39,975	40,915	940	405,188	10.1212%
6/30/13	39,975	41,010	1,035	406,223	10.1212%
6/30/14	39,975	41,115	1,140	407,363	10.1212%
6/30/15	39,975	41,230	1,255	408,618	10.1212%
6/30/16	39,975	41,357	1,382	410,000	10.1212%

Fig. 8-1

Net Effect of Journal Entries on Assets, Liabilities, and Net Income:			
Entry	**Assets**	**Liabilities**	**Net Income**
c-ii	Increase	Increase	No Effect
c-iii	Decrease	No Effect	Decrease
c-iv	Decrease	Decrease	No Effect
d-iv	Decrease	Increase	Decrease
e-i	Increase	Increase	No Effect
e-iv	No Effect	Increase	Decrease

Fig. 8-2

Case 9:

Effective Tax Rate Manipulation

Executive Summary and Analysis:

Working to lower a company's effective tax rate is one of the few tax accounting topics that have been discussed up to this point in my accounting curriculum. Although I had an understanding of the fact that large companies have entire teams of people constantly working to find ways to pay a lower tax rate, I had no idea about the extent to which this occurs in the world of public accounting.

A large company like Apple, through the manipulation of their tax structure, is able to pay an effective tax rate of about 1.9%. This is roughly 5% of the rate mandated by the US government (36.9%). This dramatically lower tax rate is possible through complicated tax haven structures put in place by the company which essentially re-route revenues through false entities that exist in locations with far less stringent taxation laws. Common locations for these entities include the Netherlands and Kenya. Each of these locations offer different tax benefits to companies aiming to lower their effective tax rates. In the case of the Netherlands these benefits include a low intellectual property tax as well as having more tax treaties than any other nation in the world. Kenya attracts some of the largest companies in the world in a different way than the Netherlands. Kenya has special economic zones which offer dramatic tax breaks to new entities for the first ten years of their operation, however, most companies that choose to route revenues through Kenya are able to experience this tax holiday indefinitely. This is possible through means such as opening a new entity at the end of the ten-year period to replace the entity that is no longer subject to the lower tax rates. These created entities are often nothing more than an illusion of a real company. In fact, there are companies that are entirely devoted to the management of these artificial entities. Intertrust in the

Netherlands is one such company. The Intertrust building serves as the home address of over 2000 of these so-called mailbox entities.

The ultimate goal of companies that create these complicated tax haven structures is to achieve "neutral taxation" which as stated in the video essentially means no tax. This treatment of the effective tax rate is, for all intents and purposes, completely legal, however many groups and individuals (Government officials in particular) feel that the creation of tax haven structures is a blatant abuse of tax law. Herein lies a moral dilemma that faces multinational companies. Personally, I find this moral issue incredibly interesting, as after watching "Taxodus" I feel that my thoughts are divided relatively evenly between each side of the discussion. On one hand, I have the perspective of someone who finds accounting interesting and hopes to pursue a career in public accounting. This side of me finds the manipulation of revenues and profits to lower tax rates to be intriguing and exciting, seeing the whole process as a kind of puzzle to be pieced together. Despite this, I cannot deny that I understand the moral issues that are interweaved into a tax haven system that is so widely abused. It is easy, from an accounting perspective, to overlook the repercussions that it can have on a society when the world's largest companies don't pay the appropriate amount of taxes, but still use their fair share (or more often, more than their fair share) of public resources. When taking a step back and looking from a broader perspective however, it is difficult to ignore the injustices that are caused by these tax havens. After all, these practices of manipulating tax rates are the same ones used by the Russian mafia to hide their profits. The unfortunate reality of the matter is that it is unlikely that changes will come to remedy these issues in tax law. This is because of the overarching question related to this

matter: if companies were forced to pay applicable taxes in their entirety, would they still be able to provide the products and services that individuals have come to expect, while keeping prices competitive?

Case 10:

Merck & Co.

Executive Summary:

New Jersey based Merck and Co. is one of the largest developers and retailers of pharmaceuticals in the world. Large companies such as Merck often need to raise large amounts of capital for a variety of reasons, such as the purchase of property and equipment. One of the most prominent methods used by these companies to raise capital is the issuance of capital stock. A share of capital stock, such as common stock or preferred stock, essentially grants its owner a percentage of ownership in a company, and any rights that may come along with that partial ownership. In general, an entity purchases a company's capital stock in anticipation (or, in the very least, hope) of a return on their investment either through the sale of the stock at a price higher than its cost, or the payment of dividends on capital stock outstanding. A company that is operating at a profit will often choose to distribute a portion of its earnings to its shareholders in the form of a dividend. Because of this link to profits, potential investors often view the declaration and payment of dividends as a sign that a company is profitable. Conversely, if a company that normally pays a dividend decreases its annual dividend drastically or fails to pay a dividend altogether, it is often viewed as a sign of weakness. For this reason, companies that have historically paid a dividend try to pay dividends that are equal or greater than that of prior years, even if the payment is not merited by profits. In analyzing Merck's payment of dividends, it appears that they may be guilty of this kind of "dividend smoothing". In the year 2007, Merck's dividend payout ratio (dividends to net income) is over 100%, meaning that more money was paid in dividends than was earned as net income. In comparison, Merck's dividend payout ratio in 2006 was roughly 75%. This is likely because the only way that Merck could pay

a dividend in 2007 that was comparable to its 2006 dividend was to give up a much larger percentage of earnings. Sure enough, further analysis of Merck's financials reveals that its net income in 2007 is over $1,000,000,000 less than the net income reported for 2006, but the dividend paid per share only decreased by $0.01. I find the declaration and payment of dividends to be one of the more interesting topics that can be discussed in the analysis of a company. When your average person logs onto yahoo finance and is looking at potential investment opportunities, it is likely that they would view a company's dividends per share as a good measure of a company's. In analyzing Merck's financial statements however, we can see that this may or may not be the case. Companies have a variety of means that they can use to distort figures, such as dividends per share, in a way sheds the most positive light possible on the company's performance. This is one of many reasons that the in-depth analysis of a company's financials is essential in order to properly understand how successfully a company is operating.

Appendix:

a.

i. Merck & Co. is authorized to issue 5,400,000,000 shares of common stock. This number can be found on their consolidated balance sheet in the Liabilities and stockholders' equity section.

ii. The total number of shares issued by Merck can also be found in the Liabilities and Stockholder's Equity section of the balance sheet. As of year-end 2007, Merck has issued 2,983,508,675 shares of common stock.

iii. Merck's balance sheet reports $29,800,000 as the value of common stock. This can be calculated by multiplying the number of common shares issued by the par value of each share which in this case is $0.01. Companies often use a very low par value such as this for their common stock in order to avoid the likelihood of a contingent liability in the case that the stock price per share were to plummet.

iv. Merck holds 811,005,791 common shares in treasury at year-end 2007. This number can be found the Liabilities and Stockholders' equity section of the balance sheet.

v. The number of common shares outstanding for Merck at year-end 2007 is 2,172,502,884. This can be calculated by subtracting the number of shares held in treasury from the total number of issued shares.

vi. Merck's total market capitalization at year end 2007 is $125,157,891,100. This can be calculated by multiplying the total number of common shares outstanding by the market price of one common share at year end 2007.

b. OMIT

c. A company pays dividends on their common stock as a return on the common stockholders' investment. The share price of a company's common stock will generally increase upon payment of a dividend, because the payment of dividends signals profitability and stability to potential investors.

d. A company may decide to repurchase shares of their own stock (purchase treasury stock) for a variety of reasons. For example, the purchase of treasury stock directly from common shareholders can be a means for a company to distribute cash to its stockholders in a tax efficient manner (the tax rate on sale of stock is very low). A company may also purchase treasury stock in an effort to decrease the total number of shares outstanding. This drives up earnings per share and can be also useful in the case that an outside company is attempting a takeover by purchasing shares.

e. Merck & Co. Payment of Dividends (all values in millions of dollars):

Retained Earnings	3310.7	
Dividends Payable		3.4
Cash		3307.3

f. OMIT

g.

i. Merck & Co. uses the cost method to account for its treasury stock transactions as is noted in the Liabilities and Stockholders' equity section of the balance sheet. Under the cost method, the treasury stock account is debited in the amount of the total reacquisition cost. This treatment results in a deduction to both total paid in capital and retained earnings on the balance sheet.

ii. The total number of treasury shares Merck purchased in 2007 can be found in the notes to the financial statements (note 11). In 2007, Merck repurchased 26,500,000 shares of its own common stock.

iii. In total, Merck paid $1,429,700,000 to buy back its own stock during the year 2007. This translates to roughly $53.95 per share repurchased. This expenditure can be found correctly categorized as a financing activity on Merck's statement of cash flows.

iv. Treasury stock is reported as a deduction to stockholders' equity on the balance sheet, rather than an asset. To classify repurchased stock as an asset would be akin to a company owning a part of itself which is illogical. The purchase of treasury stock decreases net assets and grants a company none of the rights that typically come along with the ownership of common stock. For these reasons, treasury stock is essentially unused capital stock, which should not be classified as an asset.

h. OMIT

i. Merck & Co. (numbers in millions)

	2007	**2006**
Dividends paid	$3,307,300,000	$3,322,600,000
Shares outstanding	2,172,502,884	2,167,785,445
Net income	$3,275,400,000	$4,433,800,000
Total assets	$48,350,700,000	$44,569,800,000
Operating cash flows	$6,999,200,000	$6,765,200,000
Year-end stock price	$57.61	$41.92
Dividends per share	$1.52	$1.53
Dividend yield	2.6%	3.6%
Dividend payout	101.0%	75.0%
Dividends to total assets	6.8%	7.5%
Dividends to operating cash flows	47.3%	49.1%

Fig. 10-1

Case 11:

State Street Corporation

Executive Summary:

State Street Corporation is a financial holding company based in Boston, Massachusetts. Being, a financial institution, State Street's operations and reporting differ from what one would expect to see from a firm in another industry such as merchandising. Because of the nature of its industry, State Street does not carry inventory on its balance sheet. A financial institution generates income not through the creation and or sale of inventory, but instead through the purchase and sale of debt and equity investments. Trading securities are most akin to inventory for a financial services firm. These trading securities may be debt or equity securities which firms purchase with the hopes of capitalizing on short term price differences in the market. Trading securities are reported at their fair value and changes in the fair value of these investments impact net income. Another category of security carried on the balance sheet of financial services firms is available-for-sale investments. The available-for-sale securities are investments for which the firm is unsure of its intent to sell. They are reported at their fair value, like trading securities, but differ in that any unrealized gain or loss reported as a result of the adjustment to fair value is recorded as other comprehensive income, and therefore hits equity rather than net income. The final category of investment commonly found on the balance sheets of financial services firms is held-to-maturity securities. These securities are those that a firm has the positive intent and ability to hold to maturity. They differ from trading and available-for-sale securities in that held-to-maturity securities cannot include equity investments due to their lack of a maturity date. The accounting for held to maturity securities requires that they be reported at amortized cost, resulting in no unrealized gain or loss as there are no adjustments to fair value. In the discussion of

investments in securities, I find the differences between the classifications of securities to be very interesting. After all, the treatment and impact of a given security can differ greatly from the treatment and impact of the exact same security if it were classified as available-for-sale, rather than trading for example. This results in financial services firms utilizing each category of security differently to create the best possible bottom line. Income can be generated in a variety of ways, from short term price differences on trading securities, to interest inflows from held-to-maturity debt investments. Ultimately the firms that are the most successful at making money are the firms that are not only choosing good investments, but also effectively categorizing these investments and determining the proper amount of resources to be invested in each category.

Appendix:

a.

i. Trading securities are debt or equity securities that companies hold with the intention of selling within a short period of time. In a way, the trading securities of a financial institution become similar to the inventory of a merchandising company in that the institution and sells trading securities as a part of its central operations and recognizes income based on short-term price differences. For this reason, trading securities are reported at fair-value and any unrealized holding gains or losses will flow through the income statement and hit net income.

ii. If a company holds trading debt securities, it may receive interest payments at certain dates. In this case, the company would debit cash or interest receivable (depending on date of payment) and credit interest revenue for the amount of the interest payment ($1). If the preceding entry debits interest receivable there will be a second entry at the date of payment where the company will debit cash and credit interest receivable for the same amount as the first entry. If a company holds trading equity securities, it may receive dividend payments from the investee company. If this occurs the investor company would debit dividend receivable or cash (depending on the date of payment) and credit dividend revenue for the amount of the dividend ($1). If this first entry is made to dividend receivable, there will be a second entry at the time of payment which

debits cash and credits dividend receivable for the same amount as the first entry.

iii. Fair Value Adjustment (Trading) 1

Unrealized Holding Gain or Loss – Income 1

b.

i. Debt and equity securities that are not classified as trading or held-to maturity due to uncertain intent are classified as available-for-sale. These available-for-sale securities are reported at fair value and unrealized holding gains or losses are recorded in other comprehensive income, and thus hit equity on the balance sheet rather than flowing through the income statement.

ii. If a company holds available-for-sale debt securities, it may receive interest payments from the investee. If this occurs, the investor would record a debit to cash or interest receivable for the full amount of the interest payment ($1). The credit in this case would be to interest receivable and, if the security was purchased at a premium, an additional credit would be made to debt investments for the amortization of the premium during the period (if the security were issued at a discount, debt investments would be credited for the amount of amortization. If the entry described above initially debits interest receivable a second entry will be made upon payment which debts cash and credits interest receivable for the amount of the payment.

iii. Fair Value Adjustment (AFS) 1

Unrealized Holding Gain or Loss – Equity 1

c.

i. Debt securities that a company has the positive intent and ability to hold until they mature are classified is held-to-maturity. These securities are reported at their amortized cost and therefore no unrealized gains or losses are recorded in the treatment of held-to-maturity debt securities. Equity securities cannot be classified as held-to-maturity as they do not have a date of maturity.

ii. A company makes no entry to adjust held-to-maturity securities to fair value because they are reported at their amortized cost. There are no unrealized holding gains or losses recorded in the treatment of held-to-maturity securities.

d.

i. On December 31, 2012, the balance of State Street's trading account assets account is $637,000,000. This amount reflects the fair market value of these securities at December 31, 2012, as it already includes the fair value adjustment account which acts as a contra/adjunct account to the investments.

ii. 2012 Adjusting Entry (numbers in millions of dollars)

Fair Value Adjustment (Trading) 115

Unrealized Holding Gain or Loss – Income 115

e.

i. The 2012 year-end balance of State Street's investment securities held to maturity account is $11,379,000,000. This amount can be found on the face of the balance sheet.

ii. The fair market value of these investments at year-end 2012 is $11,661,000,000. This value is noted parenthetically on the balance sheet.

iii. The $11,379,000,000 reported as the balance in the investment securities held to maturity represents the amortized cost of the security. Amortized cost is the original cost of the securities as adjusted for the accumulated amortization of any premium or discount up to the reporting date. In the case that the securities were purchased at a discount, the amortized cost will be higher than the original cost. If the securities were issued at a premium, the amortized cost recorded will be less than the original cost.

iv. The difference between the fair market value and the amortized cost of the held-to-maturity securities represents a change in the average market rate of interest from the time that the securities were purchased. The excess of fair value above amortized cost in the case of State Street's investment securities held to maturity account suggests that interest rates have fallen since the point in time that the securities were purchased. This is implied by the fact that other companies attribute a higher value to State Street's held-to-maturity securities than similar securities which could be purchased at the current average market rate of interest.

f.

i. The 2012 year-end balance in State Street's investment securities available for sale account is $109,682,000,000. This balance represents the fair market value of available-for-sale debt and equity securities.

ii. At year-end 2012, State Street reports unrealized gains of $2,001,000,000 and unrealized losses of $822,000,000 on its available-for-sale securities. These gains and losses net to an unrealized gain of $1,119,000,000.

iii. At year-end 2012, State Street reports realized gains of $101,000,000 and realized losses of $46,000,000 on available-for-sale securities. These gains and losses net to a realized gain of $55,000,000. This amount appears as a gain on the face of the income statement and represents a positive cash flow on the statement of cash flows. This is because it represents the gains on the sale of available-for-sale securities during the year which have already been realized and will be included in net income.

g. (All journal entries in millions of dollars)

i.	Investment Securities Available for Sale	60,812	
	Cash		60812
ii.	Cash	5,399	
	Unrealized Holding Gain or Loss – Equity	67	
	Investment Securities Available for Sale		5,411
	Gain on Sale of Investment Securities (AFS)		55

iii. The original cost of the securities can be calculated by subtracting the gain on sale of investment securities available for sale from the cash proceeds. This gives the original cost of the securities as $5,344,000,000.

Case 12:

ZAAG Inc.

Executive Summary:

ZAAG Inc. is a company that produces and sells mobile device accessories such as screen protectors for smartphones. This case takes an in-depth look at ZAGG's financial statements, with a specific focus on the accounting related to income taxes. The statutory income tax rate is the percentage of a company's income that must be paid in income taxes, as mandated by the federal government. ZAGG reports a statutory rate of 35% for 2012 in this case. In reality, companies rarely, if ever, end up paying exactly the statutory rate of income taxes. The actual income tax rate paid by a company is called the effective income tax rate. For example, in 2012 ZAGG paid an effective tax rate 39.3%, which is 4.3% higher than the statutory rate. The difference between the effective and statutory rates is reconciled in footnote 8 of the financial statements. A number of items affect the tax rate paid by ZAGG in 2012, but the largest contributors to its increased tax rate are state income taxes, non-deductible expenses, and an increase in the allowance to reduce deferred tax assets to expected realizable value.

In this particular case, ZAAG paid an effective tax rate that was higher than the statutory income tax rate in 2012. However, many large companies manage to pay far less than the statutory rate through the use of complex tax haven structures, which route revenues through off-shore locations that have lax income tax regulations. As tax reform takes effect and the statutory income tax rate decreases, some companies may have to analyze their tax structures to determine whether or not it is worthwhile to continue devoting resources to the effort of lowering their effective tax rate. It will be interesting

to see how companies respond to tax reform in the coming years, and the impact it will have on financial reporting.

Appendix:

a. The term book income refers to the pre-tax income that is reported on a company's financial statements. On ZAGG's statement of operations, this number can be found to be $23,898,000. A company's book income may differ from its taxable income. This situation occurs when there are permanent or temporary differences in the income that is reported on the financial statements and the income that is reported for tax purposes.

b.

   i. A permanent tax difference is an event or transaction that is reported differently for financial reporting and tax purposes. Permanent differences cannot reverse in future periods and thus will never be eliminated. In the case that a company must pay a fine for its negative environmental impact, a permanent difference would be created. This is because the fine is reported as an expense on the financial statements but may never be considered an expense in the calculation of taxable income.

   ii. A temporary tax difference results when there is a difference between the book basis and the tax basis of an asset or liability, that will result in taxable or deductible amounts in future years. An example of a case that would result in a temporary difference would be as follows: a company reports higher depreciation on its financial statements than is reflected by its taxable income. In this case, the temporary difference would create a future taxable amount and thus, a deferred tax liability.

iii. The statutory tax rate is the income tax rate that is set by the government, and thus is mandated by law.

iv. The effective tax rate is actual tax rate that a company is exposed to. This rate can be manipulated by a company through a variety of means such as routing income through off-shore tax havens. For this reason, it is incredibly rare for a large company to pay taxes according to the statutory rate. In this case however, ZAGG pays an effective rate that is higher than the statutory income tax rate. The reasons for this are discussed further in part "f".

c. Part "c" is addressed below, in "Deferred Taxes on the Income Statement and Balance Sheet" below.

d. Part "d" is addressed below, in "Deferred Taxes on the Income Statement and Balance Sheet"

Deferred Taxes on the Income Statement and Balance Sheet:

When a company has temporary differences between its book income and its taxable income, it will result in amounts that are either taxable or deductible in future years. These future taxable or deductible amounts result in either a deferred tax liability or deferred tax asset respectively. A deferred tax liability results when a taxable temporary difference at the end of a given period results in an increase to taxes payable in future years. An example of a situation that would give rise to a deferred tax liability is as follows:

> Company A specializes in the sale of a specific good. It begins operations in December of 2017, and only sells one unit of this good during 2017. The good is sold to Company B and is delivered during the month of December. In December 2017 Company A records revenue for the sale and records a receivable in the amount of the expected payment from Company B, which is scheduled for January of 2018. When financial statements are prepared for Company A at the end of December 2017, taxable income falls short of book income by the amount of the sale. This taxable temporary difference decreases income taxes payable in the current period, and creates a deferred tax liability. In January of 2018 payment for the good sold in the prior year is received by Company A. No temporary differences originate in 2018. When financial statements are prepared by Company A at the end of December 2018, the taxable temporary difference originating in 2017 reverses, resulting in an increase to income taxes payable for 2018 and a decrease in the deferred tax liability in the amount of the original sale.

The amount that is recorded as a deferred tax liability is the value of the taxable temporary difference for the period multiplied by applicable tax rates. As is demonstrated in the above example, this liability is then decreased in future periods as the temporary difference reverses. The reversal occurs because the liability increases income tax payable in the affected future periods. Deferred tax assets result when a deductible temporary difference at the end of a given period represents a tax benefit in future years.

The following case is an example of a situation that would result in a deferred tax asset being recorded:

> Company A begins renting apartments in December of 2017. During 2017, only one apartment is rented by Ten Ant. Ant's lease begins January 1, 2018 but rent payment for the entirety of 2018 is received by Company A during December 2017. As a result, Company A records the receipt of cash and unearned rent revenue in the amount of the annual rent payment in 2017. When financial statements are prepared by Company A at the end of December 2017, book income is less than taxable income by the amount of the annual rent payment. The resulting deductible temporary difference increases income taxes in the current period and creates a deferred tax asset. During 2018, all of the unearned revenue recorded in 2017 is earned. No temporary differences originate in 2018. When Company A prepares financial statements at the end of December 2018, the deductible temporary difference originating in 2017 reverses, resulting in a decrease to income taxes payable and the deferred tax asset in the amount of the annual rent payment.

The value recorded for the deferred tax asset is the amount of the deductible temporary difference multiplied by applicable tax rates. Like deferred tax liabilities, deferred tax assets are also decreased in future years as the temporary difference reverses. This reversal of deferred tax assets can be seen in the example above. In the case of either

a deferred tax asset or liability, the deferred tax account represents either an increase or decrease to the amount of income tax expense recorded on the income statement. This treatment is in accordance with FASB ASC 740 which addresses the accounting for income taxes. ASC 740-10-50-2 mandates that the following components of the net deferred tax asset or liability are disclosed on the balance sheet: (a) the total of all deferred tax liabilities; (b) the total of all deferred tax assets; (c) the total valuation allowance recognized for deferred tax assets, which reduces deferred tax assets when it is determined that it is "more than likely" (greater than 50% probability) that some portion of the deferred tax asset will not be realized. Disclosures related to the income statement are addressed in ASC 740-10-50-9. It is required that the significant components of income tax attributable to the continuing operations of a company in a given year are disclosed on the company's income statement. These significant components are given by ASC 740-10-50-9 include the current tax expense (or benefit) and the deferred tax expense (or benefit) amongst other relevant Items. Income tax expense, as reported on the income statement is generally calculated as the income taxes payable plus or minus the change in deferred income taxes. In this calculation, an increase in deferred tax liabilities is added to income taxes payable and an increase in deferred tax assets is subtracted from income taxes payable. Conversely, a decrease in deferred tax liabilities or deferred tax assets would be subtracted and added respectively. The current and deferred portions of income tax expense are disclosed separately on the income statement. This treatment of the income tax expense account ensures that a company's financial statements represent the complete economic position of a company so that investors and creditors can accurately predict the amounts, timing and uncertainty of future cash flows. If companies

were to simply report their current tax bill, or income tax payable, as income tax expense on the income statement, information vital to identifying the company's economic position would be omitted in any case where a deferred tax asset or liability arises as the result of temporary differences. For example, if a deferred tax liability should be recorded by Company A in 2017, but this deferred liability was not included in the computation of income tax expense or disclosed in the financial statements, the company would overstate its net income and investors would be unaware of the future cash outflow that is represented by the future taxable amount. Ultimately, the goal of the income statement is to accurately report the operations of a company so that investors and creditors can make informed decisions. The treatment of income tax expense outlined in ASC 740 achieves this goal, whereas the use of a company's current tax bill as a periods income tax expense could potentially misrepresent the company's overall economic position.

e. If it is determined that it is "more likely than not" (greater than 50% probability) that a company will not realize a portion of a deferred tax asset, the asset should be reduced by a valuation allowance. This valuation allowance is called the allowance to reduce deferred tax assets to expected realizable value. If a company decides, based on available evidence, that it is more likely than not that a portion of a deferred tax asset will not be realized, it makes an entry to record the reduction in value. The debit in this entry is made to income tax expense thus decreasing the expense. The credit is made to the allowance account, increasing the value of the allowance by the amount that the company expects will not be realized.

f. (all journal entries in thousands)

i.	Income Tax Expense	9,393	
	Deferred Tax Asset, net of Deferred Tax Liability	8,293	
	Income Tax Payable		17,686

ii.	Income Tax Expense	9,393	
	Deferred Tax Asset, net of valuation allowance	8,002	
	Deferred Tax Liability		291
	Income Tax Payable		17,686

iii. The effective tax rate paid by ZAGG in 2012 can be calculated by dividing their income tax provision ($9,393,000) by their income before provision for income taxes ($23,898,000). This calculation yields an effective tax rate of 39.3%. The increase in rate from the statutory tax rate is a result of several items such as state income taxes, non-deductible expenses, and an expected decrease in the realizable value of deferred tax assets.

iv. The amount $13,508,000 can be reconciled to the balance sheet by taking the sum of current deferred income tax assets ($6,912,000) and non-current deferred income tax assets ($6,596,000).

Case 13:

Apple Inc.

Executive Summary:

Apple Inc. designs, produces, and sells a wide variety of products including devices, software, and accessories. For a company that has such a staggeringly high volume of transactions processed each day, an important accounting consideration is the amount and timing of revenue recognition. If Apple sells an iPhone on a payment plan, there could be some question as to whether revenue should be recognized in full at the date of sale, or over time as payments are made. In order to ensure that revenue recognition is standardized across the market, businesses adhere to FASB standards. In 2017 a new FASB standard for revenue recognition was put into place. This new standard, ASC 606, states that revenue should be recognized when (or as) performance obligations are satisfied, as determined by the transfer of control. When a new standard is issued, as ASC 606 in 2017, some companies choose to become early adopters of the standard. It appears that Apple has chosen not to adopt the new revenue recognition standard early, as the financial statements prepared by Apple for the fiscal year 2017, were prepared according to the old revenue recognition standard, as evidenced by the notes on revenue recognition matching the notes from Apples 2010 10-K. Apple will be required to prepare its 2018 financial statements according to the new standard.

It will be interesting to see the impact that the new standard has had on businesses in the first year of its adoption as companies begin to close the books on 2018. Although the changes may not have a standardized effect on every business in the market, it is undeniable that many, if not most companies will see the impact of the new revenue recognition standards on their bottom line. Hopefully the standard's impact for investors

and creditors will be decidedly more positive, as revenue recognition becomes more consistent across the market.

Appendix:

a. In a basic sense, revenue is gross income resulting from a company's primary operations. Revenues differ from gains in that gains are the result of the peripheral operations of a company, and thus are not an indicator of future cash flows. For example, a retail shoe company would record revenue upon the sale of a pair of shoes, but income on the sale of plant, property, and equipment would be recorded as a gain.

b. For a business to recognize revenue in a period means that the business records income from a transaction in that period. The revenue is recognized and reported on the income statement as a component of net income. The income statement accounts affected by revenue transactions for a retail business, such as Apple, include sales revenue, cost of goods sold, and sales returns and allowances. Revenue recognition for a retail business influences the balance sheet through the accounts receivable, inventory, and allowance for sales returns and allowances accounts. According to FASB ASC 606, an entity should recognize revenue when the customer obtains control of the asset. Indicators of the transfer of control include the right to payment, passage of legal title, change of physical possession, and customer acceptance of the significant risks and rewards of ownership.

c. According to the financial statements provided in the case, as well as Apple's most recent 10-K, "The Company recognizes revenue [1] when persuasive evidence of an arrangement exists, [2] delivery has occurred, [3] the sales price is fixed or determinable and [4] collection is probable." Based on this statement

from Apple's 2017 10-K, it appears that they had not yet adopted the new standard at year end 2017, as this approach to revenue recognition is taken nearly word for word from the old standard.

d. A multiple-element contract is an agreement in which there are multiple deliverables. For a company like Apple, example of a common multiple-element contract might be the sale of a device on a payment plan, with an "Apple Care" warranty. An arrangement like this can pose several revenue recognition issues. The product changes hands on the date of sale, but payment for the product occurs gradually over a period of time. Conversely, the warranty is likely paid for in its entirety on the date of sale, but warranty related services will not be performed until a later date, if at all. With transactions like this being excessively common for Apple, the company must determine how it will allocate and when it will recognized recognize revenues in accordance with reporting standards.

e. Management is often evaluated and compensated based on how their performance compares to target performance levels. For this reason, managers can often benefit from certain self-serving revenue recognition choices. Manipulating the timing of revenue recognition is one way that managers can make their performance appear more profitable in a low performing period. Revenue may even be intentionally deferred in high performing periods causing operations to appear less profitable. This allows a profit to be recorded, while preventing future performance targets from being set too high.

f.

i. Under the new revenue recognition standard, Apple would recognize revenue for a song sold on iTunes when the song is delivered in the form of a download on the customers device.

ii. Revenue should be recognized on Mac accessories sold in the Apple store after the customer has checked out and received their product or products. If the products were sold online, revenue should be recognized when control transfers to the customers, likely at the point of shipment.

iii. Apple should recognize revenue on the sale of iPods to a third-party reseller when control passes during shipment. Assuming that this shipment is rather large it is likely that a returns and allowances account will be recorded in case any issues arise with the delivered products.

iv. Under new revenue recognition standards, Apple should not record revenue for gift cards sold at the time of sale. Instead, a liability is recorded because the gift card represents future performance obligations on the part of apple. Revenue is recorded when the gift cards are themselves redeemed for goods and services. Apple may also eventually record revenue for the unredeemed portion of gift cards, or breakage.

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