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ACCOUNTING PRINCIPLES: A COLLECTION OF CASE STUDIES

by
Rachel Sequin Brunette

A thesis submitted to the faculty of The University of Mississippi in partial fulfillment of
the requirements of the Sally McDonnell Barksdale Honors College.

Oxford
May 2019

Approved by

Advisor: Dr. Victoria Dickinson

Reader: Dean Mark Wilder

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Abstract

ACCOUNTING PRINCIPLES: A COLLECTION OF CASE STUDIES (Under the direction of Dr. Victoria Dickinson)

For my thesis, I completed twelve case studies to analyze common accounting concepts with real companies and scenarios. Over two semesters, I was given the cases by Dr. Victoria Dickinson in a course specifically designed by the Sally McDonnell Barksdale Honors College. The purpose of the course and this thesis is to gain a better understanding of various accounting topics in respect to the current U.S. Generally Accepted Accounting Principles (GAAP) and Financial Accounting Standards Board (FASB). The case study titles are broad but each case take an in-depth discussion into specific areas with the use of short answers, calculations, and journal entries. Some topics, such as a financial statement analysis, examine the financial statements as a whole. While other topics, such as accounts receivable, discuss specific financial statement accounts in detail. Other miscellaneous topics in this collection include deferred income tax and data analytics.

By working through these cases, I improved my accounting knowledge and skills significantly. I felt more prepared throughout my audit internship due to what I learned during the course. Now with the completion of this thesis, I feel more prepared to start full-time as an audit associate. I believe readers will also develop a better understanding of these accounting concepts.

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CASE 1:
FINANCIAL STATEMENT ANALYSIS
Glenwood Heating, Inc. and Eads Heaters, Inc.

September 6, 2017

The first case compares two home heating companies, Glenwood Heaters, Inc. and Eads Heaters, Inc., to decide which is a safer investment. The first step in the analysis is to look at the financial statements from both companies, which will show the impact of different accounting methods.

During the first year of operations, 20X1, the companies recorded twelve identical transactions which can be seen in Table 3 in Appendix 1B. However, five more transactions, after the twelve, were completed differently between companies, seen in Table 4(A, B, C) and Table 5(A, B, C) also in Appendix 1B.

Looking at the financial statements for each company in Appendix 1, we can identify how those five transactions affected several accounts. The first transaction caused Glenwood Heating, Inc. to have a higher accounts receivable balance. The second transaction influenced inventory and cost of goods sold, which ultimately changed the current assets balance and the gross profit, respectively. The next transaction caused Eads Heaters, Inc. to have a lower equipment balance by \$11,000. The fourth transaction set apart the companies as the manager of Glenwood Heating, Inc. decided to rent equipment on a yearly basis and the manager of Eads Heaters, Inc. chose a capital lease agreement. This difference led to Eads Heaters, Inc. having a significantly higher plant asset and long-term liability totals. In the last transaction, both companies put aside 25 percent of their net income, however since the four prior transactions differentiated net income, each company paid a different provision for income tax, considerably affecting retained earnings and net income to have a difference over \$20,000.

After analyzing which accounts the five transactions affected, investors can use financial ratios to effectively compare these differences between the companies. The

current ratio and acid test ratio, which both measure a company's ability to pay off short term debt, is higher for Glenwood Heating, Inc. However, Eads Heaters, Inc. has higher inventory and accounts receivable turnover rates, signifying they are more efficient at inventory management and collection. Looking at profitability ratios, Glenwood Heating Inc. has higher rates for profit margin ratio and return on total assets, meaning their net income in each sales dollar and profitability of assets is more appealing to investors. All calculations for these ratios can be found in Appendix 1C.

After analyzing the two companies' financial statements and ratios, investors initially might lean towards Glenwood Heating, Inc. as they are more profitable and efficient at paying debts. On the other hand, Eads Heaters, Inc. is better with asset management, and the lease agreement shows a long-term incentive. After analyzing the financial statements and ratios, Eads Heaters, Inc. would be a better investment than Glenwood Heating, Inc.

APPENDIX 1: Financial Statements

TABLE 1A: Glenwood Heating, Inc. Income Statement

Glenwood Heating, Inc. Income Statement For Year Ended December 31, 20X1	
Sales	\$ 398,500
Cost of Goods Sold	<u>177,000</u>
Gross Profit	221,500
Selling and Administrative Expenses	
Bad Debt Expense	\$ 994
Depreciation Expense	19,000
Other Operating Expenses	34,200
Rent Expense	<u>16,000</u>
Total Selling and Administrative Expenses	<u>70,194</u>
Income from Operations	151,306
Other Expenses	
Interest Expense	<u>27,650</u>
Income Before Taxes	123,656
Provision for Income Taxes	<u>30,914</u>
Net Income	<u>\$ 92,742</u>

TABLE 1B: Glenwood Heating, Inc. Statement of Retained Earnings

Glenwood Heating, Inc. Statement of Retained Earnings For Year Ended December 31, 20X1	
Retained Earnings, beginning	\$ 0
Add: Net Income	92,742
Less: Dividends	<u>23,200</u>
Retained Earnings, ending	<u>\$ 69,542</u>

TABLE 1C: Glenwood Heating, Inc. Balance Sheet

Glenwood Heating, Inc.			
Balance Sheet			
December 31, 20X1			
Assets			
Current Assets			
Cash		\$ 426	
Accounts Receivable	\$ 99,400		
Less: Allowance for Bad Debts	<u>994</u>	98,406	
Inventory		<u>62,800</u>	
Total Current Assets			\$ 161,632
Plant Assets			
Land		70,000	
Building	350,000		
Accumulated Depreciation - Building	<u>10,000</u>	340,000	
Equipment	80,000		
Accumulated Depreciation - Equipment	<u>9,000</u>	<u>71,000</u>	
Total Plant Assets, Net Depreciation			<u>481,000</u>
Total Assets			<u>\$ 642,632</u>
Liabilities and Equity			
Current Liabilities			
Accounts Payable	26,440		
Interest Payable	<u>6,650</u>		
Total Current Liabilities		33,090	
Long-Term Liabilities			
Note Payable		<u>380,000</u>	
Total Liabilities			413,090
Equity			
Common Stock		160,000	
Retained Earnings	92,742		
Less: Dividends	<u>23,200</u>	<u>69,542</u>	
Total Equity			<u>229,542</u>
Total Liabilities and Equity			<u>\$ 642,632</u>

TABLE 2A: Eads Heaters, Inc. Income Statement

Eads Heaters, Inc. Income Statement For Year Ended December 31, 20X1	
Sales	\$ 398,500
Cost of Goods Sold	<u>188,800</u>
Gross Profit	209,700
Selling and Administrative Expenses	
Bad Debt Expense	\$ 4,970
Depreciation Expense	41,500
Other Operating Expenses	<u>34,200</u>
Total Selling and Administrative Expenses	<u>80,670</u>
Income from Operations	129,030
Other Expenses	
Interest Expense	<u>35,010</u>
Income Before Taxes	94,020
Provision for Income Taxes	<u>23,505</u>
Net Income	<u>\$ 70,515</u>

TABLE 2B: Eads Heaters, Inc. Statement of Retained Earnings

Eads Heaters, Inc. Statement of Retained Earnings For Year Ended December 31, 20X1	
Retained Earnings, beginning	\$ 0
Add: Net Income	70,515
Less: Dividends	<u>23,200</u>
Retained Earnings, ending	<u>\$ 47,315</u>

TABLE 2C: Eads Heaters, Inc. Balance Sheet

Eads Heaters, Inc. Balance Sheet December 31, 20X1			
Assets			
Current Assets			
Cash			\$ 7,835
Accounts Receivable	\$ 99,400		
Less: Allowance for Bad Debts	<u>4,970</u>	94,430	
Inventory			<u>51,000</u>
Total Current Assets			\$ 153,265
Plant Assets			
Land			70,000
Building	350,000		
Accumulated Depreciation - Building	<u>10,000</u>	340,000	
Equipment	80,000		
Accumulated Depreciation - Equipment	<u>20,000</u>	60,000	
Leased Equipment	92,000		
Accumulated Depreciation - Leased Eq.	<u>11,500</u>	<u>80,500</u>	
Total Plant Assets, Net Depreciation			<u>550,500</u>
Total Assets			<u>\$ 703,765</u>
Liabilities and Equity			
Current Liabilities			
Accounts Payable			26,440
Interest Payable			<u>26,650</u>
Total Current Liabilities			53,090
Long-Term Liabilities			
Note Payable			360,000
Lease Payable			<u>63,360</u>
Total Liabilities			496,450
Equity			
Common Stock			160,000
Retained Earnings	70,515		
Less: Dividends	<u>23,200</u>	<u>47,315</u>	
Total Equity			<u>207,315</u>
Total Liabilities and Equity			<u>\$ 703,765</u>

APPENDIX 1B: Recording Transactions

TABLE 3: Home Heaters – Part A

Home Heaters – Part A Recording basic transactions											
	Cash	Accounts Receivable	Inventory	Land	Building	Equip-ment	Accounts Payable	Note Payable	Interest Payable	Common Stock	Retained Earnings
A1	160,000									160,000	
A2	400,000							400,000			
A3	(420,000)			70,000	350,000						
A4	(80,000)					80,000					
A5			239,800				239,800				
A6		398,500									398,500
A7	299,100	(299,100)									
A8	(213,360)						(213,360)				
A9	(41,000)							(20,000)			(21,000)
A10	(34,200)										(34,200)
A11	(23,200)										(23,200)
A12									6,650		(6,650)
Balances	<u>47,340</u>	<u>99,400</u>	<u>239,800</u>	<u>70,000</u>	<u>350,000</u>	<u>80,000</u>	<u>26,440</u>	<u>380,000</u>	<u>6,650</u>	<u>160,000</u>	<u>313,450</u>

**TABLE 4A: Glenwood Heating, Inc.
Part B**

Glenwood Heating, Inc. – Part B Recording basic transactions (1 of 3)										
	Cash	Accounts Receivable	Allowance for Bad Debts	Inventory	Land	Building	Acc. Depr. Building	Equipment	Acc. Depr. Equipment	
Part A Balances	47,340	99,400	-	239,800	70,000	350,000	-	80,000	-	
B1			994							
B2				(177,000)						
B3							10,000		9,000	
B4	(16,000)									
B5	(30,914)									
Balances	<u>426</u>	<u>99,400</u>	<u>994</u>	<u>62,800</u>	<u>70,000</u>	<u>350,000</u>	<u>10,000</u>	<u>80,000</u>	<u>9,000</u>	

**TABLE 4B: Glenwood Heating, Inc.
Part B**

Glenwood Heating, Inc. – Part B Recording basic transactions (2 of 3)										
	Accounts Payable	Note Payable	Interest Payable	Common Stock	Dividend	Sales	Cost of Goods Sold	Other Op. Expenses		
Part A Balances	26,440	380,000	6,650	160,000	23,200	398,500	-	34,200		
B1										
B2							177,000			
B3										
B4										
B5										
Balances	<u>26,440</u>	<u>380,000</u>	<u>6,650</u>	<u>160,000</u>	<u>23,200</u>	<u>398,500</u>	<u>177,000</u>	<u>34,200</u>		

**TABLE 4C: Glenwood Heating, Inc.
Part B**

Glenwood Heating, Inc. – Part B Recording basic transactions (3 of 3)									
	Part A Balances	Bad Debt Expense	Depr. Expense Building	Depr. Expense Equipment	Rent Expense	Interest Expense	Provision for Income Taxes		
B1		994							
B2									
B3			10,000	9,000					
B4					16,000				
B5						27,650			
Balances		<u>994</u>	<u>10,000</u>	<u>9,000</u>	<u>16,000</u>	<u>27,650</u>			<u>20,194</u>

**TABLE 5A: Eads Heaters, Inc.
Part B**

Eads Heaters, Inc. – Part B Recording basic transactions (1 of 3)									
	Part A Balances	Cash	Accounts Receivable	Allowance for Bad Debts	Inventory	Land	Building	Acc. Depr. Building	Acc. Depr. Equipment
B1			99,400	-	239,800	70,000	350,000	-	80,000
B2				4,970	(188,800)				
B3								10,000	20,000
B4		(16,000)							
B5		(23,505)							
Balances		<u>7,835</u>	<u>99,400</u>	<u>4,970</u>	<u>51,000</u>	<u>70,000</u>	<u>350,000</u>	<u>10,000</u>	<u>80,000</u>
									<u>20,000</u>

**TABLE 5B: Eads Heaters, Inc.
Part B**

Eads Heaters, Inc. – Part B Recording basic transactions (2 of 3)										
	Leased Equipment	Acc. Depr. Leased Equipment	Accounts Payable	Note Payable	Interest Payable	Lease Payable	Common Stock	Dividend	Sales	Cost of Goods Sold
Part A Balances	-	-	26,440	380,000	6,650	-	160,000	23,200	398,500	-
B1										
B2										188,800
B3										
B4	92,000	11,500				83,360				
B5										
Balances	<u>92,000</u>	<u>11,500</u>	<u>26,440</u>	<u>380,000</u>	<u>6,650</u>	<u>83,360</u>	<u>160,000</u>	<u>23,200</u>	<u>398,500</u>	<u>188,800</u>

**TABLE 5C: Eads Heaters, Inc.
Part B**

Eads Heaters, Inc. – Part B Recording basic transactions (3 of 3)									
	Other Op. Expense	Bad Debt Expense	Depr. Expense Building	Depr. Expense Equipment	Depr. Expense	Interest Expense	Provision for Income Taxes		
Part A Balances	34,200	-	-	-	-	27,650	-		
B1		4,970							
B2									
B3			10,000	20,000					
B4					11,500	7,650			
B5							(23,505)		
Balances	<u>34,200</u>	<u>4,970</u>	<u>10,000</u>	<u>20,000</u>	<u>11,500</u>	<u>35,010</u>	<u>23,505</u>		

APPENDIX 1C: Financial Ratios

Glenwood Heating, Inc.

$$\text{Current Ratio} = \frac{\text{current assets}}{\text{current liabilities}} = \frac{161,632}{53,090} = 3.04$$

$$\text{Acid Test Ratio} = \frac{\text{cash} + \text{current receivables}}{\text{current liabilities}} = \frac{98,832}{53,090} = 1.86$$

$$\text{Inventory Turnover} = \frac{\text{cost of goods sold}}{\text{average inventory}} = \frac{177,000}{62,800} = 2.82$$

$$\text{Accounts Receivable Turnover} = \frac{\text{net sales}}{\text{average accts. rec.}} = \frac{398,500}{98,406} = 4.05$$

$$\text{Profit Margin Ratio} = \frac{\text{Net income}}{\text{Net sales}} = \frac{92,742}{398,500} = 23\%$$

$$\text{Return on Total Assets} = \frac{\text{Net Income}}{\text{average total assets}} = \frac{92,742}{642,632} = 14\%$$

Eads Heaters, Inc.

$$\text{Current Ratio} = \frac{\text{current assets}}{\text{current liabilities}} = \frac{153,265}{61,730} = 2.48$$

$$\text{Acid Test Ratio} = \frac{\text{cash} + \text{current receivables}}{\text{current liabilities}} = \frac{102,265}{61,730} = 1.66$$

$$\text{Inventory Turnover} = \frac{\text{cost of goods sold}}{\text{average inventory}} = \frac{188,800}{51,000} = 3.70$$

$$\text{Accounts Receivable Turnover} = \frac{\text{net sales}}{\text{average accts. rec.}} = \frac{398,500}{94,430} = 4.22$$

$$\text{Profit Margin Ratio} = \frac{\text{Net income}}{\text{Net sales}} = \frac{70,515}{398,500} = 18\%$$

$$\text{Return on Total Assets} = \frac{\text{Net Income}}{\text{average total assets}} = \frac{70,515}{703,765} = 10\%$$

CASE 2:
PROFITABILITY AND EARNINGS PERSISTENCE
Molson Coors Brewing Company

September 20, 2017

In this case, we assess the financial statements for Molson Coors Brewing Company through questions that fall into three main categories; concepts, process, and analysis. The direct answers to the case questions can be found in Appendix 2, following this summary.

Considering concepts first offers the user fundamental background information to help understand and analyze financial statements. Knowing a classified income statement is broken down into three major sections, helps us recognize and compare key amounts. We also take a closer look at comprehensive income, which shows important gains and losses that are not included in the income statement.

The next part of this case is discussing the process, which includes excise taxes, special items, and other income (expense). These items are unique and not seen on every income statement. Molson Coors chooses to list excise taxes on their income statement to show how net sales was calculated, since in other industries it is common for returns and discounts/allowances to be deducted from the sales revenue account. Special items are also important to this income statement as they are not continuing operations but are included in the continuing operations income as the company expects some special items to reoccur. Lastly, other income (expense) should be noted because it is a non-recurring activity but more common than special items, so the user should compare the amount to previous years to gain a better understanding.

The final part of the case is the analysis section, where we examine Molson Coors effective tax rate. This amount is not included on the income statement but is derived from dividing the income (loss) from continuing operations before income taxes by the income tax benefit (expense), which are both found on the statement.

APPENDIX 2: Case Questions and Answers

Concepts:

- A. What are the major classifications on an income statement?
- An income statement is classified into three major sections; operating, non-operating, and earnings per share. The operating revenues and expenses appear first, showing sales, cost of goods sold, marketing, general and administrative expenses, selling expenses, and income from operations. Listed next is non-operating revenues and expenses, including other income, interest and tax expenses, and other gains and losses. Last on the income statement is the earnings per share section.
- B. Explain why, under U.S. GAAP, companies are required to provide “classified” income statements.
- The requirement for classified income statements allows investors to easily identify and interpret revenues, expenses, gains, and losses. A classified income statement also distinguishes regular and non-recurring activities, which further helps users better assess and predict future cash flows.
- C. In general, why might financial statement users be interested in a measure of persistent income?
- Providing persistent income simply confirms the stability and consistency of the company’s cash flows. This helps investors make more reliable predictions.

- D. Define comprehensive income and discuss how it differs from net income.
- Comprehensive income includes net income plus any unrealized transactions, such as gains or losses on available-for-sale securities, pension adjustments, and foreign currency translations. Comprehensive income also differs from net income as it is not shown on the income statement.

Process:

- E. The income statement reports “Sales” and “Net sales.” What is the difference? Why does Molson Coors report these two items separately?
- Sales shows the unadjusted amount of sales revenue while net sales shows sales revenue less excise taxes. Molson Coors reports both sales and net sales to show the effect of the excise taxes imposed on their sales revenue. Since Molson Coors is a brewing company and excise taxes are imposed on beer shipments, it is important to distinguish the excise tax from a sales tax. Companies in other industries would deduct sales discounts and sales returns and allowances from the unadjusted sales amount to obtain net sales.
- F. Consider income statement item “Special items, net” and Note 1 and 8.
- i. In general, what types of items does Molson Coors include in this line item?
 - Special items include unusual or infrequent items such as employee related charges, impairments or asset abandonment charges, and termination fees.

- ii. Explain why the company reports these on a separate line item rather than including them with another expense item. Molson Coors classifies these special items as operating expenses. Do you concur with this classification?
 - In Note 1, Molson Coors states “Although we believe these items are not indicative of our core operations, the items classified as special items are not necessarily non-recurring.” It makes sense they recorded these items on a separate line because they are not regular, core operating expenses. However, at least some special items are predicted to reoccur because they are related to operations, which is why it is a good idea that they classify the special items as operating expenses.

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

- Other income (expense) is unrelated to core operations but is more common, whereas special items are more unusual and nonrecurring items which come from operating activities.

H. Refer to the statement of comprehensive income.

- i. What is the amount of comprehensive income in 2013? How does this amount compare to net income in 2013?
 - Comprehensive income is \$760.2 million and net income is \$572.5 million.

- ii. What accounts for the difference between net income and comprehensive income in 2013? How are the items included in Molson Coors' comprehensive income related?
- Comprehensive income is higher since it includes unrealized items which net income does not. The difference between the two incomes is due to:
 - Foreign currency translation adjustments,
 - Unrealized gain (loss) on derivative instruments,
 - Reclassification of derivative (gain) loss to income,
 - Pension and other postretirement 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 included in the comprehensive income are related to one another because they are peripheral transactions that have not been realized yet.

Analysis:

- J. Consider the information on income taxes, in Note 7. What is Molson Coors' effective tax rate in 2013?
- Note 7 shows the effective tax rate used on December 31, 2013 was 12.8%. Molson Coors found this percentage by dividing income tax expense (\$84.0) by pretax income (\$654.5), both found in the income statement.

CASE 3:
ACCOUNTS RECEIVABLE

Pearson plc

October 4, 2017

Pearson plc provides users with their income statement and balance sheet for 2009, allowing us to interpret key financial strategies. This case is divided into two sets of questions, the concepts and the process. It should be noted in advance, since Pearson is a London based company, they refer to their account receivable as trade receivables, allowance for doubtful accounts as provision for bad and doubtful debts, and allowance for sales returns and allowances as provision for sales returns.

Through the concept questions, found in Appendix 3, readers can explore the use of accounts receivables and contra accounts. Basically, accounts receivable are promises of a future payment from a customer and a contra account reduces these receivables on the balance sheet. Pearson uses two contra accounts; allowance for doubtful accounts and allowance for sales returns and allowances. The allowances are estimated based “primarily on historical return rates” as states in Note 1q, other approaches managers may use include percentage-of-sales and aging-of-accounts. In Note 22 Pearson provides the age categories for accounts receivable.

The second half of the analysis is the process of the receivables, detailed questions and answers are found in Appendix 3. To start we look into the activities of the allowance for doubtful accounts. This estimate is derived from four items; exchange differences, income statement adjustments, written off accounts, and a business acquisition. Users can also see the how estimate of the allowance for sales returns and allowances was journalized. After understanding those two accounts, it is easy to derive the actual collection of receivables.

APPENDIX 3: Case Questions and Answers

Concepts:

- A. What is an account receivable? What other names does this asset go by? [1] [SEP]
- An account receivable is the promise of a future payment for goods or services sold to a customer, representing a short-term credit extension.
 - Accounts receivable may also be referred to as trade receivables.
- B. How do accounts receivable differ from notes receivable?
- Notes receivable, like accounts receivable, are promises of a future payment, however they have a specific due date and they may be long-term extensions. Additionally, notes receivable are often interest-bearing, whereas accounts receivable are not.

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

- A contra account is used to reduce a related account on the balance sheet. They also provide the user with more information on the balance sheet.
- Pearson uses two contra accounts, provision for bad and doubtful debts and provision for sales returns. Since Pearson is a London based company the terminology is slightly different, in the United States these accounts are referred to as allowance for doubtful accounts and allowance for sales returns and allowances, respectively.
- Activities captured in the allowance accounts are the estimated amount of cash collections from accounts receivable that will not be collected and the amount of sales revenue that will be returned.
- When estimating the allowance, managers may consider the previous year's percentage of uncollectible to revenue and sales returns and allowances to sales revenue. They may also consider the aging of the accounts receivable, and how much time has passed since the due date.

D. Two commonly used approaches for estimating uncollectible accounts receivable are the percentage-of-sales procedure and the aging-of-accounts procedure.

Briefly describe these two approaches. What information do managers need to determine the activity and final account balance under each approach? Which of the two approaches do you think results in a more accurate estimate of net accounts receivable?

- The percentage-of-sales procedure is when managers take divide net sales of previous years by the actual receivables uncollected in those years, using those percentages managers can estimate the current years expected uncollectible amount in respect to the current year sales. The aging-of-accounts procedure also applies a percentage from previous years but uses different percentages with each age group of accounts receivable. In most instances, the more time that has passed since an account has been overdue, the more likely the managers can say it will not be collected.
- For percentage-of-sales method managers will need historical financial information including net sales and actual bad debt expense, to allow them to find a percentage to apply to the current year net sales. Aging-of-accounts requires managers to know the age of prior accounts receivables and the percentage of collections per age category, so they can apply the percentage to the current year accounts receivables.
- The aging-of-accounts procedure results in a more accurate estimate because it considers several percentages and does not focus on the income statement like the percentage-of-sales method.

- E. If Pearson anticipates that some accounts will be uncollectible, why did the company extend credit to those customers in the first place? Discuss the risks that managers must consider with respect to accounts receivable. [1] [SEP]
- Ideally every customer would pay his or her credit on time, however that is not realistic. To continue business operations, while considering the risk of uncollected receivables, it is smart to estimate the allowances. It is less of a risk for managers to overestimate an allowance which would underestimate the company's earnings.
 - Risks managers consider is overestimating or underestimating the amount uncollectible because it affects the net accounts receivable, which investors use in decision making.

Process:

F. Note 22 reports the balance in Pearson’s provision for bad and doubtful debts (for trade receivables) and reports the account activity during the year ended December 31, 2009. Note that Pearson refers to the trade receivables contra account as a “provision.”.

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

		Beginning balance	72
Exchange differences	5	Income statement movements	26
Utilized	20	Acquisition through business combo.	3
		End of year balance	76

- In Note 22 the activity for allowance for doubtful accounts is shown with the beginning of the year balance at £72 million. Listed next is the foreign exchange rate difference of five million pounds sterling. Next the income statement movements, including adjustments financial statements, amounts to £26 million. Pearson refers to the other debit item as “utilized”, which in the U.S. simply means receivables of £20 million have been written off. The last credit is the acquisition through business combination, meaning when Pearson acquired another business, they also acquired the business’s allowance for doubtful accounts of £3 million. These activities lead to an ending balance of £76 million.

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

Bad Debt Expense	26	
Allowance for Doubtful Accounts		26
Allowance for Doubtful Accounts	20	
Accounts Receivable		20

* Bad Debt Expense is an income statement account, and both Allowance for Doubtful Accounts and Accounts Receivable are balance sheet accounts.

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

- The allowance for doubtful accounts is included in the operating section of the income statement.

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

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

Allowance for Sales Returns and Allowances
Amounts in £ Millions

	Beginning balance	372
Actual sales returns	Estimates sales returns	
and allowances	and allowances	425
443	End of year balance	354

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

Sales Returns and Allowances	425	
Allowance for Sales Returns and Allowances		425

Allowance for Sales Returns and Allowances	443	
Accounts Receivables		443

* Sales Returns and Allowances is an income statement account, and both Allowance for Sales Returns and Allowances and accounts receivables are balance sheet accounts.

- iii. In which income statement line item does the estimated sales returns appear?
- Allowance for sales returns and allowances will be in the operating section under sales revenue on the income statement. Also, estimated sales returns are deducted from gross sales to arrive at net sales.

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

Accounts Receivable (gross)

Amounts in £ Millions

Beginning balance	1,474	Cash collections	5,679
Sales, gross	5,624		
End of year balance	1,419		

Account Receivables	5,624	
Sales		5,624
Cash	5,679	
Account Receivables		5,679

CASE 4:
TIME VALUE OF MONEY
Intermediate Accounting Problem

October 11, 2017

This case focuses on various types of time value situations with compound interest. Figure 4 below shows the exact problem 6-2 from page 372 of the intermediate textbook. For each of the questions, we will first determine what variables are known and what we are trying to compute. From there we will decide the best time value formula and respective interest factor, both by the tables, (seen in Appendix 4) and by the factor equations.

P6-2 (LO2,3,4) GROUPWORK EXCEL (Various Time Value Situations) Using the appropriate interest table, provide the solution to each of the following four questions by computing the unknowns.

- (a) What is the amount of the payments that Ned Winslow must make at the end of each of 8 years to accumulate a fund of \$90,000 by the end of the eighth year, if the fund earns 8% interest, compounded annually?
- (b) Robert Hitchcock is 40 years old today and he wishes to accumulate \$500,000 by his sixty-fifth birthday so he can retire to his summer place on Lake Hopatcong. He wishes to accumulate this amount by making equal deposits on his fortieth through his sixty-fourth birthdays. What annual deposit must Robert make if the fund will earn 8% interest compounded annually?
- (c) Diane Ross has \$20,000 to invest today at 9% to pay a debt of \$47,347. How many years will it take her to accumulate enough to liquidate the debt?
- (d) Cindy Houston has a \$27,600 debt that she wishes to repay 4 years from today; she has \$19,553 that she intends to invest for the 4 years. What rate of interest will she need to earn annually in order to accumulate enough to pay the debt?

Figure 4: Problem 6-2

Starting with (a), we are given the *future value* of \$90,000, the *number of periods* of 8 years, and *interest* of 8% compounded annually. We are trying to find the annual *rent* amount Ned must make at the *end of the period*, so it is a future value of an ordinary annuity situation. Using the appropriate interest table (6-3) for the future value factor, we use the equation;

$$\text{FV of an ordinary annuity} = \text{Rent (FVF-OA}_{8, 8\%})$$

$$90,000 = \text{Rent (10.63663)}$$

$$\text{Rent} = 90,000 / 10.63663$$

$$\text{Rent} = \mathbf{\$8,461}$$

The future value factor of an ordinary annuity can be calculated using the equation;

$$\text{FVF-OA} = \frac{(1 + i)^n - 1}{i} = \frac{(1 + 0.08)^8 - 1}{0.08} = 10.63663$$

Next, in (b) we are given the *future value* of \$500,000, the *number of periods* of 24 years (Robert's 64th birthday will be 25 years from today, his 40th birthday), and interest of 8% compounded annually. We want to find the annual *rent* payments again, but because Robert will be making the first deposit today, it is a future value of an annuity due. Using the appropriate interest table (6-6) for the future value factor, we use the equation;

$$\text{FV of an annuity due} = \text{Rent} (\text{FVF-AD}_{24, 8\%})$$

$$500,000 = \text{Rent} (72.10594)$$

$$\text{Rent} = 500,000 / 72.10594$$

$$\text{Rent} = \mathbf{\$6,934}$$

The future value factor of an annuity due can be calculated using the equation;

$$\text{FVF-AD} = \left(\frac{(1+i)^n - 1}{i} \right) \cdot (1+i) = \frac{(1+0.08)^{24} - 1}{0.08} \cdot 1.08 = 72.10594$$

For the third question, we are given a present value of \$20,000, an *interest* rate of 9%, and a *future value* of \$47,347. To find the *number of periods* in years it will take to earn the future value, we will use the future value of a lump sum equation;

$$\text{FV of a lump sum} = \text{PV} (\text{FVF}_{n, 9\%})$$

$$47,347 = 20,000 (\text{FVF}_{10, 0.09})$$

$$\text{FVF}_{n, 9\%} = 47,347 / 20,000$$

$$\text{FVF}_{10, 9\%} = 2.3674 \rightarrow \text{found on the interest table 6-1 is } \mathbf{10 \text{ years.}}$$

The future value factor of a lump sum can be calculated using the equation;

$$FVF = (1 + i)^n$$

$$FVF = 1.09^n$$

$$n = \log(2.3674) / \log(1.09)$$

$$n = 0.37426 / 0.037426$$

$$n = 10 \text{ number of periods}$$

Lastly in (d) we are given a *future value* of \$27,600, the *number of periods* of 4 years, and a *present value* of \$19,553. To find the *rate of annual interest* earned, we will use the present value of a lump sum equation and table (6-2).

$$PV \text{ of a lump sum} = FV(PVF_{4, i})$$

$$19,553 = 27,600 (PVF_{4, i})$$

$$(PVF_{4, i}) = 19,553 / 27,600$$

$$(PVF_{4, i}) = 0.70844 \rightarrow \text{found on the interest table is } \mathbf{9\% \text{ annual interest.}}$$

The present value factor of a lump sum can be calculated using the equation;

$$PVF = \frac{1}{(1 + i)^n} = \frac{1}{(1 + i)^4}$$

$$0.70844 (1 + i)^4 = 1$$

$$(1 + i)^4 = 1 / 0.70844$$

$$(1 + i)^4 = 1.41156$$

$$1 + i = 1.09$$

$$i = 0.09 \text{ or } 9\%$$

APPENDIX 4: Exerpts from Interest Tables

Table 6-3
Future Value of an Ordinary Annuity of 1

<i>n</i> periods	2.0%	2.5%	3.0%	4.0%	5.0%	6.0%	8.0%
1	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
2	2.02000	2.02500	2.03000	2.04000	2.05000	2.06000	2.08000
3	3.06040	3.07563	3.09090	3.12160	3.15250	3.18360	3.24640
4	4.12161	4.15252	4.18363	4.24646	4.31013	4.37462	4.50611
5	5.20404	5.25633	5.30914	5.41632	5.52563	5.63709	5.86660
6	6.30812	6.38774	6.46841	6.63298	6.80191	6.97532	7.33593
7	7.43428	7.54743	7.66246	7.89829	8.14201	8.39384	8.92280
8	8.58297	8.73612	8.89234	9.21423	9.54911	9.89747	10.63663
9	9.75463	9.95452	10.15911	10.58280	11.02656	11.49132	12.48756
10	10.94972	11.20338	11.46388	12.00611	12.57789	13.18079	14.48656

(a)

Table 6-6
Future Value of an Annuity Due

<i>n</i> periods	2%	2.5%	3%	4%	5%	6%	8%
1	1.02000	1.02500	1.03000	1.04000	1.05000	1.06000	1.08000
2	2.06040	2.07563	2.09090	2.12160	2.15250	2.18360	2.24640
3	3.12161	3.15252	3.18363	3.24646	3.31013	3.37462	3.50611
4	4.20404	4.25633	4.30914	4.41632	4.52563	4.63709	4.86660
5	5.30812	5.38774	5.46841	5.63298	5.80191	5.97532	6.33593
6	6.43428	6.54743	6.66246	6.89829	7.14201	7.39384	7.92280
7	7.58297	7.73612	7.89234	8.21423	8.54911	8.89747	9.63663
8	8.75463	8.95452	9.15911	9.58280	10.02656	10.49132	11.48756
9	9.94972	10.20338	10.46388	11.00611	11.57789	12.18079	13.48656
10	11.16872	11.48347	11.80780	12.48635	13.20679	13.97164	15.64549
11	12.41209	12.79555	13.19203	14.02581	14.91713	15.86994	17.97713
12	13.68033	14.14044	14.61779	15.62684	16.71298	17.88214	20.49530
13	14.97394	15.51895	16.08632	17.29191	18.59863	20.01507	23.21492
14	16.29342	16.93193	17.59891	19.02359	20.57856	22.27597	26.15211
15	17.63929	18.38022	19.15688	20.82453	22.65749	24.67253	29.32428
16	19.01207	19.86473	20.76159	22.69751	24.84037	27.21288	32.75023
17	20.41231	21.38635	22.41444	24.64541	27.13238	29.90565	36.45024
18	21.84056	22.94601	24.11687	26.67123	29.53900	32.75999	40.44626
19	23.29737	24.54466	25.87037	28.77808	32.06595	35.78559	44.76196
20	24.78332	26.18327	27.67649	30.96920	34.71925	38.99273	49.42292
21	26.29898	27.86286	29.53678	33.24797	37.50521	42.39229	54.45676
22	27.84496	29.58443	31.45288	35.61789	40.43048	45.99583	59.89330
23	29.42186	31.34904	33.42647	38.08260	43.50200	49.81558	65.76476
24	31.03030	33.15776	35.45926	40.64591	46.72710	53.86451	72.10594
25	32.67091	35.01171	37.55304	43.31174	50.11345	58.15638	78.95442

(b)

Table 6-1
Future Value of a Lump Sum

<i>n</i> periods	2.0%	2.5%	3.0%	4.0%	5.0%	6.0%	8.0%	9.0%
1	1.02000	1.02500	1.03000	1.04000	1.05000	1.06000	1.08000	1.09000
2	1.04040	1.05063	1.06090	1.08160	1.10250	1.12360	1.16640	1.18810
3	1.06121	1.07689	1.09273	1.12486	1.15763	1.19102	1.25971	1.29503
4	1.08243	1.10381	1.12551	1.16986	1.21551	1.26248	1.36049	1.41158
5	1.10408	1.13141	1.15927	1.21665	1.27628	1.33823	1.46933	1.53862
6	1.12616	1.15969	1.19405	1.26532	1.34010	1.41852	1.58687	1.67710
7	1.14869	1.18869	1.22987	1.31593	1.40710	1.50363	1.71382	1.82804
8	1.17166	1.21840	1.26677	1.36857	1.47746	1.59385	1.85093	1.99256
9	1.19509	1.24886	1.30477	1.42331	1.55133	1.68948	1.99900	2.17189
10	1.21899	1.28008	1.34392	1.48024	1.62889	1.79085	2.15892	2.36736

(c)

Table 6-2
Present Value of a Lump Sum

<i>n</i> periods	2.0%	2.5%	3.0%	4.0%	5.0%	6.0%	8.0%	9.0%
1	0.98039	0.97561	0.97087	0.96154	0.95238	0.94340	0.92593	0.91743
2	0.96117	0.95181	0.94260	0.92456	0.90703	0.89000	0.85734	0.84168
3	0.94232	0.92860	0.91514	0.88900	0.86384	0.83962	0.79383	0.77218
4	0.92385	0.90595	0.88849	0.85480	0.82270	0.79209	0.73503	0.70843
5	0.90573	0.88385	0.86261	0.82193	0.78353	0.74726	0.68058	0.64993

(d)

CASE 5:
PROPERTY, PLANT, AND EQUIPMENT
Palfinger AG

November 8, 2017

To analyze a company's property, plant, and equipment (PPE) account, the user will need to be aware of the type of company. This is important because the material of the account changes from industry to industry and even among companies in the same industry. The PPE account will give the reader a greater understanding of the company's operations.

For this case, users explore what is included in the PPE account of Palfinger AG. To efficiently understand Palfinger's assets, the case asks two sets of questions. The first set regards the general concepts and the second focuses on the process of recording these assets and their respective costs. The complete list of questions and answers can be found in Appendix 5: Case Questions and Answers, following this summary.

The set concept questions revolve around property, plant, and equipment assets specific to Palfinger. The company will include PPE which will be able to fit their operations as a company who manufactures various large products; including hydraulic equipment, several types of cranes, and other construction solutions. Analyzing Palfinger's operations, we can assume they will record property and plant of large warehouses and construction yards to manufacture and store their products. For their equipment, we can assume this account will include large, heavy machinery used to production process for the type of products they offer. The first set also explores how Palfinger recognizes costs associated with these assets.

The second set of questions first considers the computations of property, plant and equipment, specifically depreciation, grants, and disposals. Then considers the effect of different depreciation methods.

APPENDIX 5: Case Questions and Answers

Concepts:

- A. Based on the description of Palfinger above, what sort of property and equipment do you think the company has?
- Palfinger’s PPE would probably include a large property to store their large products, like a construction yard. Also, they would need equipment to manufacture their heavy machinery and other products.
- B. The 2007 balance sheet shows property, plant, and equipment of €149,990. What does this number represent?
- The total net value after straight-line depreciation of property, plant, and equipment which represents all durable assets with characteristics such as;
 1. acquired for use in operations and not for resale,
 2. long-term in nature and usually depreciated, and
 3. possess physical substance.
- C. What types of equipment does Palfinger report the financial statement notes?
- Palfinger groups their PPE into five categories;
 1. Land and buildings,
 2. Undeveloped,
 3. Plant and machinery,
 4. Other plant, fixtures, fittings, and equipment, and
 5. Prepayments and assets under construction.

D. In the notes, Palfinger reports “Prepayments and assets under construction.”

What does this sub-account represent? Why does this account have no accumulated depreciation? Explain the reclassification of €14,958 in this account during 2007.

- “Prepayments and assets under construction” represent self-constructed assets that are prepaid as an expense before they can be put into operation. These assets are also not depreciated because they are not being used yet, hence the reclassification in 2007 when the assets have been completed, moved into PPE, and are able to be depreciated.

E. How does Palfinger depreciate its property and equipment? Does this policy seem reasonable? Explain the trade-offs management makes in choosing a depreciation policy.

- The company uses straight-line depreciation for PPE. Seen in the notes of the financial statements, the useful life expectancy is 8-50 years for buildings, 3-15 years for plant and machinery, and 3-10 years for fixtures, fittings, and equipment. This is a simple and effective method; however, it does involve the company’s judgement for useful life and eight years for a building seems a little short.

- F. Palfinger routinely opts to perform major renovations and value-enhancing modifications to equipment and buildings rather than buy new assets. How does Palfinger treat these expenditures? What is the alternative accounting treatment?
- Palfinger states in their notes of the financial statements, “Replacement investments and value enhancing investments are capitalized and depreciated over either the new or the original useful life.” So, they depreciate these renovations along with the associated asset. The alternative method would be to expense the cost.

Process:

- G. Use the information in the financial statement notes to analyze the activity in the “Property, plant and equipment” and “Accumulated depreciation and impairment” accounts for 2007. Determine the following amounts:
- i. The purchase of new property, plant and equipment in fiscal 2007.
 - Found in note 2, the additions of PPE in 2007 total €61,444.

- ii. Government grants for purchases of new property, plant and equipment in 2007. Explain what these grants are and why they are deducted from the property, plant, and equipment account.
 - Found in note 2, the amount of government grants total €733.
 - Government grants are a form of assistance to pay for assets. They are deducted from the carrying value of the PPE account to recognize the fair value of the asset. As Palfinger repays these grants, the PPE account increases in value. The other method of reporting government grants is as deferred income.

- iii. Depreciation expense for fiscal 2007.
 - Also found in note 2, the total depreciation expense for 2007 was €12,557.

- iv. The net book value of property, plant, and equipment that Palfinger disposed of in fiscal 2007.
 - The net book value of disposed PPE in 2007 was €1,501. This is found by subtracting the total disposals in accumulated depreciation and impairment (€12,298) from the total disposals in the acquisition costs (€13,799).

H. The statement of cash flows (not presented) reports Palfinger received proceeds on the sale of property, plant, and equipment amounting to €1,655 in fiscal 2007. Calculate the gain or loss that Palfinger incurred on this transaction. Hint: use the net book value you calculated in part G. iv. Explain what this gain or loss represents in economic terms.

- Palfinger would realize a gain €154 since the book value of the assets disposed equaled €1,501 and they received €1,655 for the assets.

I. Consider the €10,673 added to “Other plant, fixtures, fittings, and equipment” during fiscal 2007. Assume that these net assets have an expected useful life of five years and a salvage value of €1,273. Prepare a table showing the depreciation expense and net book value of this equipment over its expected life assuming Palfinger recorded a full year of depreciation in 2007 and the company uses:

- i. Straight-line depreciation.

Table 5A: Straight-Line Depreciation

Year	Carrying Value	Depreciation expense	Acc. depreciation (end of year)	Book value (end of year)
1	10,673	1,880	1,880	8,793
2	8,793	1,880	3,760	6,913
3	6,913	1,880	5,640	5,033
4	5,033	1,880	7,520	3,153
5	3,153	1,880	9,400	1,273

- ii. Double-declining-balance depreciation.

Table 5B: Double-Declining-Balance Depreciation

Year	Carrying Value	Depreciation expense (40%)	Acc. depreciation (end of year)	Book value (end of year)
1	10,673	4,269	4,269	6,404
2	6,404	2,562	6,831	3,842
3	3,842	1,537	8,368	2,305
4	2,305	922	9,290	1,383
5	1,383	110	9,400	1,273

- J. Assume the equipment from part i. was sold on the first day of fiscal 2008 for €7,500. Assume that Palfinger's accounting policy is to take no depreciation in the year of sale.
- i. Calculate any gain or loss on this transaction, assume Palfinger used straight-line depreciation. What is the total income statement impact of the equipment for the two years that Palfinger owned it? Consider the gain or loss on disposal as well as the total depreciation recorded on the equipment (i.e. the amount from part I. i.).
- To record the sale of equipment using straight line depreciation:

Cash	7,500
Loss on sale	1,293
Equipment	8,793
 - This will be a loss of €1,293 on the income statement. By adding the depreciation of €1,800, total impact on the income sheet will be €3,173.

- ii. Calculate any gain or loss on this transaction assuming the company used double-declining-balance depreciation. What is the total income statement impact of this equipment for the two years that Palfinger owned them? Consider the gain or loss on disposal as well as the total depreciation recorded on the equipment (i.e. the amount from part I. ii.).

- To record the sale of equipment with double-declining depreciation:

Cash	7,500
Gain on sale	1,096
Equipment	6,404

- The impact will be a gain on disposal of €1,096 on the income statement.

But, with a gain we will lessen that year's depreciation of €4,269. So again, the total impact the income sheet will be €3,173.

- iii. Compare the total two-year income statement impact of the equipment under the two depreciation policies. Comment on the difference.

- With the straight-line method recognizing a loss of €1,293 and the double-declining balance recognizing a gain of €1,096, the impact on the income sheet would both be €3,173. In this example, the loss using straight line was added to €1,880 and the gain from double declining was subtracted from €4,629. The reason these equal is because essentially the impact on the income statement is the cost of the asset (€10,673) less the amount received for the sale (€7,500). The difference is how this will be reported on the income statement, either as a gain or loss.

CASE 6:
RESEARCH & DEVELOPMENT COSTS

Volvo Group

November 15, 2017

This case analyzes the financial statements of Volvo Group, specifically the effect of the research and development (R&D) activities. To do so, the case provides three sets of questions; concepts, process, and analysis. The exact questions and answers can be found in Appendix 6, following this summary.

The concept questions allow the user a better understanding of the research and development activities. Descriptions of the R&D activities are provided in an IAS 38 excerpt attached in the case. From this excerpt and notes from Volvo's financial statements, we can determine the criteria for Volvo to capitalize or expense the R&D expenditures. Next, we considered the impact from GAAP and IFRS principles on the financial statements. After comparing the two, we concluded GAAP provides a more accurate outcome.

The second set of questions highlight the accounting process Volvo follows for reporting research and development costs. From the information provided in the company's statements, we can analyze determine the total R&D costs incurred from costs capitalized, expensed, and amortization on previous assets.

Lastly, the analysis section compares Volvo to Navistar, a company in the same industry but different size financially. The comparison shows how similar the proportion of expenses to net sales are between the companies over multiple years.

APPENDIX 6: Case Questions and Answers

Concepts:

A. The 2009 income statement shows research and development expenses of SEK 13,193 (millions of Swedish Krona). What types of costs are likely included in these amounts?

- In the IAS excerpts, it is stated the research and development expenses can be incurred from several R&D activities. These activities are expensed because they are either not distinguishable between the research phase or development phase or they do not meet IAS 38 criteria. All research activities are expensed, these include:
 - activities aimed at obtaining new knowledge;
 - the search for, evaluation and final selection of, applications of research findings or other knowledge;
 - the search for alternatives for materials, devices, products, processes, systems, or services; and
 - the formulation, design, evaluation, and final selection of possible alternatives for new or improved materials, devices, products, processes, systems or services.

- B. Volvo Group follows IAS 38- *Intangible Assets*, to account for its research and development expenditures (see IAS 38 excerpts at the end of this case). As such, the company capitalizes certain R&D costs and expenses others. What factors does Volvo Group consider as it decides which R&D costs to capitalize and which to expense?
- By following the IAS 38 standard, Volvo capitalizes R&D expenditures which;
 - are highly certain to result in future financial benefits,
 - can prove the technical functionality of a new product prior to its development being reported as an asset, and
 - are not expenditures arising from the research phase.
 - Volvo expenses any R&D expenditures which do not meet the IAS 38 criteria.
- C. The R&D costs that Volvo Group capitalizes each period (labeled Product and software development costs) are amortized in subsequent periods, similar to other capital assets such as property and equipment. Notes to Volvo's financial statements disclose that capitalized product and software development costs are amortized over three to eight years. What factors would the company consider in determining the amortization period for particular costs?
- Volvo estimated these costs would have a useful life of three to eight years. This estimate would be based off previous product and software development useful lives and if the intangible asset has a definite or indefinite life.

D. Under U.S. GAAP, companies must expense all R&D costs. In your opinion, which accounting principle (IFRS or U.S. GAAP) provides financial statements that better reflect costs and benefits of periodic R&D spending?

- IFRS might provide financial statements since it would match revenue closer. However, GAAP is more likely to be accurate because by expensing all R&D costs you are being conservative. In most industries, especially pharmaceuticals, it is likely that most R&D activities will not generate revenue.

Process:

E. Refer to footnote 14 where Volvo reports an intangible asset for “Product and software development.” Assume that the product and software development costs reported in footnote 14 are the only R&D costs that Volvo capitalizes.

- i. What is the amount of the capitalized product and software development costs, net of accumulated amortization at the end of fiscal 2009? Which line item on Volvo Group’s balance sheet reports this intangible asset?
 - The amount of the net capitalized product and software development costs in 2009 are SEK 11,409. On the balance sheet, this amount is included in the total intangible assets.

- ii. Create a T-account for the intangible asset “Product and software development,” net of accumulated amortization. Enter the opening and ending balances for fiscal 2009. Show entries in the T-account that record the 2009 capitalization (capital expenditures) and amortization. To simplify the analysis, group all other account activity during the year and report the net impact as one entry in the T-account.

Product and software development, net
Amounts in SEK millions

Beginning Balance	12,381		
Amount capitalized	2,602	Amortization, net	3,126
		Other activity	448
End of year balance	11,409		

- F. Refer to Volvo’s balance sheet, footnotes, and the eleven-year summary. Assume that the product and software development costs reported in footnote 14 are the only R&D costs that Volvo capitalizes.
- i. Complete the table for Volvo’s Product and software development intangible asset.

Table 6A: R&D Cost Three Year Comparison - Volvo

(in SEK millions)	2007	2008	2009
Product and software development costs capitalized during the year	2,057	2,150	2,602
Total R&D expense on the income statement	11,059	14,348	13,193
Amortization of previously capitalized costs (included in R&D expense)	2,357	2,865	3,126
Total R&D costs incurred during the year	10,759	13,633	12,669

- ii. What proportion of Total R&D costs incurred did Volvo Group capitalize (as product and software development intangible asset) in each of the three years?
- Volvo capitalized 19% in 2007, 16% in 2008, and 21% in 2009. These percentages are found by dividing product and software development costs capitalized by the total R&D costs incurred. The calculations are below.

$$2007: \frac{2,057}{10,759} = 0.1912$$

$$2008: \frac{2,150}{13,633} = 0.1577$$

$$2009: \frac{2,602}{12,669} = 0.2054$$

Analysis:

G. The following table for Navistar for fiscal year end October 31, 2007 to 2009.

(in USD millions)	2007	2008	2009
Total R&D costs incurred during the year	375	384	433
Net sales, manufactured products	11,910	14,399	11,300
Total assets	11,448	10,390	10,028
Operating income before tax	(73)	191	359

- i. Use information from Volvo's eleven-year summary to complete the table:

Table 6B: Costs Over Three Years - Volvo

(in SEK millions)	2007	2008	2009
Net sales, industrial operations	276,795	294,932	208,487
Total assets	321,647	372,419	332,265

- ii. Calculate the proportion of total research and development costs incurred to net sales from operations (called, net sales from manufactured products, for Navistar) for both firms. How does the proportion compare between the two companies?

Table 6C: R&D to Net Sales Comparison – Navistar and Volvo

Navistar (in USD millions)	2007	2008	2009
Total R&D costs incurred during the year	375	384	433
Net sales, manufactured products	11,910	14,399	11,300
<i>Proportion</i>	<i>3.2%</i>	<i>2.7%</i>	<i>3.8%</i>
Volvo (in SEK millions)	2007	2008	2009
Total R&D costs incurred during the year	10,759	13,633	12,669
Net sales, industrial operations	276,795	294,932	208,487
<i>Proportion</i>	<i>3.9%</i>	<i>4.6%</i>	<i>6.1%</i>

- In the table created above, users can see that Navistar and Volvo, although different sized companies, are very comparable regarding the proportion of R&D costs to sales. This table also shows Volvo increased their R&D costs in proportion to sales approximately 1% every year. The exact calculations for the proportions are shown below.

$$\text{Navistar, '07: } \frac{375}{11,910} = 0.0315, \text{ '08: } \frac{384}{14,399} = 0.0267, \text{ '09: } \frac{433}{11,300} = 0.0383$$

$$\text{Volvo, '07: } \frac{10,759}{276,795} = 0.0389, \text{ '08: } \frac{13,633}{294,932} = 0.0462, \text{ '09: } \frac{12,669}{208,487} = 0.0608$$

CASE 7:
DATA ANALYTICS
Google Fusion Tables

January 31, 2018

Introduction of Fusion Tables

Google launched the Fusion Tables tool in June 2009 to facilitate combination, management, and sharing of data on the cloud. The system also allows users to filter and add visualizations to the data imported. The type of technology platform it uses is a software-as-a-service application. Fusion Tables emphasizes collaboration and visualization of large amounts of data, helping users make business decisions.

Google's goal with the Fusion Tables was to create a system which targeted an audience who do not necessarily have expert training in these database systems. Users will benefit if they are already familiar with using and reading spreadsheets, diagrams, charts, and JavaScript. Although, Google did publish dozens of tutorials and guides for using the application. After exploring the application, I personally found it very straight forward. The application can also be viewed on mobile devices. It is very user friendly as you are able to directly upload data from an Excel spreadsheet or a Google Sheet. For more complex data management, users are able to gather and visualize data in real time. Journalists seem to be a large portion of Fusion Tables users because of this mapping feature.

Although, Fusion Tables is helpful for a wide variety of scenarios and attracts many types of professionals. For this case we will explore how the application may be used in auditing, tax planning, and advisory. To begin using the application, just log into google and import data or select to create an empty table.

A publicly available data set, titled "PlanSmart" on Fusion Tables will be used for visual references in this case study. Figure 1, slightly zoomed in for this report, is the

“homepage” of Fusion Tables once the user has uploaded data and it displays the content in a spreadsheet format.

College Number	Level	College Name	State	Acceptance Rate	Religious Affiliation	Tuition	Type of College	Majors
78	3	James Madison University	VA	61	None	\$18,656		
79	3	John Brown University	AR	65	Interdenominational	\$21,736	Liberal Arts	
80	3	Le Tourneau University	TX	54	None	\$25,250		
81	3	Loyola University-New Orleans	LA	66	Roman Catholic Church, Society of Jesus (Jesuits)	\$35,504	Liberal Arts	
82	3	Marquette University	WI	55	Roman Catholic Church, Society of Jesus (Jesuits)	\$34,200		
83	3	Mary Baldwin College	VA	54	Presbyterian Church	\$28,360	Liberal Arts (Also all women)	
84	3	McMurry University	TX	55	United Methodist Church	\$24,121	Liberal Arts	
85	3	Miami University-Oxford	OH	73	None	\$25,950		
86	3	Michigan State University	MI	71	None	\$22,762		
87	3	Midwestern State University	TX	64	None	\$16,164	Liberal Arts	
88	3	Millsaps College	MS	55	United Methodist Church	\$30,500	Liberal Arts and Business	
89	3	Mississippi State University	MS	62	None	\$16,619	Agricultural	

Figure 7A: Google Fusion Homepage

Auditing

Google Fusion Tables will assist auditors in assuring completeness, existence and valuation of a client’s financial reports. The first step to an audit is to plan ahead with the audit team and client. Being in contact with the client prior the end of the fiscal year means having up to date statements and schedules. Fusion Tables facilitates this with the sharing and publishing tools. Luckily, it is very easy for the client to upload and update data for the auditor to see. Also, any changes to the data will be seen by the auditor and this ensures no one will unethically alter account balances. The system also has a privacy setting, so the financial information will remain confidential between the client and auditor. Shown below in Figure 2 and 3, are the options from the pull-down menus, which allow the user to easily update, share, and download the data. The selections are

not available in the reference images because it is not logged in as a registered user, however the client would be registered and have access to these tools.

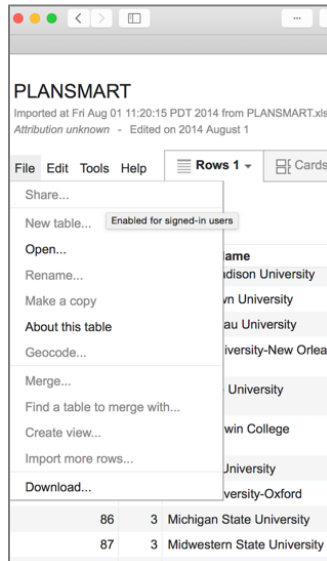


Figure 7B: File Menu

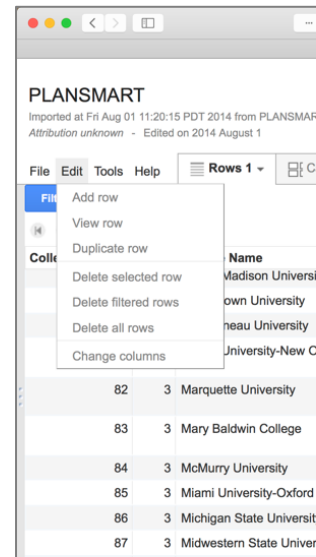


Figure 7C: Edit Menu

Another part of an audit engagement is to access any changes in the client’s business or management that may be considered material or noteworthy in nature. These changes may be made during the fiscal year or from the previous year, such as changing the method of depreciation or terms for credit sales. If the organization uses Fusion Tables, they can easily add a visualization of the data imported in order to further understand these changes and the impact. One chart the user may want to consider is a scatter plot or line graph. These visuals are easy to read and can simplify large sets of complex data. Below Figure 4 shows what how the scatter plot appears and also the other chart options on the left side of the screen. One helpful tool is also changing the tooltip of a chart, so when the user’s mouse scrolls over the plot, a description of the data will appear, this will help the user put the data into context. By clicking “Change

tooltip...” the user is able to customize which information is displayed, this would be very useful when preparing for a meeting with the audit client.

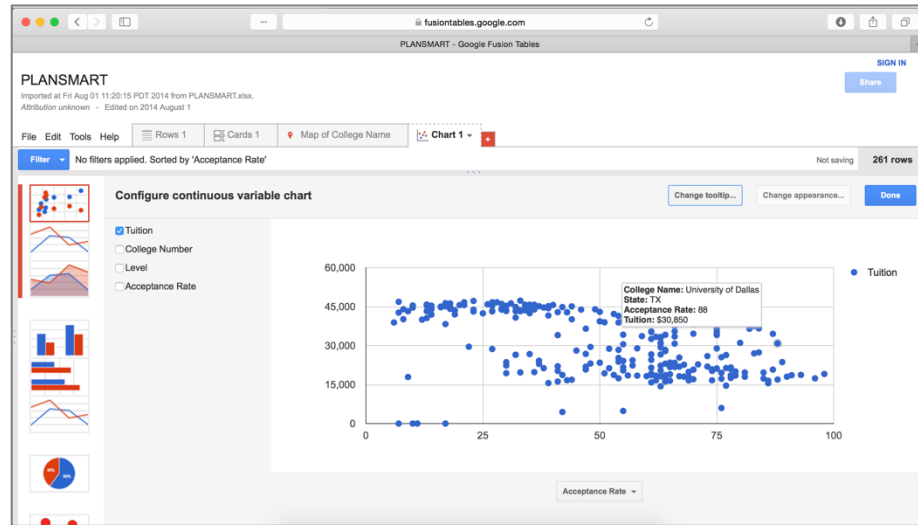


Figure 7D: Scatterplot

The third way which Fusion Tables could help an auditor is the timeline feature. The auditing team may want to keep a timeline of all the client deadlines or progress when preparing for and throughout an audit. The timelines are zoom-able, so you can view years, months, weeks, days and even hours for the audit. Auditors may want to use this feature within the audit team or share it with the client. If the audit team has a timeline of multiple client deadlines and wishes to share a timeline with one client, they can filter the data imported and just view and share one specific client timeline. The timeline can be labeled by clients, or auditors. So, if all the auditors have a shared timeline, one auditor can filter the data in order to see timelines specific to them. Unfortunately, previous Fusion Tables reference data set did not have an example of a timeline.

Tax Planning

Tax planning is the next area of the case which will illustrate how Fusion Tables can help in a business setting. Tax accountants can definitely benefit from the same Fusion Tables tools discussed in the audit examples. However different from an auditor, an important responsibility of a tax accountant is minimizing the client's legal tax payment. To do this effectively and efficiently the accountant may want to visualize the different effects of changing data in a data set on Fusion Tables. For instance, if the client is deciding if buying new equipment is worth the tax deduction, the accountant could alter a data set to see the deductions. Fusion Tables also has a network graph option, which shows the relationships between data. Figure 5 shows the options for a network graph for this Fusion Tables data set.

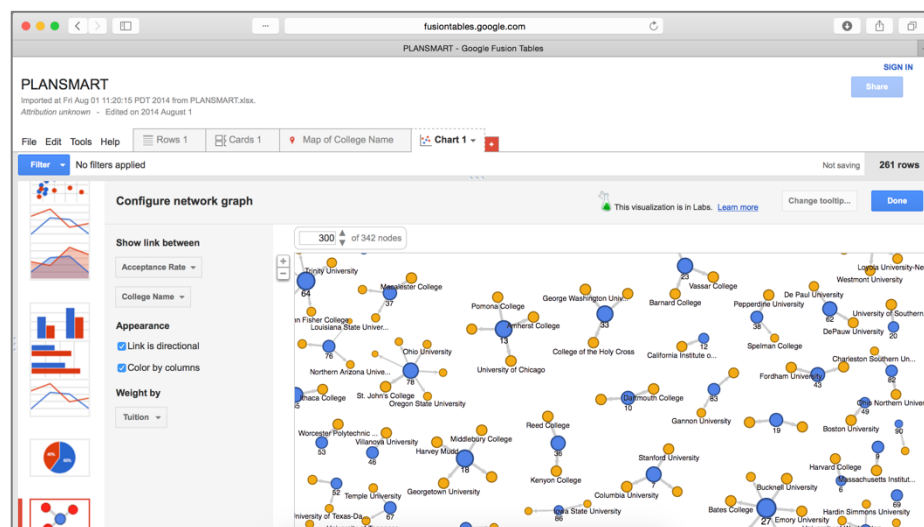


Figure 7E: Network Graph

Another example for tax planning is working on a team, with the collaboration features of fusion tables, working as a team becomes very easy. The system enables users to have instantly updated data sets, so if the accountants are altering or adding to

the data, the rest of the team will see these changes. Users can also create discussion groups right in the system, so comments will be shown for easy access by the other users. Team administrators can easily add or disconnect users from the system as well. Figure 6 shows a sample discussion group in the Fusion Tables application.

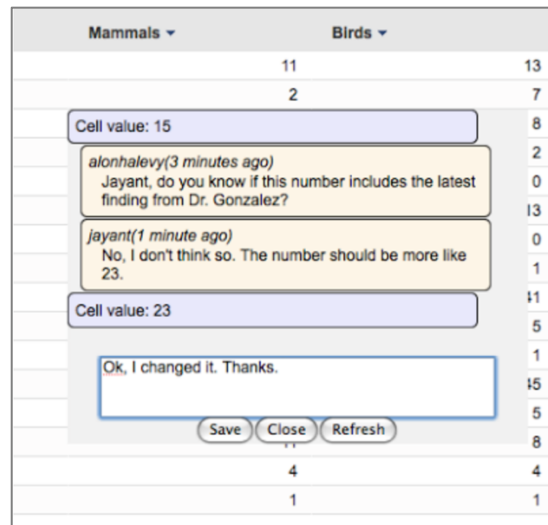


Figure 7F: Discussion Group

Working individually or as a team, tax accountants usually consolidate financial statements in order to prepare the tax documents. Fusion Tables makes it simple to merge, consolidate, and filter through data. These data sets can be imported into the system in various forms. Then once in the Fusion Tables, the accountant can consolidate and filter through information.

Advisory

Financial advisors are committed to helping clients make the right investments while identifying threats and weaknesses. Like auditing and tax planning, advisory needs to follow government and industry regulations. A lot of the times, they will be presenting

new rules and regulations to their coworkers. Fusion Tables will help advisors present, share, and store up to date data on these industry regulations. The ability to visualize data with a map can help advisors who are discussing regulations that only affect certain states or cities. The advisory team can simply add a column in Fusion Tables with the locations or boundary of the regulation and then add a map. Since the regulation can be updated later with new locations or boundary, it is helpful the map will automatically update too. Figure 7 displays the map from our reference Fusion Tables data set and the data that is displayed when a point is clicked on.

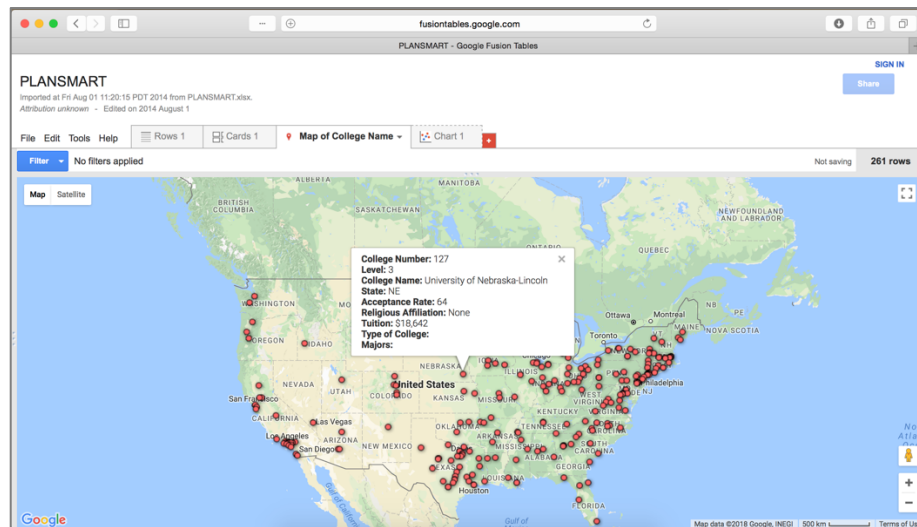


Figure 7G: Map

Advisors also analyze financial statements and then summarize their findings and solutions to the client. In order for a client to easily understand the data and the advisor's solution, the visualization tool in Fusion Tables will be beneficial. This is a way for advisors to illustrate key ratios, financial highlights, and trends. As shown in Figures 4 and 5, there are plenty of charts to choose from when visualizing data. Shown in Figures 8 and 9 are additional charts advisors may choose to use.

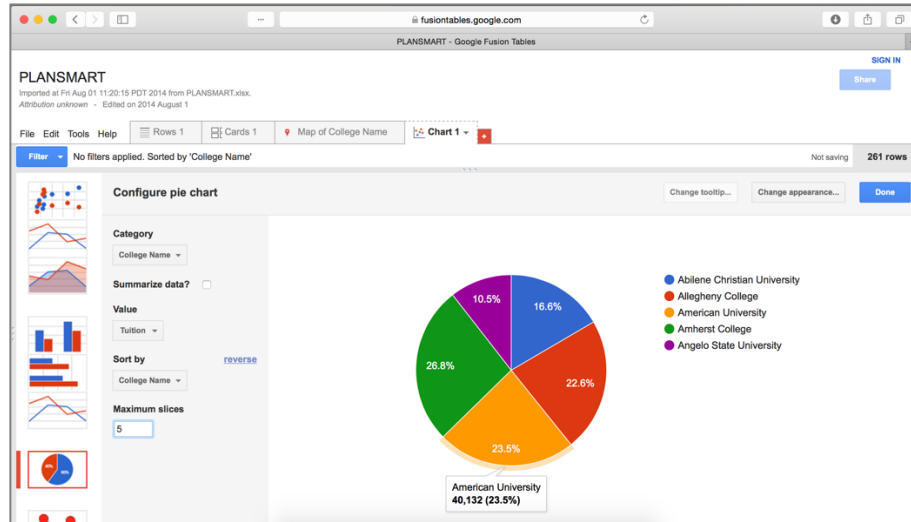


Figure 7H: Pie Chart

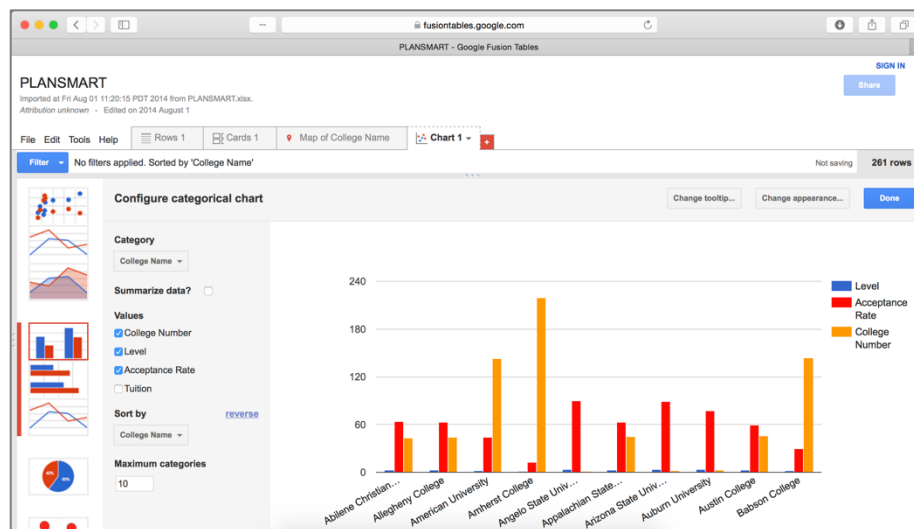


Figure 7I: Bar Chart

Conclusion

As we know, Fusion Tables stores, visualizes, manages, consolidates, filters, and shares data in real time. Fusion Tables also allows users to create business cards and publish up to date data and visuals on other websites. With this said, the best function of the system is the actually its usability. This system is targeted for users who have little

training, but also can benefit those with expert training, such as some auditors, tax accountants, and financial advisors.

Auditors benefit mainly from the communication standpoint with clients. Since Fusion Tables is so user-friendly, clients would not be intimidated by using this system. Auditors also benefit from the visualization tool of the system, allowing complex data to be simplified helps both the auditor and client. Tax accountants will want to implement Fusion Tables because it allows the consolidation of data from multiple sources. Even further, the accountants can visualize different tax scenarios, assuring their clients the lowest legal tax payment. Lastly, financial advisors will be able to simplify regulations with the use of maps and up to date data and show clients proposed solutions through easy to read charts.

CASE 8:
LONG-TERM DEBT
Rite Aid Corporation

February 14, 2018

This case explores long-term debt while looking into the financial statements and notes from Rite Aid Corporation. Most people try to steer clear of debt, however with companies it is becoming more common to obtain long-term debt for the purpose of funding. Rite Aid is a great example of a company for this case study because they have various forms of debt.

The case first explores the general concepts of these types of debt. We will define and distinguish the differences between secured and unsecured debt. Then discuss terms including guaranteed, senior, fixed-rate, and convertible. Lastly, in the concept section of the case we will begin looking into why Rite Aid would want to have several types of debt. The majority of the case is the process section, where we analyze the nature of Rite Aid's three different secured and unsecured notes. By doing so, we will explore topics like interest, discounts, and debt schedules. The answers to the case questions follow this introduction in Appendix 8. Note all dollar amounts are in thousands to correspond with the financial statements.

The overall analysis contributes to the understanding of how debt affects a company's financial position, specifically assets, liabilities, and income. Long-term debt has a large impact on the cash flows and on assets which they pledged as a security. Rite Aid's statement of cash flow includes the balance for "Proceeds from issuance of long-term debt." FASB has been increasing debt disclosure requirements, which allows users to better understand the amount of debt compared the amount of assets. Long term debt can also reduce the earnings per share if the debt is convertible to common stock.

APPENDIX 8: Case Questions and Answers

Concepts:

- A. Consider various types of debt described in note 11, Indebtedness and Credit Agreement.
- i. Explain the difference between Rite Aid's secured and unsecured debt. Why does Rite Aid distinguish between these two types of debt?
 - Secured debt differ from unsecured debt because they are backed by a pledge of some sort of collateral. Unsecured debt is not backed by a form of collateral. An unsecured note may be riskier but might pay a higher interest rate than a secured bond. Rite Aid distinguishes the debt because of the risk and interest rate differences.
 - ii. What does it mean for debt to be "guaranteed"? According to note 11, who has provided the guarantee for some of Rite Aid's unsecured debt?
 - The guarantor will guarantee the debt will be paid by them if the debt holder cannot pay off the debt. Subsidiaries owned by Rite Aid are the guarantors for the corporation's unsecured debt obligations.
 - iii. What is meant by the terms "senior," "fixed-rate," and "convertible"?
 - Senior notes are paid before unsecured debt if the debt holder experiences financial trouble, like bankruptcy. Fixed-rate debt has the same interest rate throughout the life of the debt. Convertible debts are able to be converted into another security, like stock.

- iv. Speculate as to why Rite Aid has different types of debt with a range of interest rates.
 - Rite Aid has different types of debt because they are from different sources and for different purposes. Also, the market rate is always changing so the issuance date affects the interest rate, along with the type of bond.

Process:

- B. Consider note 11, Indebtedness and Credit Agreement. How much total debt does Rite Aid have at February 27, 2010? How much of this is due within the coming fiscal year? Reconcile total debt reported in note 11 with what Rite Aid reports on its balance sheet.
 - On February 27, 2010 Rite Aid has a total debt of \$6,370,899. This balance includes three accounts from the balance sheet; long-term debt less current maturities (\$6,185,633), current maturities of long-term debt and lease financing options (\$51,501), and lease financing obligations less current maturities (133,764). On page 83, Note 11 also has the same total debt balance (\$6,370,899) listed as “Total debt.”

- C. Consider the 7.5% senior secured notes due March 2017.
 - i. What is the face value (i.e. the principal) of these notes? How do you know?
 - The face value is \$500,000. Users can assume the note was issued at par because there is no mention of a premium or discount for the note.

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

Cash	500,000
Notes Payable	500,000

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

- The annual interest expense is 7.5% of the face value (\$500,000), so it is \$37,500.

Interest Expense	37,500
Cash	37,500

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

Note Payable	500,000
Cash	500,000

D. Consider the 9.375% senior notes due December 2015.

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

- The face value of the note on February 27, 2010 is \$410,000 and the carrying value is \$405,951. This amount is found from subtracting the unamortized discount (\$4,049) from the principal. These numbers differ because of the note was purchased at a discount which is amortized annually.

- ii. How much interest did Rite Aid pay on these notes during the fiscal 2009?
- Rite Aid paid \$38,438 on interest in 2009. This amount is found from multiplying the face value by the interest rate and number of periods; $410,000 \times 9.375\% \times 12/12 = \$38,438$.
- iii. Determine the total amount of interest expense recorded by Rite Aid on these notes for the year ended February 27, 2010. Note that there is a cash and a noncash portion to interest expense on these notes because they were issued at a discount. The noncash portion of interest expense is the amortization of the discount during the year.
- The interest expense recorded on February 27, 2010 was \$39,143. These balances are found from the difference between the 2009 discount (\$4,754) and the 2010 discount (\$4,049) is \$705. Which indicated the annual discount on the note is \$705. We already know from part ii that the cash payment is \$38,438, so adding the discount gives us the interest expense.
- iv. Prepare the journal entry to record interest expense on these notes for fiscal 2009. Consider both the cash and discount (noncash) portions of the interest expense from part *iii* above.

Interest expense	39,143
Discount on Note Payable	705
Cash	38,438

- v. Compute the total rate of interest recorded for fiscal 2009 on these notes.
 - To compute the effective interest rate, simply divide the interest expense by the carrying value. For this period, the interest expense was \$39,143 and the beginning carrying value was \$405,246, so the effective interest rate is 9.659%.

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

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

- The face value of the 9.75% note is \$410,000 and it was issued at 98.2%. We calculate the cash received and discount amount by multiplying the 98.2% times the face value to find the note was issued at a discount of \$7,380 and cash received is \$402,620.

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

- ii. At what effective annual rate of interest were these notes issued?
- The best way to find an effective interest rate is utilizing the Microsoft Excel “RATE” function. The formula is RATE(number of payment periods, interest payment, present value cash proceeds, face value). For this case we plug in; RATE(7, -39975, 402620, -410000) to get the rate of 10.1212%. We find the annual interest payment of \$39,975 by computing 9.375% of \$410,000.
- iii. Assume that Rite Aid uses the effective interest rate method to account for this debt. Use the table that follows to prepare an amortization schedule for these notes. Use the last column to verify that each year’s interest expense reflects the same interest *rate* even though the *expense* changes.

Table 8A: Amortization Schedule

<i>Date</i>	<i>Interest Payment</i>	<i>Interest Expense</i>	<i>Bond Discount Amortization</i>	<i>Net Book Value of Debt</i>	<i>Effective Interest Rate</i>
06/30/2009	-	-	-	402,620	-
06/30/2010	39,975	40,750	775	403,395	10.1212%
06/30/2011	39,975	40,828	853	404,248	10.1212%
06/30/2012	39,975	40,915	940	405,188	10.1212%
06/30/2013	39,975	41,010	1,035	406,223	10.1212%
06/30/2014	39,975	41,115	1,140	407,363	10.1212%
06/30/2015	39,975	41,230	1,255	408,618	10.1212%
06/30/2016	39,975	41,357	1,382	410,000	10.1212%

- iv. Based on the above information, prepare the journal entry that Rite Aid would have recorded February 27, 2010, to accrue interest expense on these notes.
- Since the note was issued in June, it is not a complete year to February 27th, so we multiply both the interest payment and the discount by 8/12 months; $39,975 \times 8/12 = 26,650$, $775 \times 8/12 = 517$. The sum of these amounts equals the interest expense for the eight months between June and February.

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

- v. Based on your answer to part *iv.*, what would be the net book value of the notes at February 27, 2010?
- The net value of the notes on February 27, 2010 would be \$403,137. The carrying value is found by adding the amortized discount to the prior carrying value, $402,620 + 517 = 403,137$. Although Rite Aid's lists the carrying value as \$403,308, it is because the discount with the effective interest method is so similar to the discount with the straight-line method, that they may use straight line amortization because it is simple.

CASE 9:

SHAREHOLDERS' EQUITY

Merck & Co. and GlaxoSmithKline plc.

February 23, 2018

This case explores the stockholders' equity concepts while analyzing two pharmaceutical and health-care product companies. Both global companies, however Merck & Co. (Merck) is based out of New Jersey while GlaxoSmithKline (Glaxo) is from London. In this case study, we focus more on Merck and conclude by comparing key dividend-related ratios.

To start, the case views Merck's financial statements to find the common shares issued, outstanding, and repurchased. Users are able to understand the relationship between these terms and how they appear on the financial statements in both number of shares and the account balance. Then the case discusses dividends and treasury stock. Building off our knowledge of Merck's common stock, we gain a better understanding as to why a company would pay dividends and repurchase shares. After the general concept questions, the set of process questions explore the statement of retained earnings and statement of cash flows more in depth. The process questions also touch on the journal entries for the dividend activity. Lastly, the analysis questions compare Merck and Glaxo by dividend-related ratios. Even with significant differences in share outstanding, total assets, net income, and market share price, these two companies are very similar. The following appendix includes the complete case questions and answers related to Merck's stockholders' equity.

APPENDIX 9: Case Questions and Answers

Concepts:

- A. Consider Merck's common shares.
- i. How many common shares is Merck authorized to issue?
 - Merck authorized 5,400,000,000 shares to issue.

 - ii. How many common shares has Merck actually issued at December 31, 2007?
 - Merck issued 2,983,508,675 shares in 2007.

 - iii. Reconcile the number of shares issued at December 31, 2007, to the dollar value of common stock reported on the balance sheet.
 - The number of issued common stock shares (2,983,508,675) multiplied by the par value (\$0.01) totals the \$29.8 million common stock value on the balance sheet.

 - iv. How many common shares are held in treasury at December 31, 2007?
 - Merck held 811,005,791 common shares in treasury at December 31, 2007.

 - v. How many common shares are outstanding at December 31, 2007? ^[1]_[SEP]
 - There were 2,172,502,884 common shares outstanding on December 31, 2007. This value is found by subtracting the treasury shares (811,005,791) from the issued shares (2,983,508,675).

vi. At December 31, 2007, Merck's stock price closed at \$57.61 per share.

Calculate the total market capitalization of Merck on that day.

- On December 31, 2007, Merck's market capitalization totaled \$125,157,891,147. This is found by multiplying the outstanding shares (2,172,502,884) by the market price per share (\$57.61).

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

- When a company pays dividends, it is publicizing that their profits are genuine and financial position is stable enough for the distribution. The Intermediate Accounting book (by Kieso, Weygandt, and Warfield) lists five reasons for paying dividends;
 1. To maintain agreements to retain some or all earnings, to protect against loss.
 2. To meet state corporation requirements.
 3. To retain assets that would otherwise be paid out as dividends.
 4. To smooth out dividend payments by accumulating earnings in good years to use as basis for dividends in bad years.
 5. To build a cushion against possible losses in calculation of profits.

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

- Companies may repurchase their own share to decrease the shares outstanding in order to ultimately increase their earnings per share. This is listed as one of the five general reasons corporations repurchase their own shares. The other four reasons from the Intermediate Accounting book include;
 1. To provide tax-efficient distributions of excess cash to shareholders.
 2. To provide stock for employee stock compensation contracts or to meet potential merger needs.
 3. To thwart takeover attempts or to reduce the number of stockholders.
 4. To make a market in the stock.

Process:

D. Consider Merck's statement of cash flow and statement of retained earnings.

Prepare a journal entry to summarize Merck's common dividend activity in 2007.

Retained Earnings	3,310.7
Dividends Payable	3.4
Cash	3,307.3

- The debit to retained earnings (\$3,310.7 million) was found in Merck's Statement of Retained Earnings, listed as Dividends Declared on Common Stock. Next, the cash amount (\$3,307.3 million) is found in the Statement of Cash Flows, listed as Dividends Paid to Stockholders. Lastly, the dividends payable (\$3.4 million) is found by computing the difference between the Retained Earnings and Cash amounts. The balance sheet shows a \$4.2 million difference between dividends payable 2006 to 2007. This is \$800,000 more than the dividends payable we calculated. This difference is due to Merck's rounding in calculations.

E. In 2007, Merck repurchased a number of its own common shares on the market.

- Describe the method Merck uses to account for its treasury stock transactions.
 - Merck uses the cost method for the treasury stock transactions. Users know this because shown on the balance sheet is "treasury stock, at cost" and also the treasury stock is deducted from the paid-in capital and retained earnings and not from the common stock balance. The cost method debits the treasury stock at the amount it was repurchased.

- ii. How many shares did Merck repurchase on the open market during 2007?
 - Merck repurchased 26,500,000 shares in 2007.

- iii. How much did Merck pay, in total and per share, on average, to buy back its stock during 2007? What type of cash flow does this represent?
 - Merck paid \$1,429,700,000 for the 26.5 million shares at \$53.95 per share to repurchase their stock in 2007. This total is a financing activity on the Statement of Cash Flows.

- iv. Why doesn't Merck disclose its treasury stock as an asset?
 - It would be inappropriate for Merck, or any company, to classify treasury stock as an asset. An asset is defined as a probable future benefit. While repurchasing stock may have a benefit, it is actually just reducing the outstanding stock.

Analysis:

- F. Determine the missing amounts and calculate the ratios in the tables below. What differences do you observe in Merck's dividend-related ratios across the two years? What differences do you find in the companies' dividend-related ratios?

Table 9A: Financial Ratios – Merck and Glaxo

	Merck		Glaxo
	2007	2006	2007
Dividends Paid (<i>in millions</i>)	\$3,307.3	\$3,322.6	£2,793.0
Shares Outstanding	2,172,502,884	2,167,785,445	5,373,862,962
Net Income (<i>in millions</i>)	\$3,275.4	\$4,433.8	£6,134.0
Total Assets (<i>in millions</i>)	\$48,350.7	\$44,569.8	£31,003.0
Operating Cash Flows (<i>in millions</i>)	\$6,999.2	\$6,765.2	£6,161.0
Year End Stock Price	\$57.61	\$41.94	£97.39
Dividends Per Share	\$1.52	\$1.53	£0.53
Dividend Yield	2.64%	3.65%	0.54%
Dividend Payout	100.97%	74.94%	45.53%
Dividends to Total Assets	6.84%	7.45%	9.01%
Dividends to Operating Cash Flows	47.25%	49.11%	45.33%

- Merck's dividend-related ratios remained fairly constant between 2006 and 2007. One notable difference is the dividend payout ratio, this was a result of a lower net income in 2007 while dividends paid did not decrease in proportion. Another change across the years is the dividend yield, a result of a higher year end stock price in 2007. When comparing the two companies, Glaxo pays less dividends per share (\$1.05), holds more shares outstanding, and a much higher year end stock price (\$192.83). These currency conversions are using the 2007 rate of 1 GBP = 1.98 USD. These accounts create the difference in the dividend-related ratios between the companies. Although it should be noted the dividends to operating cash flows are comparable between companies in 2007.

CASE 10:
MARKETABLE SECURITIES

State Street Corporation

April 4, 2018

The State Street Corporation financial statements will be used in this case for a better understanding and analysis of marketable securities. Marketable securities are investments which are classified as financial assets. Financial assets differ from physical assets because they are valued on a contractual claim to cash flows. Financial assets include cash, receivables, another company's stock, loans, and bonds. So, we can label these marketable securities by trading, available-for-sale, and held-to-maturity. The definition of a security in the Kieso Intermediate Accounting book is "a share, participation or other interest in property or enterprise of the issuer." The main purpose of a security is to make a profit. However, this case demonstrates how the different types of securities are accounted for differently and their effect on the financial statements.

The first part of the case explores each of the three securities individually. Then the second part applies our understanding of the investments to State Street's financial statements. This is where we see the different valuation methods being used and the holding gains and losses from the investments. The specific questions and answers of the case follow this summary in Appendix 10.

APPENDIX 10: Case Questions and Answers

Concepts:

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

i. In general, what are trading securities?

- Trading securities are a type of debt or equity investment. The securities are classified as trading because the company intends to sell them in a short time frame. The overall purpose of a trading security is to make a profit on them, whether that be through buying low and selling high, dividends, or interest.

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

Cash	1	
Dividend Revenue		1

Cash	1	
Interest Revenue		1

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

Fair Value Adjustment, Trading	1	
Unrealized Holding Gain/Loss, Income		1

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

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

- Available-for-sale securities are also a type of debt or equity investment. The name “available-for-sale” describes their function, to be held until management decides to sell them. These securities can also be defined as not being trading or held to maturity securities, they are more of a hybrid.

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

Cash	1	
Dividend Revenue		1

Cash	1	
Interest Revenue		1

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

Fair Value Adjustment, Available-for-sale	1	
Unrealized Holding Gain/Loss, Equity		1

- C. Consider securities held-to-maturity. Note that State Street calls these, “Investment securities held to maturity.”
- i. In general, what are these securities? Why are equity securities never classified as held-to-maturity?
 - Held-to-maturity securities are the third classification of debt investments, and only one that cannot be an equity security. These securities are exclusively debt investments because they have a maturity date and an equity investment does not have a maturity date. The intention of these securities is to hold them to maturity and make a profit from interest.
 - ii. If the market value of securities held-to-maturity increased by \$1 during the reporting period, what journal entry would the company record?
 - No entry is needed when the market value increases because they are not adjusted to fair value, instead they are recorded at amortized cost.

Process:

- D. Consider the “Trading account assets” on State Street’s balance sheet.
- i. What is the balance in this account on December 31, 2012? What is the market value of these securities on that date?
 - On December 31, 2012, the balance of Trading securities is \$637 million. This balance also represents the securities market value because they are recorded at fair value which is told to the users in note 1.

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

- To bring the balance from \$552 million to \$637 million fair value, State Street should record an unrealized holding gain of \$85 million. The journal entry (in millions) is:

Fair Value Adjustment, Trading	85.0
Unrealized Holding Gain/Loss, Income	85.0

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

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

- The balance on December 31, 2012 of the held-to-maturity securities is \$11,379 million.

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

- The fair value is \$11,661 million, which is disclosed on the balance sheet in parenthesis and again in note 4.

- iii. What is the amortized cost of these securities? What does “amortized cost” represent? How does amortized cost compare to the original cost of the securities?
- The amortized cost is the balance of \$11,379 million. The amortized cost represents the carrying value of the securities, or the cost net the amortized discount or premium. The amortized cost is less than the original cost.
- iv. What does the difference between the market value and the amortized cost represent? What does the difference suggest about how the average market rate of interest on held-to-maturity securities has changed since the purchase of the securities held by State Street?
- The market value is the selling price of the security, while the amortized cost is the book value, so the difference is the gain or loss on sale of bonds. For State Street, the amortized cost/book value (\$11,379 million) is \$282 million less than the market value (\$11,661 million). This represents a gain of \$282 million if they sold the securities, indicating the market rate is below the stated rate.

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

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

- The balance of available-for-sale securities is \$109,682 million on December 31, 2012. This balance represents the market value of the securities because they are available-for-sale and it states they are carried at fair value in the notes.

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

- The unrealized gain or loss is the difference between the fair value (\$109,682 million) less the amortized cost of \$108,563 million, found in note 4. The difference is a gain of \$1,119 million. Another way to calculate this is by finding the difference in unrealized gains and losses disclosed in note 4. There users read a gain of \$2,001 million and a loss of \$882 million, the different is again a gain of \$1,119 million.

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

- The second page of note 4 shows the net realized gains and losses for 2010. Here users see a gain \$101 million and a loss of \$55 million, meaning a net realized gain of \$55 million. On the income statement the \$55 million amount is listed as a net gain from sales and investment securities under the revenue section. State Street did not provide a statement of cash flows; however, this gain would also be recorded on a statement of cash flows.

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

Proceeds from sales of available-for-sale securities \$5,399

Purchases of available-for-sale securities \$60,812

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

Debt Investments, Available-for-sale	60,812
Cash	60,812

(In millions)

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

Cash	5,399
Unrealized Holding Gain, Equity	67
Realized Gain on Available-for-sale	55
Debt Investments, Available-for-sale	5,411

(in millions)

- iii. Use the information in part g. *ii* to determine the original cost of the available-for-sale securities sold during 2012.
- The original cost of the available-for-sale securities is \$5,344 million. It does not equal the credit to Debt Investments in part ii since the original cost would not include the \$67 million unrealized holding gain.

CASE 11:
DEFERRED INCOME TAX
ZAGG Incorporated

April 4, 2018

This case focuses on income taxes for financial statement presentation. Using ZAGG's financial statements as a reference, we will explore the income difference between accounting for financial purposes and tax purposes. Differences, permanent or temporary, arise from items that are accepted by GAAP and not recognized for tax purposes, or vice versa. Temporary differences can increase or decrease the income expense, therefore altering the effective tax rate in comparison to the statutory tax rate.

The case then discusses how to account for these differences, the deferred income taxes. Accounting Standards Codification 740 is the guiding code for income taxes and has been altered in many ways in December of 2017. This code requires companies to adjust their deferred tax accounts for the new tax rate, trace all deferred taxes to the original temporary difference, and disclose this information on the financial statements. These tax rate and item deduction changes affect the deferred income taxes but also the total income tax account, thus effecting company's effective tax rate.

Lastly, the case applies the accounting for deferred income taxes to ZAGG. With their financial statements and notes we can put the deferred tax amounts into interest expense journal entries, compute the company's effect tax rate, and interpret the balance sheet tax items. The completed questions and answers follow this summary in Appendix 11.

APPENDIX 11: Case Questions and Answers

Concepts:

- A. Describe what is meant by the term book income? Which number in ZAGG's statement of operation captures this notion for fiscal 2012? Describe how a company's book income differs from its taxable income.
- Book income refers to the pre-tax income reported in the company's "books," as in the income amount reported on the income statement. The difference between book income and taxable income is that book income follows GAAP. Another difference is book income uses the full accrual method to report revenues while taxable income uses a modified cash basis. ZAGG reported a book income of \$23,898,000 for 2012.
- B. In your own words, define the following terms:
- i. Permanent tax differences (also provide an example)
 - A permanent tax difference is the difference resulting from accounting for an item on the financial statements, but it is not allowed on the tax report. These are permanent because they will not reverse in future periods. For example, items recognized for financial reporting purposes but not for tax purposes include interest received on state and municipal obligations or proceeds from life insurance carried by the company. On the other hand, items recognized for tax purposes but not for financial reporting purposes include depletion of natural resources in excess of their cost and dividends received from U.S. corporations.

- ii. Temporary tax difference (also provide an example)
 - Temporary tax difference is the difference between the tax basis of an asset or liability and its book amount. They are called temporary because they are a result of timing issues and will result in either a future taxable or deductible amount. An example of how these differences occur is if a company reports their sales on the accrual basis on the financial statements and on a cash basis for tax purposes.

- iii. Statutory tax rate
 - A statutory tax rate is exactly what it sounds like, a tax rate mandated by a statute. This legal tax is enforceable to all citizens, but the rates may differ by groups, which are usually categorized by ranges of individual or household income.

- iv. Effective tax rate
 - The effective tax rate is the rate equal to the tax expense divided by the book income. This represents the average rate that income is taxed.

- C. Explain why a company reports deferred income taxes as part of total income tax expense. Why don't companies report the current tax bill as their income tax expense?
- Deferred income taxes represent a future obligation or benefit that took place in this period but not yet recognized. This disclosure of the future events provides users and investors useful insight to the company's financial standing. Therefore, the reported tax expense on the income statement differs from the statutory tax rate. In 2017, the U.S. tax reform altered how accounting for tax purposes will be reported. The major change to the act was the statutory corporate tax rate reduction, from 35% to 21%. When a change in tax rate occurs, the expected tax obligation also changes, companies will need to adjust all of their deferred income tax accounts. According to GAAP, the effects of tax rate changes should be recorded as a discrete item and part of tax expense or benefit in continuing operations. For IFRS, the tax rate effects on deferred taxes need to be traced to their original tax difference. Other effects the act includes is lowering dividends received reductions, repealed the Corporate Alternative Minimum Tax, depreciation of property, and limits interest expenses. Since the act changed certain deductions, taxable income will be different from their book income, resulting in new temporary differences and an effective tax rate. This act requires that companies disclose the effects on the deferred tax amounts.

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

- A deferred tax asset reflects a future deductible amount caused by a temporary difference where the taxable income will be less than the book income. It is called an asset because by lowering the future tax payable amounts, it will result in a probable future benefit. This difference may be caused by a warranty liability that is recorded in the financial statements but for tax purposes the warranty tax deduction cannot be recorded until it is paid.
- Meanwhile, a deferred tax liability represents a future taxable amount caused by a temporary difference where the taxable income will be higher than the book income. It is called a liability because the company has the obligation pay the difference in future periods, which follows the definition of a liability. A deferred tax liability can result from recording accounts receivable from revenue recognized for book purposes. The balance sheet for tax purposes, would not include the accounts receivable, creating a temporary difference between taxable income and book income.

D. continued.

- Basically, when taxable income does not equal book income, a deferred tax asset or liability will be credited or debited in the income tax journal entry. By adding this line to the entry, the company increases or decreases their income taxes payable, thus being called a deferred tax asset or liability. After the deferred tax amount has been recorded for the future periods to sum the temporary difference, the book income will equal the taxable income and the difference is then reversed. Because deferred tax assets and liabilities are reported on the income statement, they can provide useful future tax information to users.

E. Explain a deferred income tax valuation allowance and when it is recorded.

- If a company has a deferred tax asset that is not likely to be realized, the account needs to be reduced with a contra account (allowance to reduce deferred tax asset to expected realizable value). This is similar to an allowance for sales returns and discounts, where it reduces the asset account (deferred tax asset, in this case) and credits the expense account. On the financial statements this account decreases the deferred tax asset.

Process:

F. Consider information disclosed in Note 8 - Income Taxes to answer the following:

i. Using information in the first table in Note 8, show the journal entry that

ZAGG recorded for the income tax provision in fiscal 2012?

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

(In thousands)

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

- The deferred tax asset in the journal entry above is found by the net effect of the deferred tax asset with the deferred tax liability. Note 8 shows users the items that lead to the deferred tax assets and liabilities amount. The difference between 2012 and 2011 for the deferred tax assets and liabilities are \$8,002,000 and \$291,000, respectively. The calculations and extended journal entry are below.

Income Tax Expense	9,393	
Deferred Tax Asset	8,002	
Deferred Tax Liability	291	
Income Tax Payable		17,686

(In thousands)

Deferred Tax Asset: $15,015,000 - 6,300,000 = \text{debit } 8,002,000$

Deferred Tax Liability: $794,000 - 1,086,000 = \text{debit } 292,000$

- iii. The second table in Note 8 provides a reconciliation of income taxes computed using the federal statutory rate (35%) to income taxes computed using ZAGG's effective tax rate. Calculate ZAGG's 2012 effective tax rate using the information provided in their income statement. What accounts for the difference between the statutory rate and ZAGG's effective tax rate?
- As explained in B. iv. the effective rate is the tax expense divided by the taxable income. ZAGG's effective rate is 39%, this difference from statutory rate of 35% is due to the additional taxes included in the income expense. In this case this includes the state tax, non-deductible expenses, and a return to provision adjustment.

$$\text{Effective tax rate} = 9,393 / 23,898 = 39\%$$

$$\text{Statutory tax rate} = 8,364 / 23,989 = 35\%$$

- iv. According to the third table in Note 8 - Income Taxes, ZAGG had a net deferred income tax asset balance of \$13,508,000 at December 31, 2012. Explain where this amount appears on ZAGG's balance sheet.
- The net deferred tax asset amount is the balance of the deferred tax asset (\$14,302,000) and the deferred tax liability (\$794,000). On the balance sheet the net deferred tax is recorded as the current portion (\$6,912,000) and deferred, or non-current portion (\$6,596,000).

CASE 12:
REVENUE RECOGNITION

Apple Inc.

May 2, 2018

Twenty years ago, Apple released the first iMac. This was the just the beginning of Apples success, next iTunes, then the iPod, and in 2007 the iPhone. The trend continued and grew as did their “iRevenues”. During Apple’s life, how consumers viewed technology drastically changed and how accountants viewed technology also changed. In 2014, The Financial Accounting Standards Board (FASB) and the International Accounting Standards Boards (IASB) jointly updated the revenue recognition to include guidelines for contracts involving software. Although this standard focused on many more areas than software, Apple is a great company to use in this case because of their various sources of revenue.

The new accounting standard update, FASB 606, focuses on all revenue from contracts with customers. The update was needed to clarify revenue recognition guidelines and help prevent accounting fraud. This case discusses the standard in depth through characteristics of revenue, recognition, contracts and fraud incentives. The second part of the case addresses Apple’s different sources of revenue and how the new standard applies.

Revenues are inflows of assets or increases in value of an asset from normal operations, gains arise from discontinued operations. Recognizing revenue can be simple if it is a routine sale where the revenue would be recorded at the point of the sale. Recognizing revenue can be very complicated though, which is why the boards updated the revenue recognition standard. This standard provides a five-step guideline for recognizing revenue in more complex situations. Apple’s financial statements from the case disclosed their criteria for recognizing revenue, which roughly aligns with the five-step process. Therefore, it makes sense to read in Apple’s 2017 10k the adoption of the

new standard will not have a material impact. The new standard also addresses multiple element contracts, which will affect Apple's software and licensing contracts. Now companies should recognize revenue from these contracts on a stand alone selling price if they are distinctive performance obligations. This change is outlined in the fourth step of the recognition process, which highlights three methods; adjusted market assessment approach, expected cost plus margin approach, and residual approach. One benefit of the new revenue recognition standard, and these approaches, is how it standardizes accounting across industries.

The second half of the case focuses on recognizing revenue for specific transactions that Apple would experience, these include; iTunes song sold online, Apple brand accessories sold online, selling iPods to a third-party reseller, and selling gift cards. Through discussing these transactions, we explore the principal-agent relationship which is included in the new standard. This consideration applies to revenue that involves a third party or vendor. A simple way to distinguish if the entity is acting as the principal or agent is by determining if they have control of the good or service being exchanged before the transfer to the customer. The entity is a principal if they had control of the good or service prior to the transfer. The new standard also clarifies the concept of control. Finally, the case touches on how software contracts will be recognized under the new standard. The biggest change is that companies can determine distinct obligations without establishing vendor-specific objective evidence of fair value. The standard details how to determine separate performance obligations by the nature of the license, the right to access and use it, and the category of intellectual property it is. Even with the standard, judgment will still be needed to determine the obligations in complex situations.

This update will help clarify the difference between GAAP and IFRS revenue standards and hopefully eliminate recognition issues and fraud. Found on the next page is the complete questions and answers to Apple's case.

APPENDIX 12: Case Questions and Answers

Concepts:

A. In your own words, define “revenues.” Explain how revenues are different from “gains.”

- Revenues are the result of assets increasing in value from normal operations. For example, a company can increase assets by collecting cash from a merchandise sale. Gains are also increases in assets, however gains are from discontinued operations. An example of a gain is the profit from selling equipment over its book value. On the other hand, if the company’s main operation is to sell equipment, like Caterpillar for example, the proceeds from the sale would be considered revenue. The two items are presented separately on the income statement to help users better understand the company’s financial health and future cash flows.

B. Describe what it means for a business to “recognize” revenues. What specific accounts and financial statements are affected by the process of revenue recognition? Describe the revenue recognition criteria outline in the FASB’s Statement of Concepts No. 5.

- Recognizing revenue is when the company can account for the revenue being earned on their financial statements. Transactions like selling merchandise are simple since when the sale takes place the revenue is earned. A contract between the company and client may indicate that not all revenue is earned on the day of the sale, instead it may be gradually earned over a period of time. To help guide more complex revenue recognition, the FASB and IASB developed a new standard which issued the asset-liability approach. As the name suggests, the accounts used to determine when to recognize revenue are the assets and liabilities. Since revenue is based on changes in assets and liabilities, almost all financial statements are affected (income statement, balance sheet, statement of cash flows). The new standard provides a key objective, five-step process, and the principal. The five-step process:
 1. Identify the contract with customers.
 2. Identify the separate performance obligations in the contract.
 3. Determine the transaction price.
 4. Allocate the transaction price to the separate performance obligations.
 5. Recognize revenue when each performance obligation is satisfied.

C. Refer to the Revenue Recognition discussion in Note 1. In general, when does Apple recognize revenue? Explain Apple's four revenue recognition criteria. Do they appear to be aligned with the revenue recognition criteria you described in part b, above?

- Stated in Note 1, Apple recognizes revenue when;
 1. persuasive evidence of an arrangement exists,
 2. delivery has occurred,
 3. the sales price is fixed or determinable, and
 4. collection is probable.
- Yes, Apple's recognition criteria align with the five-step process from the new standard. Persuasive evidence of an arrangement exists matches with the first and second step. Fixed or determinable sales price align with the third and fourth step. Lastly, delivery and probable collection support the fifth step.
- After reviewing Apple's 2017 10k, from the SEC Filings on their website, the notes state the same criteria as in the 10k provided by the case. Apple addresses the new revenue standard in their 2017 10k, and states;

“The Company will adopt the new revenue standards in its first quarter of 2019 utilizing the full retrospective transition method. The new revenue standards are not expected to have a material impact on the amount and timing of revenue recognized in the Company's consolidated financial statements.”

D. What are multiple-element contracts and why do they pose revenue recognition problems for companies?

- Multiple-element contracts are contracts which contain more than one performance obligation. This poses a problem for revenue recognition since companies need to decide if the obligations are distinct or separately identifiable from the other obligations. When the company is determining the obligations, they will either provide the goods or services individually or all together as a bundle. Then the next issue is pricing the goods or services. Apple explains, in Note 1, their method of measuring the sales price to be recognized in multi-element arrangements.

E. In general, what incentives do managers have to make self-serving revenue recognition choices?

- Since revenue is an extremely important element of a company's financial well-being to investors, as well as being complicated, it is prone to fraud. Incentives to commit fraud in recognizing revenue might include executive bonuses, sales goals, commission, or simply, maintaining a reputation.

Process:

F. Refer to Apple's revenue recognition footnote. In particular, when does the company recognize revenue for the following types of sales?

i. iTunes songs sold online.

- In this case, Apple states they recognize revenue made through a third-party, like iTunes songs, at the net amount of the payment retained. This amount is then included in the net sales on the financial statements, and the sales price set by the third-party is not included in the financial statements. Revenue is recognized at the time of the sale.
- However, the new revenue recognition standard considers the principal-agent relationship and indicators to determine the role of the entity in the transaction. Regarding sales of iTunes songs online, Apple would be the principal, since they provide the goods to the customer and have risk on the sale. The standard states the principal recognizes the gross amount of the sale. The principal-agent relationship guidelines are found in section 606-10-55 of the FASB standards.
- Also, the update provides five indicators to determine if the performance obligation has been met and revenue should be recorded. One of the indicators is the customer has accepted the asset, which applies to a customer buying an iTunes song online. So, revenue from the sale of iTunes songs online will be recognized at the time of the sale.

ii. Mac-branded accessories such as headphones, power adaptors, and backpacks sold in the Apple stores. What if the accessories are sold online?

- In this case, revenue from Apple products sold online are not recognized until the customer has received the product, since Apple has the inventory risk if the item is lost in transit. Apple also sets the sales price for these products.
- This aligns with the new revenue recognition standard. Because no third-party is involved, Apple receives the full sales amount for the products. As noted in the previous answer, the standard provides five indicators on when to recognize revenue. Since Apple has the inventory risk, they still will not recognize revenue until the customer receives the product.

iii. iPods sold to a third-party reseller in India.

- Apple states revenue from the sale of iPods to a third-party reseller is deferred until the third-party has received the iPods. In multi-element sales contracts, if the iPods contain essential software, Apple would use a hierarchy to determine the selling price.
- Similar to the iTunes songs example, the new revenue recognition standard considers principal-agent relationships when a third-party is involved. For iPods sold to a third-party reseller, Apple is a principal because they transfer the good to the customer (the third-party) and their performance obligation is complete.

F. iii. *Continued.*

- Additionally, the new standard does not require vendor-specific objective evidence (VSOE) to separately account for elements in a software contract. Now, revenue will not be deferred if VSOE cannot be determined for the obligations and instead, it will be allocated to the estimated stand-alone selling prices. The software is only recognized if it is proven to be a distinct obligation. This update changes how Apple recognizes revenue in the case provided and can be found in the section 606-10-25 of the new standard.

iv. Revenue from gift cards.

- Apple discloses, in the Note 1 of the case, revenue from gift cards is recorded as deferred until the customer uses the gift card. Under the new standard, revenue from gift cards should be recognized when the future obligation is met, or the goods are transferred to the customer. The revenue is recorded as the amount redeemed by the customer plus a proportional breakage amount (the amount not used by the customer). This update is found in the section 606-10-55 of the code.

On my honor, I pledge that I have neither given, received, nor witnessed any
unauthorized help on this case. – Rachel Brunette