

# THE APPLICATION OF ACCOUNTING CONCEPTS THROUGH CASE STUDIES

by  
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Approved by

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## **Abstract**

My thesis addresses several important concepts of accounting principles. These concepts are explored through twelve different case studies that each help address a specific topic. The topics cover the treatment of items such as accounts receivables, property, plant, and equipment, long-term debt, shareholder's equity, marketable securities, deferred income taxes, and revenue recognition rules. The methods used to complete these cases was to take the information I learned in class as well as reference my textbooks. It helped me to understand what the questions were asking and therefore the corresponding solutions. For each case, I had to search through each company's financial statements to discover the significances of what was being reported. An important aspect of combing through the financial statements was to carefully read the notes to the financial statements. The notes held the most crucial information to answer the questions presented in the cases. Working through all of these cases taught me real-world uses of the information I was learning in all of my accounting classes. These practical applications were helpful because it taught me further how to take the information and apply it to the questions being asked. This thesis is set to explore several highly important and relative accounting concepts that benefited me greatly in my education and my real-life experiences as an intern in the tax practice of public accounting.

## **Table of Contents**

A) Case 1: Home Heaters	2
B) Case 2: Molson Coors Brewing Company	27
C) Case 3: Pearson Plc - Accounts Receivable	33
D) Case 4: Problem 6-2	42
E) Case 5: Palfinger AG – Property, Plant, & Equipment	47
F) Case 6: Volvo Group – Research & Development Costs	58
G) Case 7: Data Analytics	66
H) Case 8: Rite Aid Corporation – Long-Term Debt	75
I) Case 9: Merck & Co., Inc. – Shareholder’s Equity	86
J) Case 10: State Street Corporation – Marketable Securities	94
K) Case 11: ZAGG Inc. – Deferred Income Taxes	108
L) Case 12: Apple Inc. – Revenue Recognitions	118
M) Bibliography	

Olivia Hamilton  
Case 1: Home Heaters  
Dr. Dickinson  
ACCY 420

**The Honor Code:**

“On my Honor, I pledge that I have neither given, received, nor witnessed any unauthorized help on this case.”

Signed: Olivia Hamilton

## **1) Executive Summary:**

In 20X1, two separate companies, Glenwood Heating, Inc. and Eads Heaters, Inc., formed businesses to sell home heating units. For the first year of operations, both companies made the same decisions. However, at the end of the first year, the managers of the companies chose to make different decisions about how their company will run. The main difference was that Glenwood Heating, Inc. chose to use an operating lease when it came to equipment, while Eads Heaters, Inc. chose a capitalized lease. Other differences included that Glenwood estimated one percent for allowance for bad debts, while Eads estimated 5 percent. Also, Glenwood used the straight-line method to depreciate both the building and the delivery equipment, while Eads used the straight-line method for the building and the leased equipment, but the double-declining balance method to depreciate the delivery equipment. This resulted in more depreciation expense for Eads. However, both companies used 25 percent to calculate their income tax expense. To compare the two companies in an efficient manner, my team and I journalized all the transactions each company made in year 1 as seen in Appendix 1A. Next, we created a trial balance for both companies, which is shown in Appendix 1B. As the tables show, both the companies have the exact same entries as well as trial balances. We did the same thing for the new decisions made in year 2 by journalizing the entries and creating a trial balance for both companies as seen in Appendix 1C and 1D respectively. With all this data, my team and I could create useful financial statements for both companies. After examining the income statements, the statements of retained earnings, and the balance sheets of each company, we concluded that the better investment would be Glenwood Heating, Inc.

## **2) Introduction:**

The Home Heaters case taught the importance at looking at all aspects of a company before investing. Small changes in a manager's business decisions can alter a company's net income. People need to be well informed when thinking of investing in a company, so the opportunity to compare two companies' financial statements is very beneficial in decision making. Also, this case helps to review how to calculate notes payable, interest payable, and depreciation expense, which are important tools within accounting. Going forward, I will use this to sharpen knowledge of how business' make decisions and the journal entries that go with it. In addition, it shows how decisions effect all parts of the financial statements for a company. Lastly, it has taught me to be a more informed investor because if I were to invest in a company, I would be able to look at the financial statements with understanding to make my investment decisions. The case has shown a lot about the real world and taught me how to choose the correct company to invest in. Therefore, with the knowledge and information about Glenwood Heating, Inc. and Eads Heaters, Inc., I believe that Glenwood is the better choice when it comes to investing or lending money.

**1) Financial Analysis**  
**A) Income Statement:**

Table 1.1 Glenwood's Income Statement  
 Glenwood Heating, Inc.  
 Multistep Income Statement  
 For Year Ended December 31, 20X1

Revenues		
Sales	\$398,500.00	
Cost of Goods Sold	(177,000.00)	
Gross Profit		221,500.00
Operating Expenses		
Other Operating Expenses	(34,200.00)	
Bade Debt Expense	(994.00)	
Depreciation Expense - Building	(10,000.00)	
Depreciation Expense – Equipment	(9,000.00)	
Rent Expense	(16,000.00)	
Total Operating Expenses		(70,194.00)
Operating Income		151,306.00
Non-Operating Expenses		
Interest Expense	(27,650.00)	
Net Income Before Tax		123,656.00
Income Tax Expense	(30,914.00)	
Net Income		\$92,742.00

Table 1.2 Eads' Income Statement  
Eads Heaters, Inc.  
Multistep Income Statement  
December 31, 20X1

Revenues		
Sales	\$398,500.00	
Cost of Goods Sold	(188,800.00)	
Gross Profit		209,700.00
Operating Expenses		
Other Operating Expenses	(34,200.00)	
Bade Debt Expense	(4,970.00)	
Depreciation Expense - Building	(10,000.00)	
Depreciation Expense – Equipment	(20,000.00)	
Rent Expense	(11,500.00)	
Total Operating Expenses		(80,670.00)
Operating Income		\$129,030.00
Non-Operating Expenses		
Interest Expense	(35,010.00)	
Net Income Before Tax		94,020.00
Income Tax Expense	(23,505.00)	
Net Income		\$70,515.00



At a first glance of Tables 1.1 and 1.2, it is obvious that Glenwood Heating, Inc. has a higher net income than Eads Heaters, Inc. This means that Glenwood made more money than Eads after expenses were accounted for. The main difference comes from the depreciation of the building, equipment, and the leased equipment for Eads. Glenwood chose to use an operating lease as well as use the straight-line method to depreciate both the equipment and the building. Eads chose to use the straight-line method to depreciate the building and the leased equipment and the double-declining balance method to depreciate the equipment. This resulted in a \$22,500 increase in total depreciation expense when compared to Glenwood. Even though Glenwood had to pay \$16,000 to rent the equipment, it was still a cheaper method than leasing additional equipment that also faced a depreciation expense.

A more important piece of information that can be drawn from the income statement is the earnings per share. This is valuable knowledge for investors because it informs them how much money they will be earning from their shares with the company. Net income divided by number of shares outstanding is how to calculate earnings per share. Since both companies issued 3,200 shares of capital stock, we must divide each of their net incomes by that value to get earnings per share. The calculations can be found in Appendix 1E. For Glenwood Heating, Inc., the earnings per share is \$28.98, while Eads Heaters, Inc. the earnings per share is \$22.04. Therefore, people that invested in Glenwood would get more return on their investments if they were to invest in Eads. Because the primary reason to invest in stock in a company is to earn money through dividends, investors are drawn to pick the better performing companies where they have the option to gain more money. Using this idea, I concluded that an investor would be much more likely to invest in Glenwood Heating, Inc.

**A) Statement of Retained Earnings:**

Table 1.3 Glenwood's Statement of Retained Earnings

Glenwood Heating, Inc.	
Statement of Retained Earnings	
For Year Ending: December 31, 20X1	
Beginning Balance: Retained Earnings January 31, 20X1	\$ 0
Add: Net Income for Year 20X1	92,742.00
Total	92,742.00
Less: Dividends for Year 20X1	(23,200.00)
Ending Balance: Retained Earnings December 31, 20X1	\$ 69,542.00

Table 1.4 Eads' Statement of Retained Earnings

Eads Heaters, Inc.	
Statement of Retained Earnings	
For Year Ending: December 31, 20X1	
Beginning Balance: Retained Earnings January 31, 20X1	\$ 0
Add: Net Income for Year 20X1	70,515.00
Total	70,515.00
Less: Dividends for Year 20X1	(23,200.00)
Ending Balance: Retained Earnings December 31, 20X1	\$47,315.00

Next, my team and I looked at the statements of retained earnings for both companies. Retained earnings is the money the company has kept after paying out dividends to stockholders. This statement is useful because by looking at Tables 1.3 and 1.4 investors can clearly see how much each company paid in dividends to stockholders in the previous year. Investors look to this to make sure that the company is making enough in revenues that they can actually pay their investors. Since both Glenwood and Eads paid the same in dividends in year one, this is not as helpful of a financial statement. However, it may interest the investors to see how much each company is retaining each year because it shows the healthiness and the possible growth of the company. Therefore, by looking at both the statements of retained earnings the possible investor can see that Glenwood retained \$69,542, while Eads only retained \$47,315. Glenwood Heating, Inc. is a better choice because it shows to be more profitable and therefore, the possibility to grow and prosper even more.

**A) Balance Sheet**

Table 1.5 Glenwood's Balance Sheet

Glenwood Heating, Inc.			
Classified Balance Sheet			
December 31, 20X1			
Assets		Liabilities	
Current Assets		Current Liabilities	
Cash	\$426.00	Accounts Payable	\$26,440.00
Accounts Receivable	99,400.00	Notes Payable	380,000.00
Allowance for Bad Debts	(994.00)	Interest Payable	6,650.00
Inventory	62,800.00	Total Liabilities	\$413,090.00
Property, Plant, and Equipment			
Land	70,000.00	<b>Stockholder's Equity</b>	
Building	350,000.00	Common Stock	160,000.00
Accumulated Depreciation-Building	(10,000.00)	Retained Earnings	69,542.00
Equipment	80,000.00	Total Stockholder's Equity	\$229,542.00
Accumulated Depreciation-Equipment	(9,000.00)		
Total Assets	\$642,632.00	Total Liabilities and Stockholder's Equity	\$642,632.00

1.6 Eads' Balance Sheet

Eads Heaters, Inc.			
Classified Balance Sheet			
December 31, 20X1			
Assets		Liabilities	
Current Assets		Current Liabilities	
Cash	\$7,835.00	Accounts Payable	\$26,440.00
Accounts Receivable	99,400.00	Notes Payable	380,000.00
Allowance for Bad Debts	(4,970.00)	Interest Payable	6,650.00
Inventory	51,000.00	Lease Payable	83,360.00
Property, Plant, and Equipment		Total Liabilities	496,450.00
Land	70,000.00		
Building	350,000.00	<b>Stockholder's Equity</b>	
Accumulated Depreciation-Building	(10,000.00)	Common Stock	160,000.00
Equipment	80,000.00	Retained Earnings	47,315.00
Accumulated Depreciation-Equipment	(20,000.00)	Total Stockholder's Equity	207,315.00
Leased Equipment	92,000.00		
Accumulated Depreciation- Leased Equipment	(11,500.00)		
Total Assets	\$703,765.00	Total Liabilities and Stockholder's Equity	\$703,765.00

Lastly, we have the balance sheets for both Glenwood Heating, Inc. and Eads Heaters, Inc., which are shown in Tables 1.5 and 1.6. A balance sheet is a helpful breakdown of all of the accounts and their final balances, which an investor can look at to see the company's financial position. It is broken down into assets, liabilities, and equities. Looking at the total assets and the total liability allows investors to see how liquid a company is. This is important because if something were to go wrong, the company would still be able to pay off all its liabilities. Both companies have enough assets to cover their liabilities, but another reason Glenwood Heating, Inc. is a better investment is because it would have more assets left after paying off liabilities, which is because for Eads, the we also had to account for the lease payable. This is good for investors because it is a sign that they will still receive dividends or some of their money back even if something happens to the company.

### **3) Conclusion:**

Overall, Glenwood Heating, Inc. is the better investment when compared to Eads Heaters, Inc. After looking at the income statement, statement of retained earnings, and balance sheet of both companies, it would be clear to any reasonably knowledgeable investor. The main reasons are more earnings per share for stockholders, more retained earnings which can lead to more growth, and more assets that can cover the liabilities if the company needed to liquidate. Therefore, Glenwood Heating, Inc. is a stronger company and a safer choice for investors.

1) Appendix:

1A)

Table 1.7 Glenwood Journal Entries Part A

			<b>Assets</b>				
	<b>Cash</b>	<b>Accounts Receivables</b>	<b>Inventory</b>	<b>Land</b>	<b>Building</b>	<b>Equipment</b>	
No. 1	\$160,000.00						
No. 2	400,000.00						
No. 3	(420,000.00)			70,000.00	350,000.00		
No. 4	(80,000.00)					80,000.00	
No. 5			239,800.00				
No. 6		398,500.00					
No. 7	299,100.00	(299,100.00)					
No. 8	(213,360.00)						
No. 9	(41,000.00)						
No. 10	(34,200.00)						
No. 11	(23,200.00)						
No. 12							
<b>Balances</b>	<b>\$47,340.00</b>	<b>\$99,400.00</b>	<b>\$239,800.00</b>	<b>\$70,000.00</b>	<b>\$350,000.00</b>	<b>\$80,000.00</b>	

=	Liabilities			+	Stockholder's Equity	
	Accounts Payable	Notes Payable	Interest Payable		Common Stock	Retained Earnings
No. 1					\$160,000.00	
No. 2		400,000.00				
No. 3						
No. 4						
No. 5	239,800.00					
No. 6						398,500.00
No. 7						
No. 8	(213,360.00)					
No. 9		(20,000.00)				(21,000.00)
No. 10						(34,200.00)
No. 11						(23,200.00)
No. 12			6,650.00			(6,650.00)
<b>Balances</b>	<b>\$26,440.00</b>	<b>\$380,000.00</b>	<b>\$6,650.00</b>		<b>\$160,000.00</b>	<b>\$313,450.00</b>

\*No.5:  $(40 \times 1,000) + (60 \times 1,100) + (20 \times 1,150) + (62 \times 1,200) + (28 \times 1,300) = \$239,800$

\*No. 9: Interest payable =  $(\$400,000)(.07)(9/12) = \$21,000$

Cash =  $20,000 + 21,000 = \$41,000$

\*No. 11: Dividends =  $\$7.25 \text{ per share} \times 3,200 \text{ shares} = \$23,200$

\*No. 12: Interest Payable =  $(\$380,000)(0.7)(3/12) = \$6,650$



Table 1.8 Eads' Journal Entries Part A

			<b>Assets</b>				
	<b>Cash</b>	<b>Accounts Receivables</b>	<b>Inventory</b>	<b>Land</b>	<b>Building</b>	<b>Equipment</b>	
No. 1	\$160,000.00						
No. 2	400,000.00						
No. 3	(420,000.00)			70,000.00	350,000.00		
No. 4	(80,000.00)					80,000.00	
No. 5			239,800.00				
No. 6		398,500.00					
No. 7	299,100.00	(299,100.00)					
No. 8	(213,360.00)						
No. 9	(41,000.00)						
No. 10	(34,200.00)						
No. 11	(23,200.00)						
No. 12							
<b>Balances</b>	<b>\$47,340.00</b>	<b>\$99,400.00</b>	<b>\$239,800.00</b>	<b>\$70,000.00</b>	<b>\$350,000.00</b>	<b>\$80,000.00</b>	

=	Liabilities			+	Stockholder's Equity	
	Accounts Payable	Notes Payable	Interest Payable		Common Stock	Retained Earnings
No. 1					\$160,000.00	
No. 2		400,000.00				
No. 3						
No. 4						
No. 5	239,800.00					
No. 6						398,500.00
No. 7						
No. 8	(213,360.00)					
No. 9		(20,000.00)				(21,000.00)
No. 10						(34,200.00)
No. 11						(23,200.00)
No. 12			6,650.00			(6,650.00)
<b>Balances</b>	<b>\$26,440.00</b>	<b>\$380,000.00</b>	<b>\$6,650.00</b>		<b>\$160,000.00</b>	<b>\$313,450.00</b>

\*No.5:  $(40 \times 1,000) + (60 \times 1,100) + (20 \times 1,150) + (62 \times 1,200) + (28 \times 1,300) = \$239,800$

\*No. 9: Interest payable =  $(\$400,000)(.07)(9/12) = \$21,000$

Cash =  $20,000 + 21,000 = \$41,000$

\*No. 11: Dividends =  $\$7.25 \text{ per share} \times 3,200 \text{ shares} = \$23,200$

\*No. 12: Interest Payable =  $(\$380,000)(0.7)(3/12) = \$6,650$

1B)

Table 1.9 Glenwood's Trial Balances Part A

	Debits	Credits
Cash	\$47,340.00	
Accounts Receivable	99,400.00	
Inventory	239,800.00	
Land	70,000.00	
Building	350,000.00	
Equipment	80,000.00	
Accounts Payable		26,440.00
Notes Payable		380,000.00
Interest Payable		6,650.00
Common Stock		160,000.00
Dividend	23,200.00	
Sales		398,500.00
Other Operating Expenses	34,200.00	
Interest Expense	27,650.00	
Total	\$971,590.00	\$971,590.00

Table 1.10 Eads' Trial Balance Part A

	Debits	Credits
Cash	\$47,340.00	
Accounts Receivable	99,400.00	
Inventory	239,800.00	
Land	70,000.00	
Building	350,000.00	
Equipment	80,000.00	
Accounts Payable		26,440.00
Notes Payable		380,000.00
Interest Payable		6,650.00
Common Stock		160,000.00
Dividend	23,200.00	
Sales		398,500.00
Other Operating Expenses	34,200.00	
Interest Expense	27,650.00	
Total	\$971,590.00	\$971,590.00

1C)

Table 1.11 Glenwood's Journal Entries Part B

Transaction	Assets			
	Cash	Accounts Receivable	Allowance for Bad Debts	Inventory
Balances: Part A	\$47,340.00	\$99,400.00		\$239,800.00
Part B(1) Bad Debts			(994.00)	
Part B (2) COGS				(177,000.00)
Part B (3) Depreciation				
Building				
Equipment				
Part B (4) Equipment				
Rental Payment	(16,000.00)			
Part B (5) Income Tax	(30,914.00)			
Balances	\$426.00	\$99,400.00	\$(994.00)	\$62,800.00

Transaction	Land	Assets		Equipment	Accumulated Depreciation Equipment
		Building	Accumulated Depreciation Building		
Balances: Part A	\$70,000.00	\$350,000.00		\$80,000	
Part B(1) Bad Debts					
Part B(2) COGS					
Part B(3) Depreciation Building			(10,000.00)		
Equipment					(9,000)
Part B(4) Equipment					
Rental Payment					
Part B(5) Income Tax					
Balances	\$70,000.00	\$350,000.00	\$(10,000.00)	\$80,000.00	\$(9,000.00)

		Liabilities		+	Equity
Transaction	Accounts Payable	Interest Payable	Note Payable	Common Stock	Retained Earnings
Balances: Part A	\$26,440.00	\$6,650.00	\$380,000.00	\$160,000.00	\$313,450.00
Part B(1) Bad Debts					(944.00)
Part B(2) COGS					(177,000.00)
Part B(3) Depreciation Building					(10,000.00)
Equipment					(9,000.00)
Part B(4) Equipment					
Rental Payment					(16,000.00)
Part B(5) Income Tax					(30,914.00)
Balances	\$26,440.00	\$6,650.00	\$380,000.00	\$160,000.00	\$69,542.00

\*No.1:  $(\$99,400)(.01) = 994$

\*No. 2:  $(40 \times 1,000) + (60 \times 1,100) + (20 \times 1,150) + (40 \times 1,200) = \$177,000$

\*No. 3: Building Depreciation =  $(350,000 - 50,000) / 30 = \$10,000$

Equipment Depreciation =  $(80,000 - 8,000) / 8 = \$9,000$

Table 1.12 Eads' Journal Entries Part B

Transaction	Assets			
	Cash	Accounts Receivable	Allowance for Bad Debts	Inventory
Balances: Part A	\$47,340.00	\$99,400.00		\$239,800.00
Part B(1) Bad Debts			(4,970.00)	
Part B (2) COGS				(188,800.00)
Part B (3) Depreciation				
Building				
Equipment				
Part B (4) Equipment Lease				
Lease Payment	(16,000.00)			
Depreciation				
Part B (5) Income Tax	(23,505.00)			
Balances	\$7,835.00	\$99,400.00	\$(4,970.00)	\$51,000.00

Transaction	Land	Building	Assets				Leased Equipment	Accumulated Depreciation Lease
			Accumulated Depreciation Building	Equipment	Accumulated Depreciation Equipment			
Balances: Part A	\$70,000.00	\$350,000.00		\$80,000.00				
Part B(1) Bad Debts								
Part B(2) COGS								
Part B(3) Depreciation								
Building			(10,000.00)					
Equipment					(20,000.00)			
Part B(4) Equipment								
Lease						92,000.00		
Lease Payment								
Depreciation							(11,500.00)	
Part B(5) Income Tax								
Balances	\$70,000.00	\$350,000.00	\$(10,000.00)	\$80,000.00	\$(20,000.00)	\$92,000.00	\$(11,500.00)	



	Liabilities				+	Equity
Transaction	Accounts Payable	Interest Payable	Notes Payable	Lease Payable	Common Stock	Retained Earnings
Balances: Part A	\$26,440.00	\$6,650.00	\$380,000.00		\$160,000.00	\$313,450.00
Part B(1) Bad Debts						(4,970.00)
Part B(2) COGS						(188,800.00)
Part B(3) Depreciation						
Building						(10,000.00)
Equipment						(20,000.00)
Part B(4) Equipment						
Lease				92,000.00		
Lease Payment				(8,640.00)		(7,360.00)
Depreciation						(11,500.00)
Part B(5) Income Tax						(23,505.00)
Balances	\$26,440.00	\$6,650.00	\$380,000.00	\$83,360.00	\$160,000.00	\$47,315.00

\*No. 1: Bad Debts =  $(99,400)(.05) = 4,970$

\*No.2 Inventory=  $(28 \times 1,300) + (62 \times 1,200) + (20 \times 1,150) + (50 \times 1,100) = \$188,800$

\*No.3: Building Depreciation=  $(350,000-50,000)/30 = \$10,000$

Equipment Depreciation =  $((100\%/8) \times 2) \times 80,000 = \$20,000$

\*No. 4: Lease Depreciation= $92,000/8 = \$11,500$

1D)

Table 1.13 Glenwood's Trial Balance Part B

	Debits	Credits
Cash	\$426.00	
Accounts Receivable	99,400.00	
Allowance for bad debts		994.00
Inventory	62,800.00	
Land	70,000.00	
Building	350,000.00	
Accumulated Depreciation-Building		10,000.00
Equipment	80,000.00	
Accumulated Depreciation-Equipment		9,000.00
Accounts Payable		26,440.00
Interest Payable		6,650.00
Note Payable		380,000.00
Common Stock		160,000.00
Dividend	23,200.00	
Sales		398,500.00
Cost of Goods Sold	177,000.00	
Other Operating Expenses	34,200.00	
Bad Debt Expense	994.00	
Depreciation Expense-building	10,000.00	
depreciation expense-equipment	9,000.00	
Rent Expense	16,000.00	
Interest Expense	27,650.00	
Provision for Income Tax	30,914.00	
Total	\$991,584.00	\$991,584.00

Table 1.14 Eads' Trial Balance Part B

	Debits	Credits
Cash	\$7,835.00	
Accounts Receivable	99,400.00	
Allowance for bad debts		4,970.00
Inventory	51,000.00	
Land	70,000.00	
Building	350,000.00	
Accumulated Depreciation-Building		10,000.00
Equipment	80,000.00	
Accumulated Depreciation-Equipment		20,000.00
Leased Equipment	92,000.00	
Accumulated Depreciation- Leased Equipment		11,500.00
Accounts Payable		26,440.00
Interest Payable		6,650.00
Note Payable		380,000.00
Lease Payable		83,360.00
Common Stock		160,000.00
Dividend	23,200.00	
Sales		398,500.00
Cost of Goods Sold	188,800.00	
Other Operating Expenses	34,200.00	
Bad Debt Expense	4,970.00	
Depreciation Expense-building	10,000.00	
depreciation expense-equipment	20,000.00	
Depreciation Expense- leased equipment	11,500.00	
Interest Expense	35,010.00	
Provision for Income Tax	23,505.00	
Total	\$1,101,420.00	\$1,101,420.00

1E) Earnings Per Share Calculations

$$\text{Glenwood EPS} = \frac{\$92,742}{3,200 \text{ shares}} = \$28.98 \text{ per share}$$

$$\text{Eads Eps} = \frac{\$70,515}{3,200 \text{ shares}} = \$22.05 \text{ per share}$$

Olivia Hamilton  
Case 2: Molson Coors Brewing Company  
Dr. Dickinson  
ACCY 420

**The Honor Code:**

“On my Honor, I pledge that I have neither given, received, nor witnessed any unauthorized help on this case.”

Signed: Olivia Hamilton

## 1) Executive Summary

Molson Coors Brewing Company is a business that sells a wide range of delicious beers. In 2013, Molson Coors presented its financial statements. These included the statements of operations, which is the income statements for years 2011, 2012, and 2013, the consolidated statements of comprehensive income, and the consolidated balance sheets. The case focused on financial reporting and delving deeper into the financial statements to explain the aspects and meanings of the classifications. This case had us describe the parts of an income statement and the comprehensive income in a way that was easy to understand for someone with some financial knowledge, such as a book keeper. The questions answered are to help more people know how to look at financial statements and gain useful information.

This case showed me how difficult it can be to explain in words why we do certain things in accounting. It is hard to define the classifications of an income statement in plain terms. In accounting, we use numbers as the explanation, but for people who do not follow the numbers, they need it written out in order to grasp the meaning. I feel this case has helped me to gain a better understanding of all the aspects of financial statements because of the explanations I had to provide. The best way to learn something completely is to have to explain it to someone else, so that is exactly what this case forced me to do. In the future, I feel I can take what I have learned from this case and apply it to times when I must break down accounting and financial information into easier ways to understand. When I am working, I will not always be dealing with people that know everything about finance, so I will need to be able to explain it myself. The Molson Coors Brewing Company was an important case about comprehending and explaining all the aspects of financial statements.

## 2) Concepts

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

The classifications of an income statement are gross profit, operating expenses, and non-operating expenses. The gross profit includes the net sales less the cost of goods sold. Net sales consists of the revenue dealing with the company's main business less any sales discounts or sales returns and allowances that the company may have. Cost of goods sold is beginning inventory plus any purchase less any purchase discounts or purchase returns and allowances, which is the goods available. Then the ending inventory is subtracted from the goods available to get the total cost of goods sold. The operating expenses are any expenses that the company incurs that has to do with their main core operations of business. These include the sections selling expenses and administrative expenses. The non-operating expenses include gains and losses that do not regularly occur as well as the income tax expense and the interest expenses.

### **Part B: Explain why, under the U.S. GAAP, companies are required to provide "classified" income statements.**

Companies are required to use classified income statements because it is much more transparent and useful. When investors look at income statements, they do not want to just see the net income, they want the details of where exactly the revenues and expenses are coming from. Also, since the classified income statement is more detailed about where all the revenues, expenses, gains, and losses are derived from, it helps to prevent fraud. The classified income statement makes it harder for companies to hide any information relating to their company. A classified income statement provides a gross margin section, an operating expense section, and a non-operating expense section. These divide the income statement into recurring and nonrecurring events. Therefore, when an investor looks at the income statement he can see what incomes happen every period and which incomes were just a random one-time thing. This helps the investor to better see how the actual core business section of the business is doing, and it gives them a more reliable number to base their decision off of. Lastly, the classified income statement should include the earnings per share on the face of the income statement. This allows investors to see how much of the income is associated with each share of common stock. Earnings per share is a useful tool for investors because it shows if the company is improving or not as well as signaling to investors how much their stock is worth. In general, the classified income statement provides clear information for investors, which can help them make better informed decisions.

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

A persistent income is the company's income that occur every period. This is the normal revenues and expenses the company earns from their operations. It does not include gains or losses that happen randomly and unusually. It is helpful because it shows the financial statement user how stable the company is. It focuses solely on how the company does each period from their business operations and not the random occurrence of a gain or loss. The persistence is important because it shows the possible investors what to expect, and therefore, gives them the ability to predict the future of the company.

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

Comprehensive income is a more inclusive income statement because it includes unrealized gains and losses from things like available for sale securities and foreign currency exchanges. It is the net income plus or minus aspects such as these abnormal events. Net income does not include as much information about all the gains and losses that the company faces, so the comprehensive income is more detailed and complete. It is important to have two separate statements for net income and comprehensive income because otherwise the net income seems to be hidden within the comprehensive income.

**3) Process**

**Part E: The Income Statement reports "Sales: and "Net Sales." What is the difference? Why does Molson Coors report these two items separately?**

Sales is referring to the total revenue the company receives from the main operations of the business. Net sales refers to the revenue from operations minus any sales discounts, sales returns and allowances and taxes that the company may have. In Molson Coors' case, the net sales is sales minus the excise tax. An excise tax is a tax that producers have to pay on their products. Molson Coors is having to pay taxes on beer shipments which reduces their sales. Net sales and sales are reported separately because sales are useful to an investor to see how much the company is selling. However, the company does not to keep all of these sales, so it is important to the investor to see how much of these sales are being lost to the excise tax. In the cases when net sales accounts for sales discounts and returns and allowances, the net sales shows if the quality of the product because if there is a big difference between sales and net sales, then the company is having to discount the product more or having a lot of returns.



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

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

The special items include infrequent items, abnormal employee costs, and costs from gains or losses from disposal of an investment, and asset abandonment charges.

**ii. Explain why the company reports these on separate line item rather than including them with another expense item. Molson Coors classifies these special items as operating expenses. Do you concur with this classification? Explain.**

The company reports them separately because they are infrequent so they are not common charges that the company usually faces. The investor needs to see these special items to know where the company is using its money, but it should not be used to predict the future of the company because it is unlikely they will occur again the next period. I think Molson Coors is correct in classifying the special items as an operating expense because the special items deal mainly with assets or insurance, which are all part of the core operations of the business.

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

The distinction between other “Other income (expense), net” and “Special items, net” is that the other income expenses deal with activities that do not relate to the core operations of the business while the special items do relate. The other income expenses deal with non-operating assets, foreign exchange, and swaps and financial instruments. These items are peripheral expenses that cannot stand alone because the company would not have incurred these expenses if not first for the operations of the business.

**Part 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?**

The comprehensive income in 2013 was \$760.20. The net income in 2013 was \$567.30. The difference between the two is \$192.90.

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

The difference is because the comprehensive income includes unrealized gains, foreign currency adjustments, reclassification of derivative, pension benefits, amortization of prior service costs, and ownership of unconsolidated subsidiaries' other comprehensive income. The comprehensive income includes more information than the net income, which results in different totals. Comprehensive income and net income are related because comprehensive income includes the net income but just adds more information on various gains and losses that are important to the company but do not tie directly to the main operations of the business.

**4) Analysis**

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

- i. What is Molson Coors' effective tax rate in 2013?**  
Molson Coors' effective tax rate is 12.8 percent.

$$\text{Effective tax rate} = \frac{\text{Income tax expense } \$84.0}{\text{Pretax income } \$654.5} = 0.128 = 12.8\%$$

Olivia Hamilton  
Case 3: Pearson Plc-Accounts Receivable  
Dr. Dickinson  
ACCY 420

**The Honor Code:**

“On my Honor, I pledge that I have neither given, received, nor witnessed any unauthorized help on this case.”

Signed: Olivia Hamilton

## 1) Executive Summary

Pearson plc is a publishing company that primarily focuses on education, business information, and consumer materials to assist with teaching. It is headquartered in the United Kingdom, so there are some different terms than what we are used to seeing in the United States. Also, instead of using GAAP, Pearson follows the IFRS when preparing financial statements. Pearson operates in sixty different countries, which means that the company incurs currency exchange fees as part of its business. The company has provided my team and I with their financial statements for both 2008 and 2009, which consist of the income statement, the statement of comprehensive income, and the balance sheet. Also, they provided us with notes to further explain their trade and other receivables.

The purpose of the case was to dive deeper into Pearson's trade and other receivables. First, we had to discuss the meanings and different types of receivables, including the contra accounts that correspond with each receivables account. Then we looked through the financial information that Pearson provided us, and we were able to create T-accounts and journal entries to show the provisions for bad and doubtful debts, the allowance for sales returns, and the gross trade receivables accounts. This case was helpful because it showed all of the aspects of a business that could affect the balance of the accounts previously stated. In the future, this will be useful because if we are working with a company, we will know how to account for sales returns and allowances as well as allowance for doubtful accounts and how they affect accounts receivables.

## **2) Concepts**

### **Part A: What is an account receivable? What other names does this asset go by?**

An account receivable is uncollected cash from a source of revenue. The company has provided the service or good and is now waiting to receive the money. The other name for accounts receivable is trade receivables.

### **Part B: How do accounts receivable differ from notes receivable?**

Accounts receivable is the money the company is waiting to collect from revenues from providing a good or service. Notes receivable is, also, when a customer promises to pay the money in the future for the goods or services provided. Notes receivable are more long term than accounts receivable, and the terms of the agreement are laid out more concretely. Additionally, accounts receivables are a verbal commitment to pay in the future, while notes receivables is a written agreement to pay with a specific timeline. Also, in most cases, notes receivables can earn interest, if it is stated in the original agreement.

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

A contra account is an account that has the opposite of the normal balance of a specific account, therefore it takes away from the original corresponding account. It is its own account because it is important to show where the decreases in the original account are coming from. The original account is then decreased the same amount, and the net value of the account is shown on the balance sheet. The two contra accounts associated with Pearson are provision for bad and doubtful debts and provision for sales returns. Since the company is from the United Kingdom, they use different terminology than we do. Therefore, when they use the term "provision", that is the same as saying "allowance", so the accounts can also be called allowance for bad and doubtful debts and allowance for sales returns. Allowance for bad and doubtful debts capture the estimated bad debt expense that the company calculates at the end of the period. It is usually calculated by taking a percentage of the accounts receivables on account. Allowance for sales returns is the estimated sales returns and allowances that a company calculates at the end of a period. Both accounts are contra asset accounts for accounts receivable, therefore, they both decrease the accounts receivable amount. Factors that managers might consider when estimating these amounts are how much bad debt and sales returns the company experienced in previous years. For allowance for bad and doubtful debts, the company usually uses a percentage of accounts receivables to calculate the estimate, therefore, the company can look at previous periods to see if the percentage they used previously over or under estimated the actual amount incurred.

**Part 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 the final account balance under each approach? Which of the two approaches do you think results in a more accurate estimate of net accounts receivable?**

Since many accounts, including accounts receivable, are tied directly to sales, the percentage-of-sales method uses this aspect. Therefore, the company chooses a percentage of accounts receivable that they believe will never be collected, then that becomes the estimate for allowance for bad and doubtful debt. The aging-of-accounts procedure is when the company divides up the receivables by when they are due. There are different intervals of amounts of days that the receivables are divided into. The company then looks at these intervals and decide the estimate that will not be collected. The farther past the due date, the more likely the accounts receivable will not be collected. Aging-of-accounts is the more accurate estimate because it looks at the likelihood of specific receivables going uncollected. The percentage-of-sales approach groups all the receivables together and takes a percentage of all them. However, the aging-of-accounts method uses a more in depth approach. Since older receivables are less likely to be collected, the company can see how many past due receivables they have and decide if they think it will ever be collected. Therefore, the numbers are more accurate and specific to the company.

**Part 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.**

It is very hard to determine whether a customer is reliable or not. Pearson wants to make sales and earn revenue, so they must have faith that their customers are honest people that will eventually pay. It is almost impossible to certainly say that a customer will not pay. Pearson can look at the customer's credit history and determine if they have been reliable in the past. However, this is still not foolproof. A customer can encounter unforeseen events that causes them to not be able to pay, or an unreliable customer able to pay. Pearson needs to make money to stay afloat, so they have to let the good outweigh the bad and deal with the risk of some customers not paying. More often than not customers will pay the company, therefore, the benefit is greater than the risk. Managers must consider the risks of the customers not paying. The manager should look for customers that he knows will pay, therefore, he will lower his risk as much as possible. He cannot know for sure, but he must have more good customers than bad or the company will not be bringing in enough revenue.

### 3) Process

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

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

	72
5	26
20	3
	76

The credit of 72 is the beginning balance of bad and doubtful debts, which is the ending balance for 2008. The debit of 5 is the exchange differences, which we incur because this company is in the United Kingdom and therefore there are currency differences. The credit of 26 is the income statement movements, which is the estimated amount of bad and doubtful debts for the year of 2009. The debit of 20 is the amount that was utilized, which means the amount that was written off. This is when we write off when a specific customer does not pay, so we have to credit our accounts receivable because that money will never be collected. The credit of 3 is the acquisition through business combination is the amount of bad and doubtful debts that the company acquired when the new company was acquired. The final total is a credit amount of 76, which is the ending balance of provision for bad and doubtful debts for 2009.



- 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 movement”) and 2) the write-off of accounts receivable (that is, the amount “utilized”) during 2009. For each account in your journal entries, note whether the account is a balance sheet or income statement account.**

All entries are in millions.

1) Bad Debt Expense	26	
Provision for Bad and Doubtful Debts		26

- Bad debt expense is an income statement account.
- Provision for Bad and doubtful debts is a balance sheet account.

2) Provision for Bad and Doubtful Debts	20	
Accounts Receivable		20

- Provision for Bad and doubtful debts is a balance sheet account.
- Accounts receivable is a balance sheet account.

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

Bad and doubtful debts expense is included in the operating expenses on the income statement.

**Part G: Note 22 reports that the balance in Pearson’s provision for sales returns was 372 pounds at December 31, 2008 and 354 pounds 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 the Pearson estimated that returns relating to 2009 Sales to be 425 million pounds. 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.**

Provision for Sales Returns (In millions)	
	372
	425
443	
	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.**

All entries are in millions.

- 1) Sales Returns and Allowances                      425  
     Provision for Sales Returns                                      425  
     - Sales returns and allowances is an income statement account.  
     - Provision for sales returns is a balance sheet account.
- 2) Provision for Sales Returns                      443  
     Accounts Receivable    443  
     - Provision for sales returns is a balance sheet account.  
     - Accounts receivable is a balance sheet account.

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

Sales returns appears on the income statement under total sales, in order to help calculate net sales.

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

Trade Receivables (in millions)	
1,030	
6,049	
	6,090
989	

All entries are in millions.

1) Accounts Receivable	6,049	
Sales		6,049
 2) Cash	 6,090	
Accounts Receivable		6,090

Olivia Hamilton  
Case 4: Problem 6-2  
Dr. Dickinson  
ACCY 420

**The Honor Code:**

“On my Honor, I pledge that I have neither given, received, nor witnessed any unauthorized help on this case.”

Signed: Olivia Hamilton

## **Executive Summary**

The purpose of this case was to solve and explain a problem from our Intermediate Accounting class. This was to help us further learn and study for our upcoming exam. I chose a problem from chapter 6 that is about the time value of money. It was very beneficial because I not only had to know how to solve the problem, but I also had to know how to explain the problem. Teaching a problem to someone else, I find, is one of the best ways to learn because it really makes you think about the problem and understand all aspects of it. This exercise was a valuable learning experience that helped me along in my studying for my exam.

6-2

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?**

First, we must decide if the problem is asking for the future value or the present value. Since it provides us with the end value of the fund, we know it is a future value fund. Next, we can determine that it is an annuity problem because we are making repeating payments. Finally, since the problem states that the payments are made at the end of each year, then we know it is an ordinary annuity. Also, since there are 8 payments we know that  $n=8$ , and we know that  $i=8$  because the interest rate is given in the problem. Therefore, the equation we would use is:

$$FV = \text{Rent}(FVFOA) \text{ where } n=8 \text{ and } i=8$$

Then we can fill in the equation with the numbers we know. We will use the future value of an ordinary annuity table to find the future value factor. Once we have all the information, we can solve for rent.

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

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

This answer means that Ned must deposit \$8,461 each year for eight years into a fund that is compounded annually at 8% to accumulate \$90,000.

- 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 palace 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?**

First, we can determine that this is a future value problem because we know that \$500,000 is a future value that we want to reach. We, also, know it is an annuity problem because Robert is going to be making equal deposits. Lastly, we know it is an annuity due problem because the last payment that Robert makes on his 64<sup>th</sup> birthday will accrue interest by his 65<sup>th</sup> birthday. Also, we know that  $n=25$ , because Robert will be making 25 payments, and we know that  $i=8$  because the interest rate is stated in the problem. Therefore, we will use the formula:

$$FV = \text{Rent}(FVFAD) \text{ where } n=25 \text{ and } i=8$$

Then we will fill in the equation with the information we know. We will get our future value factor from the table of future values of an annuity due. Then we can solve for the rent.

$$500,000 = \text{Rent}(11.52876)$$

$$\text{Rent} = 43,370$$

This means that Robert must make a deposit of \$43,370 every year for 25 years at an interest rate of 8% in order to have \$500,00 on his 65<sup>th</sup> birthday in order to retire.

- 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?**

First, we can establish that this is a future value problem because we need to know how many years in the future will it take to accumulate \$47,347. Also, we know it is a lump sum problem because Diane is only making a one-time deposit. This problem is asking for how many years it will take, so we are solving for “n” in this problem. We are given the present value, future value, and interest rate in the problem. Therefore, the equation we will use is:

$$FV = PV(FVF) \text{ where } n=? \text{ and } i=9$$

Then we can plug in the numbers we know and solve for the future value factor.

$$47,347 = 20,000(FVF)$$

$$FVF = 2.36735$$

Next, we have to go to our future value of a single sum table, and find our factor. Since we know our interest rate is 9%, we can immediately go to that column. Once we find our factor, we follow the row to the left to find the number of years associated with it. Therefore, our answer is:

$$n = 10 \text{ years}$$

This means that it will take Diane 10 years to have her \$20,000 deposit grow to \$47,347 and pay off her debt.

- d) Cindy Houston has \$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?**

First, we can determine that this is a future value problem because we are trying to accumulate \$27,600 after 4 years. Secondly, we know that it is a lump sum problem because it is a one-time deposit of \$19,553. We know that  $n=4$  because it is given in the problem. However, in this problem, we are solving for the interest rate that is needed to accumulate the goal amount. Therefore, we can use the equation:

$$FV = PV(FVF) \text{ where } n=4 \text{ and } i=?$$

Then we can plug in the numbers we know into the equation, and solve for the future value factor.

$$27,600 = 19,553(FVF)$$

$$1.4115481 = FVF$$

Next, we can go to our future value of a single sum table to find our factor. Since we know that the number of years is 4, we can immediately go to the row where  $n=4$ . When we have located our factor, we go up the same column to find the corresponding interest rate. Therefore, our answer is:

$$i = 9\%$$

This means that in order for Cindy to accumulate \$27,600 in four years from her deposit of \$19,553, she will need to invest at an interest rate of 9%.



Olivia Hamilton  
Case 5: Palfinger AG – Property, Plant, & Equipment  
Dr. Dickinson  
ACCY 420

**The Honor Code:**

“On my Honor, I pledge that I have neither given, received, nor witnessed any unauthorized help on this case.”

Signed: Olivia Hamilton

## **1) Executive Summary**

Palfinger AG is a company located in Austria that manufactures different types of cranes as well as other handling systems, tailgates, aerial work platforms, transportable forklifts, and railway system solutions. The company mainly sells to construction, transport, and agricultural industries. Palfinger provided us with its financial statements consisting of the consolidated balance sheet, the consolidated income statement, and notes to the financial statements. In this case, we were asked to answer several questions pertaining to the property, plant, and equipment assets that Palfinger possesses for its operations.

This case was helpful because it helped show how a company acquires, records, and depreciates its assets. In the future, I will have to know the different methods of depreciation and the effects of each. Palfinger was a great example for learning how to account for property, plant, and equipment during the period of business operations of a company.

## **2) Concepts**

### **a) Based on the description of Palfinger above, what sort of property and equipment do you think the company has?**

Palfinger manufactures hydraulic lifting, loading, and handling cranes, so the business most likely has a lot of heavy duty construction equipment. This would include factory equipment such as large assembly lines and all sorts of power tools used to build cranes. Also, the company would need machines to melt the metals in order to pour them into the molds of the pieces of the cranes. Their property would include things like warehouses to store their raw materials, factories to build their products, and land to hold and store their equipment and products until sold. Any of the equipment and property used for production of Palfinger's cranes would be considered their assets under property, plant, and equipment.

### **b) The 2007 balance sheet shows property, plant, and equipment of €149,990. What does this number represent?**

Property, plant, and equipment is an asset section on a company's balance sheet. They are physical and fixed assets that are reasonably easy to liquidate, and they provide benefits for the company for more than one year. These assets are vital to a company's business operations because it consists of the land, the buildings, the machinery, and the equipment that a machinery uses throughout its business processes. The number €149,990 represents the value of the historical cost of all the land, buildings, and equipment less each of their accumulated depreciation amounts. Land is the only asset in this category that is not depreciated, but buildings and equipment are depreciated each period, so their value on the balance sheet must be net of the accumulated depreciation.

### **c) What types of equipment does Palfinger report in notes to the financial statements?**

This includes buildings, investment in third-party buildings, plant and machinery, fixtures, fittings, and equipment. The buildings would include their warehouses and possibly their headquarter offices where the executives and higher ups work. The investment in third-party buildings are buildings that Palfinger owns, but lease out in order to earn rental income or other cash inflows. The plant and machinery is the location and the equipment that the company uses to build the cranes. The fixtures are pieces of equipment that are permanent parts of the building. The fittings are small pieces that are attached to the equipment. Lastly, the equipment are the other tools and machines that the company uses in the production process.

- 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 are considered property, plant, and equipment because they deal with the physical assets. A prepayment is when a company pays early for an asset that they will one day acquire and put into use. It like a prepaid asset, but it is under property, plant, and equipment because that is the type of asset it will be categorized as once it is put into use. Assets under construction are assets that are currently being built. The company owns the asset, but at the moment the asset is not available for use because it is not complete. This account does not have any accumulated depreciation because the assets in this category are not currently in use. A company can only depreciate an asset if it is being used. Once these assets are put into use, they will be moved to their proper classifications and will then be depreciated. The reclassification of €14,958 in 2007 represents these assets being put into use so they are moved to the correct asset account such as buildings or equipment. Once these assets are reclassified, they will start to be depreciated at the end of each period.

- 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 assets are depreciated once they are put into use. Palfinger uses a straight-line method. This means that the company takes the original cost of the asset then subtract the salvage value then divide this number by the number of useful years that the assets has. Palfinger determines the expected useful life by using the anticipated economic or technical useful life of the asset. It seems odd for Palfinger to immediately depreciate their assets once they are put into operation because it has not allowed for any amount of time to pass. Assets are usually depreciated at the end of the year or the end of the period. This provides a more accurate valuation of the assets. Also, choosing to use the straight-line depreciation method is an easy calculation, but it may not be the most accurate because it is assuming the same depreciation for every year without considering the amount of work the machine is doing. It is just a general blanket approach to calculating depreciation. The company could use the double-declining method, which depreciates based on a percentage of the remaining value each year. This is a more complicated calculation, but it depreciates the asset the most the first year then it decreases the amount each year. This could be a more realistic and accurate approach based on the asset that the company is depreciating.

- 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 expenses in the year in which they incur the maintenance and repair expenses, while they capitalize enhancing investments and replacing investments. These are then depreciated using the old or new expected life. This means that Palfinger charges the renovations as an expense on the income statement, but can add value to the asset that they are modifying which would increase its expected life. This would alter the depreciation expense, especially since Palfinger uses straight-line depreciation. The company would have to recalculate a new depreciation expense by using the new expected life. Another accounting treatment when revaluing an asset would be to debit the asset for the increase from the improvements then to credit a revaluation reserve in equity. This method is creating a new equity account instead of charging it as an expense.

### **3) 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.**

The purchases of new property, plant, and equipment is equal to €61,444. This can be located in the notes to the financial statement under the changes in property, plant, and equipment. The purchases include the additions that Palfinger made in 2007.

**ii. Government grants for purchase 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.**

Government grants are forms of assistance from the government. In Palfinger's case, it is money to purchase new assets for property, plant, and equipment. When dealing with grants relating to assets, a company can defer it to income or deduct it from the carrying amount. The company records the asset at its fair value on the balance sheet because it is still an increase in assets even though they did not purchase it themselves. It is deducted from property, plant, and equipment because the company is not purchasing the equipment themselves. The asset cannot be recorded at zero because that is denying that the company obtained new wealth in the form of an asset. Therefore, the company uses the fair value of the asset in order to value the asset on the books. The government is giving them the money to pay for it, so they deduct it from their assets to show how much of their own wealth they spent on the asset. Palfinger is following this method because they are deducting the government grants from the acquisitions and/or manufacturing costs. This is what IAS 20 states as one of the ways to account for government grants dealing with assets. Palfinger is following the rule of deducting the grant from the carrying value of the asset.

**iii. Depreciation expense for fiscal 2007.**

The depreciation expense for 2007 is €12,557. This can be found in the notes to the financial statements in the chart about titled "Accumulated depreciation and impairment". The depreciation expense represents the total expense the company incurred for the year from depreciating all of the assets in the property, plant, and equipment, excluding any land the company may own.

**iv. The net book value of property, plant, and equipment that Palfinger disposed of in fiscal 2007.**

The net book value of property, plant, and equipment that Palfinger disposed of is €1,501. This was found by looking at the notes to the financial statement and taking the acquisition cost of the disposals for 2007 minus the accumulated depreciation of the disposals from 2007. The equation would look like this  $€13,799 - €12,298 = €1,501$ . This number represents the amount that the equipment was worth less its accumulated depreciation. It shows how much of the equipment was used and how much it had been depreciated.

- h) The statement of cash flows (not presented) reports that 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, above. Explain what this gain or loss represents in economic terms.**

The gain that Palfinger incurs from this transaction is €154. This number represents the positive amount in revenue that Palfinger received from this transaction. The number was calculated by adding the cash gained and the accumulated depreciation and then subtracting the acquisition cost of the disposals from that sum. The journal entry would look like this:

Cash	€1,655	
Accumulated Depreciation	€12,298	
Property, plant, and equipment		€13,799
Gain on sale		€154

The gain is a plug in this journal entry that is solved for from the other given information. The gain represents the amount of increase in equity that the company received from the sale of the assets. These gains will positively impact the income statement by increasing the net income. It is an alternative form of earning a revenue apart from the main business operations of the company.

- 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 that Palfinger recorded a full year of depreciation in 2007 and the company uses:

- i. Straight-Line Depreciation.
- ii. Double-Declining-Balance Depreciation

Year	Straight-Line Depreciation	Double-Declining-Balance Depreciation
1	$(10,673 - 1,273) / 5 =$ € 1,880	$1/5 = .2$ $.2(2) = 4 = 40\%$ $10,673(40\%) =$ €4,269
2	€ 1,880	$10,673 - 4,269 = 6,404$ $6,404(40\%) =$ €2,562
3	€ 1,880	$6,404 - 2,562 = 3,842$ $3,842(40\%) =$ €1,537
4	€ 1,880	$3,842 - 1,537 = 2,305$ $2,305(40\%) =$ €922
5	€ 1,880	$2,338 - 922 = 1,383$ $1,383 - 1,273 =$ €110

To calculate the straight-line depreciation, the company takes the cost of the asset and subtracts the salvage value of the asset, if there is any. Then they divide that number by the number of estimated useful years that the asset has. This number is then used every year, so the asset is depreciated by the same amount every year.



To calculate the double-declining-balance depreciation, the company takes the one year and divides it by the number of useful years that the asset has in order to get a percent, which is known as the straight-line depreciation rate. This percent is then multiplied by two to get depreciation rate that the company will use. The depreciation rate is then multiplied by the cost to get the depreciation expense for the year. For the next year, the original cost is reduced by the amount of depreciation expense calculated in the previous year. Then this new number is multiplied by the depreciation rate to get the new depreciation expense. This pattern continues for the number of years of the asset's useful life. However, the carrying value can never be less than its salvage value, therefore when it cannot be depreciated by the full depreciation rate, the asset is only depreciated by the amount to reach the salvage value. This is what occurs in year 5 for Palfinger because the asset is only depreciated by €110 because it cannot be depreciated by the full €553.

	Straight-Line Depreciation	Double-Declining-Balance Depreciation
Acquisition Cost	10,673	10,673
Accumulated Depreciation	(9,400)	(9,400)
Net Book Value	1,273	1,273

The accumulated depreciation is calculated by summing all of the depreciation expenses for the five years of the equipment's useful life. To find the net book value, it is the asset's original cost less the accumulated depreciation. This shows the new value of the asset.

- j) Assume that the equipment from part i was sold on the first day of fiscal 2008 for proceeds of €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 assuming that the company 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.*).

The company would incur a loss of €1,293. This calculation is best shown through the journal entry that the company would have made.

Cash	€7,500	
Accumulated Depreciation	€1,880	
Loss on Sale	€1,293	
Equipment		€10,673

The loss is a plug that can be solved for from the other given information. The loss represents an expense incurred from the sale that was not part of their core form of business operations. The impact on the income statement for the first year the company owned it was that it was decreased by €1,880 for the depreciation expense. For the second year, the income statement was decreased by €1,293 by the loss on the sale. The asset was not depreciated in the year of the sale, so there was no depreciation expense in the second year. Therefore, the total income statement impact for the two years would be a decrease of €3,173.

**ii. Calculate any gain or loss on this transaction assuming that the company used double-declining-balance 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.ii.*).**

The company would incur a gain of €1,096. incur the depreciation expense and the gain. This calculation is best shown through the journal entry that the company would have made.

Cash	€7,500	
Accumulated Depreciation	€4,269	
Gain on Sale		€1,096
Equipment		€10,673

The gain is a plug number that can be solved for from the other given information. The gain represents extra revenue incurred from the sale of the equipment. The revenue is classified as a gain because it is a revenue that is not associated with the company's core operations of business. The impact on the income statement in the first year is that the net income is decreased by €4,269 because of the depreciation expense. The impact on the net income in the second year is that it is increased by €1,096 because of the gain from the sale. Palfinger does not depreciate its assets in the year they are sold, so the company does not incur a depreciation expense in the second year. Therefore, the total income statement impact for the two years would be a decrease of €3,173.

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

The total impact on the income statement for the two years is the same for both the straight-line depreciation method and the double-declining-balance method. This is because while using the straight-line depreciation method, Palfinger incurs the depreciation expense in the first year as well as a loss in the second year. While the double-declining-balance depreciation method causes a much larger depreciation expense in the first year, but then incurs a gain in the second year. In the end, by either incurring an expense and a loss or an expense and a gain, the amounts net out to be the same. This can show that in the long run it does not truly matter which depreciation method that a company chooses to use.

Olivia Hamilton  
Case 6: Volvo Group – Research & Development Costs  
Dr. Dickinson  
ACCY 420

**The Honor Code:**

“On my Honor, I pledge that I have neither given, received, nor witnessed any unauthorized help on this case.”

Signed: Olivia Hamilton

## 1) Executive Summary

Volvo Group is a Swedish company that develops and sells commercial vehicles. The company has a major portion of their operations devoted to research and development activities to find new and advanced technological discoveries. These improvements are to better their products, so that they can provide high performing cars to their customers. Volvo has provided us with financial statements, including the income statements, balance sheets, shareholder's equity, cash flow statements, an eleven-year summary, and notes to the financial statements. Our job was to delve into these financial statements to figure out associated costs having to do with research and development. It was important to notice if these intangible asset costs were capitalized or expensed.

Research and development is a major part to any company; therefore, it is important to understand how the company's account for it. With the technology age that we are currently living in, research and development toward software and other technology will become very common as companies try to improve and advance their products. This case will help me in the future to understand when to capitalize and when to expense costs from research and development. Also, it will help me be able to know how to amortize an intangible asset. Volvo is a complex company that is always improving, so looking at their financial statements was very beneficial into understanding research and development within a company.

## 2) 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?**

The costs associated with the research and development are tied to projects focused on reducing environmental impact and other global regulations. Their costs would also include development of new products including trucks, buses, construction equipment, engines, and drive systems. With these products, Volvo aims to find ways to make all of these types of vehicles more environmentally safe. Therefore, they focus on things such as reducing the amount of carbon emissions that the car produces.

- 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?**

The IAS 38 standard states that any expenditures for developing new products should be reported as an intangible asset. An intangible asset is an asset that has no physical substance, but still adds value to the company. It is difficult to decide if the intangible asset has the right qualities to be capitalized. In order to be considered an asset, it must be determinable that it will generate future benefits, and the cost must be able to be determined reliably. With research and development, only the development aspect can have the opportunity to be capitalized. However, in order to capitalize on development, it must have all of the following characteristics: have the ability to be completed technically, have the intention to be completed, have the ability to be put into use, have the ability to generate future benefits, have the resources to complete the asset, and be able to reliably calculate the cost of the expenditure. On the other hand, the research phase of research and development cannot be recognized as an intangible asset under any circumstances. Therefore, the research phase's expenditures will always be expensed.

- 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?**

Amortization is the same as depreciation, but it is for intangible assets, therefore, it is conceptual. Volvo states in its notes that the time period for depreciation for product and software development is 3 to 8 years. This period represents the intangible asset's useful life. Since an intangible asset does not usually have a residual value, the full amount of the asset is usually amortized. Also, a company can only amortize an intangible asset if it has a determinable useful life, so this is why Volvo has determined the amortization period as 3 to 8 years. To determine the amortization period, the company has to consider many factors and costs that play into the asset. This can include thinking about that companies, like Volvo, are constantly developing new products and software in order to stay relevant in today's market. These new developments play a role in having a shorter amortization period because the company realizes that it will have a new product to replace the current one within only a few years. Paying close attention to the technological developments would be a major factor for determining the amortization period for particular costs.

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

In my opinion, I believe that IFRS accounting principle regarding research and development expenditures better reflects the costs and benefits than the principles that GAAP requires. Since research and development can result in a product that a company can put into use or sell, I think it makes sense to be able to distinguish it as an asset. The research and development is part of the costs to get the asset ready to use, and with assets under property, plant, and equipment this is always considered part of the original cost of the asset. Therefore, IFRS way is a better reflection because it uses the same methods of accounting for assets as the company would use on the rest of the assets.

**3) 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 net amount of the capitalized products and software development costs at the end of 2009 is SEK 11,409. This is calculated by taking the acquisition cost of SEK 25,148 and subtracting the accumulated amortization of SEK 13,739. In the balance sheet this number is included in the intangible assets section. The total net intangible assets are SEK 41,628, so the SEK 11,409 is just a portion of the total intangible assets. The rest of the intangible assets come from items such as goodwill, entrance fees for industrial programs, and other 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.

Capitalized Product And Software, Net	
12,381	
2,602	
	3,126
	448
11,409	

The SEK 12,381 is the ending balance for product and software development for 2008, so that means it is the beginning balance for 2009. The SEK 2,602 is the cost of the capital expenditures, and the SEK 3,126 is the accumulated amortization for the capital expenditures for the period. The ending balance for 2009 is SEK 11,409, so the SEK 448 is a plug to get the account to balance.



- 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 below for Volvo's Product and software development intangible asset.

(in SEK millions)	2007	2008	2009
1)Product and software development costs capitalized during the year	2,057	2,150	2,602
2)Total R&D expense on the income statement	11,059	14,348	13,193
3)Amortization of previously capitalized costs (included in R&D expense)	2,357	2,864	3,126
4)Total R&D costs incurred during the year = 1 + 2 - 3	10,759	13,634	12,669

- iii. 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?

$$2007: 2,057/10,759= 19.12\%$$

$$2008: 2,150/13,634= 15.77\%$$

$$2009: 2,602/12,669= 20.54\%$$

4) Analysis

- g. Assume that you work as a financial analyst for Volvo Group and would like to compare Volvo's research and development expenditures to a U.S. competitor, Navistar International Corporation. Navistar follows U.S. GAAP that requires that all research and development costs be expensed in the year they are incurred. You gather the following information for Navistar for fiscal year end October 31, 2007 through 2009.

(in US \$ millions)	2007	2008	2009
Total R&D costs incurred during the year, expensed on the income statement	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 the information from Volvo's eleven-year summary to complete the following table:

(In SEK millions)	2007	2008	2009
Net sales, industrial operations	276,795	294,932	208,487
Total assets, from balance sheet	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?**

Navistar International Corporation

2007:  $375/11,910 = 3.15\%$

2008:  $384/14,399 = 2.67\%$

2009:  $433/11,300 = 3.83\%$

Volvo Group

2007:  $10,759/276,795 = 3.89\%$

2008:  $13,634/294,932 = 4.62\%$

2009:  $12,669/332,265 = 3.81\%$

The proportions are very similar between Volvo and Navistar. This shows that whether the company uses the method that IFRS or GAAP suggest that the outcome will be very similar. It does not make a difference for asset turnover whether the asset is capitalized or expensed because the proportions will be very similar in the end.

Olivia Hamilton  
Case 7: Data Analytics  
Dr. Dickinson  
ACCY 420

**The Honor Code:**

“On my Honor, I pledge that I have neither given, received, nor witnessed any unauthorized help on this case.”

Signed: Olivia Hamilton

## **Executive Summary**

In today's time, technology is constantly improving and weaving itself into the lives of everyone. This includes the business environment. It is becoming more and more prevalent that accountants need to add data analytics to their education. People already working are having to learn it on the job, so now it is becoming a part of the education offered at universities. There are many different softwares and tools out there today that can benefit companies. They assist the companies to make better business decisions that can help improve their company.

One example of this kind of software is Alteryx. It is a useful tool that many large companies are adopting. It can assist with data compilation and analysis, and therefore help the business assess themselves. From this case I have learned how important data analytics is becoming in the accounting world. It makes me want to further my education to make me a more skilled employee for when I am ready to go into the workforce. Technology is the future, so it is important for people and businesses to learn to incorporate it and learn to use it effectively.

**1) Identify the history and purpose of this tool and describe, in general, how it is used to make business decisions. Be specific about what kind of technology platform it uses, etc. and other resources that need to be in place to fully utilize the functionality of the tool.**

Alteryx is a data analytics tool that makes it easier and quicker for companies to analyze large amounts of data. In 2010, Dean Stoecker, Olivia Duane Adams and Ned Harding founded the company known as Alteryx, and each of them are still actively involved in the company today. However, originally these three people founded SRC LLC in 1997, which focused on reporting census data by geographically organizing the data. Then in 2006, the company released the software called Alteryx which dealt with analytical processes and the spatial data that corresponded with it. It was then in 2010 that the three founders chose to rename the entire company Alteryx, and it has been expanding ever since, including taking the company public in 2017. Currently, the headquarters is located in Irvine, California, and there are also locations in eleven other locations, including some international offices.

The purpose of Alteryx is to be a tool for companies so that they can integrate their data from any source, as well as have an analysis created for them. Alteryx is able to incorporate all the data and find patterns and trends to create reports for the company. It is known as a self-service tool because anyone is able to use it. The need for data analysts and scientist will become less necessary with this tool because the analyses are created and presented to the user. All the user needs to do is upload the data from the source he is using. Another great feature of Alteryx is that it is compatible with almost every other data tool. The user can import data from several different softwares such as Excel and Tableau as well as many others.

Alteryx has five different programs, which include: Alteryx Designer, Alteryx Server, Alteryx Connect, Alteryx Promote, and Alteryx Analytics Gallery. Alteryx Designer is the main tool that combines and analyzes all the data, and within a few hours it can provide a report and insights into the data. The user can then use this information to make informed predictions for their company. Alteryx Server is the tool to share the data and analyses across the user's company quickly and securely. Alteryx Connect allows the user to organize and manage the data in an effective manner so that it is easier for the company to navigate the data and access the most important information quickly. Alteryx Promote is centered around creating the predictive models, as well as helping the user integrate the model into the actual company. Finally, Alteryx Analytics Gallery is a cloud based program that allows the users to have access to their data anywhere and anytime.

**2) What special skills are needed to use this tool to aid in business decision making. How might student like yourself gain those skills?**

The beauty of Alteryx is that it does not require much skill in order for a company to be able to use it. One of the best features of Alteryx is that it does all the analysis for the user. Therefore, the user does not need to be skilled in data analytics nor data science because the program does all of that for them. The user is provided with predictive models, so there is no need to hire data specialists because the program does that job already. A person simply needs to be able to read and understand the analysis that Alteryx has provided for him.

However, Alteryx has an endless amount of potential, so people with more skills can gain even greater benefits from the tool. For example, a user can use the tool without using any codes, and receive all the information that he or she needs. On the other hand, experienced users with extensive coding knowledge can utilize Alteryx to its full potential. Therefore, it is up to the user to decide if he wants the basic functions or if he wants to delve deeper to get even more use out of Alteryx.

Alteryx can import data from almost any other source, therefore, it would be very beneficial for the user to have an understanding of how to use these outside programs. For example, Alteryx can upload data from Excel, so it would be important for the user to be able to know the functions of Excel, such as the formulas and pivot tables. Another helpful skill would be able to understand how to use Tableau. This software is also a data visualization tool, so being able to use it efficiently will allow the user to get even more out of Alteryx. Alteryx is partnered with Microsoft, Tableau, Amazon Web Services, Qlik, Cloudera, and Experian Marketing Services. Therefore, if a user is well versed in any of these other softwares, he can better utilize his data with Alteryx.

**3) How, specifically, would you use the tool in the following business settings? Create at least three specific scenarios for each category in which the tool would lead to more efficiency and/or better effectiveness. Be sure to describe what kinds of data your tool would use for each scenario.**

**a. Auditing**

Let's say that a company is a merchandising company. In its accounting records, the company will have to keep track of which goods were sold and which goods are still in ending inventory. A company should know the total goods available at the beginning of each period plus the amount purchased that period, and the total number of goods sold plus the goods in ending inventory should be equal to the total number of goods available for sale. An auditor would be required to make sure that these numbers are correct in the accounting records, as well as take a physical count to detect any differences. This is where Alteryx can be useful because it is a great tool to use to discover discrepancies within the data. Alteryx will show the user if cost of goods sold and the ending inventory correspond with the beginning inventory and the purchases. More importantly, it will show the user that there are differences in the numbers, so the user can then account for these differences. Also, it will make the physical count of the inventory to run quickly and smoothly.

Secondly, a company hires a third-party auditor with the hopes that they will provide a quality audit in a quick manner. The company itself could benefit from using Alteryx because it will make their own accounting records more accurate, therefore, there will be less mistakes for the third-party auditor to catch. On the other hand, the third-party audit company can benefit from Alteryx because it allows their job to become much easier. The company can quickly check the other company's books and ensure their accuracy. With the reduced amount of time used to complete the audit, the auditors have more time to make educated suggestions for the company. More and more companies are wanting their auditors to provide more information and suggestions for their business model. With the help of Alteryx, auditors can use the models produced by the software to explain to their clients what patterns their data exhibit. This in turn will help the auditor make better educated suggestions, and have evidence to back up the suggestions that they make. The use of Alteryx in their audits can make that public accounting firm more advanced, and it may even attract even more clients.

Lastly, Alteryx can be used to prevent and detect fraudulent behavior. Like previously stated, Alteryx is great for detecting discrepancies in data. Therefore, a company can review the differences that Alteryx finds to decide if the numbers are just human error or if it looks like suspicious behavior. For example, if a company is expected of check fraud, the results that Alteryx produces could be



used to prove the fraud is true. If the data of the amount of cash in the company's account is less than the amount that is being spent, then a red flag would go up. Alteryx would make it very hard for a company to spend money that it does not have because based on the given data that is uploaded, then it will immediately spot the difference. If a company uses Alteryx, it can also help prevent fraud because employees know it will be easy to be caught when the software catches all the strange differences in data.

## **b. Tax Planning**

Alteryx is able to analyze large amounts of data, but one feature is that it can analyze data by geographic location. Therefore, a company look at this data to find what areas have lower taxes. If a certain state has a lower tax rate, the company might consider moving its headquarters to that state, so that they are able to utilize that lower tax rate. Tax planning is all about finding ways to minimize the amount of taxes that a company has to pay. Therefore, the data analytics that Alteryx is able to produce will benefit a company by allowing them to assess the best locations to be in business, even if that means in a different country.

Another way that a company can use Alteryx to help with tax planning is by using its predictive models. These models that Alteryx generates from the imported data can show a company what future revenues and expenses that they may incur in the upcoming period. A company can use this information to see what their net income before tax is expected to be, and more importantly they can estimate their taxable income. This will allow the company to calculate and predict what their tax expense will be. It will also allow the company to start planning earlier for ways that make it possible to decrease their tax expense. Also, the company can see if they will incur any losses that might be offset by taxes. Similarly, the company can predict if they will receive any tax benefits such as tax deductions or tax credits. Again, this will help them predict how much their tax expense will be, and then in turn predict their final net income for the period. Being able to know this information earlier is beneficial because it lets a company think about if there are ways to improve their final net income after taxes are taken into consideration.

Lastly, tax accountants are always faced with a time crunch, especially during busy season. The employees are constantly working to make sure everyone of their clients can file their taxes in the way that benefits that company the best. Therefore, if a company uses Alteryx, they can increase their efficiency and effectiveness. The data models provided by Alteryx can help a tax planner to quickly find the best way to file taxes for their clients. Each company is unique and has different needs. Because of this the tax planners can take each company's specific data and import it into Alteryx, and then receive an analysis.

With this information, they can better make decisions for their clients. More importantly, they can make informed decisions quickly. This allows the tax planners to help all of their clients before tax date arrives.

**c. Financial Statement Analysis / Valuation / Advisory**

Shareholders take into account the financial statements of a company when considering investing. Therefore, Alteryx would be helpful in providing shareholders even more information. Data analytics can provide information such as earnings per share and amount of dividends paid to the shareholders. It can even compare these numbers to previous periods, and present them in a useful way to show that the company is improving. If a company makes these models available to shareholders, it is likely to attract more investors. The investors will be happy to see the financial analysis in a clear and concise manner, so that it makes their research easier. Also, investors can look at the predictive models that Alteryx produces in order to see if the company is going to continue to grow.

Another great use of Alteryx is using it to analyze the aspects of an income statement in order to make better business decisions. The company can use the analysis to look at where their revenues and expenses are coming from. Therefore, they can focus in on the areas of the business that are functioning successfully and earning the most money. Also, because the analysis can give a spread of the expenses, the company can see the areas where they can try to cut costs. This will allow the company to maximize their revenues and therefore have a higher net income. By looking at the analysis, the company can make better decisions because they have statistics to look at from their past period, which in turn can help them make changes for the future.

Lastly, Alteryx can help analyze customer information. It can show what age range, what geographic location, and what economic class that the majority of their customers fall in. If Alteryx can identify patterns, the company can focus in on a target market. Then the company can create better advertising to target that set of people. The analysis will help the company make better informed marketing decisions, which will keep current customers coming back as well as attract new customers. Also, Alteryx can show the company which marketing campaigns are not working. Therefore, the company can stop with that strategy and find one that works better for their business. This will help cut costs for advertisements that are not working, and allow the company to focus in on the marketing decisions that will increase their future profits.

- 4) Write a few paragraphs to your future public accounting partner explaining why your team should invest in the acquisition of and training in this tool. Explain how the tool will impact the staffing and scope of your future engagements.**

Alteryx is a useful tool that can benefit our company immensely. Not only can it compile all of our data in one source, but also it will generate predictive models for us. This software will reduce the need for us to hire specialized data analysts, which allows us to get rid of an expense. Alteryx costs \$5,195 per user per year, which means we would have to pay that fee for each of employees that would be using the software. However, we would be avoiding the expense of paying for a data analyst's salary and benefits. With this price, we will have access to Alteryx Designer, which includes data prep and blending, predictive analytics, visual diagrams of the data, reports, and insights. This is everything and more that could help improve our company. However, that is only the tip of the iceberg with Alteryx because the more we learn about it the more things we will be able to utilize it for. It will help our company with auditing, tax planning, and any other financial analysis. Also, the software is more efficient than a human and is less likely to make a mistake. This can make our entire business run even more flawlessly.

Another benefit is that it will not require much training for our current employees, which saves us on expenses. Alteryx only requires knowing how to use other data input softwares, such as Excel or Tableau. These are all tools that are employees should already know how to use efficiently. Alteryx can be used without coding, but if we choose to make the most of it, we can use codes to unlock even more potential. However, not every employee needs to be educated on coding. We can choose and train our employees with current coding knowledge, and only they can take training classes to make sure they understand the codes that work well with Alteryx. I believe that with Alteryx we can take our company to a new level with clients. They will come to us knowing that we know how to understand data and can make predictions, all with the help of Alteryx. It is a smart move for our company because it will make us more desirable and efficient which is worth the cost that comes with purchasing Alteryx.

## 5) Sources

Alteryx.com

Olivia Hamilton  
Case 8: Rite Aid Corporation – Long-Term Debt  
Dr. Dickinson  
ACCY 420

**The Honor Code:**

“On my Honor, I pledge that I have neither given, received, nor witnessed any unauthorized help on this case.”

Signed: Olivia Hamilton

## 1) Executive Summary

Rite Aid is a retail pharmacy that also sells over the counter medications, beauty supplies, photos, food, and other little items. The company provided us with their financial statements, which included their balance sheet, statement of operations, statement of cash flows, and notes to the financial statements. In this case, we were concerned with their balance sheet and their notes about their different types of debts. It was our job to analyze some of the companies notes, and calculate the face value, interest payments, and effective interest rates that the notes used. The job is important to make sure that Rite Aid is treating each different type of bond correctly. We had to dive into the company's balance sheet and recognized the differences between secured and unsecured debt, as well as how to treat discounts and premiums on bonds payable. Overall, the case gave a useful summary of all the different ways a company can use debt financing to help improve their company.

This case was very beneficial because it expanded my knowledge on liabilities. It helped me learn how to account for debt in many different forms. It, also, made me think in different ways to calculate interest and interest rates other than the normal, simple way we usually learn in a textbook. In the future, I will use this case to help me dive deeper into a company's financial statements, so that I can fully understand all of their debt. A lot of major companies use bonds and other forms of debt to finance their endeavors, so it is important for me to understand how to account and amortize these bonds accurately.

## 2) Concepts

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

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

Secured debt is backed by some asset that is used as collateral. A lien is placed on this asset, therefore, if the borrower were to default on the loan, the lender has the right to take the asset and sell it. The sale of the asset is supposed to cover the amount of debt. If the borrower pays off the loan, then he can keep the asset without any liens. Examples of an asset that can be used as collateral is real estate, a vehicle, stocks, or bonds.

On the other hand, unsecured debt is not backed by any asset, so the lender does not have a right to take anything if the borrower defaults on the loan. Therefore, the lender must do other things in order to receive their payments, which could include using a debt collector or taking the borrower to court. Also, if the borrower defaults it will be reflected on their credit report, so it will be more difficult in the future for the company to receive a loan.

It is important to distinguish between secured and unsecured debt because it helps the company know which one to pay first. If a company has to make the choice of which debt to pay off because they do not have enough money for all of the loans, they should pick the secured debt to pay off first. They should prioritize secured debt because if the company defaults on that loan then they will lose an asset. This asset may have an important role in the company, so it is crucial to save this asset and not let the lender take it. Also, secured debt payments are more difficult to catch up on if the borrower falls behind. However, the company could choose to prioritize some of the secured debt because they usually come with a higher interest rate because they are not backed by an asset. Therefore, it will get more expensive the longer the company does not pay off the debt because of the high interest payments. It is important to separate secured and unsecured debt because the company must assess which one is the smartest choice to pay off quickly.

- 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?**

Debt that is guaranteed means that a third party has entered into a contract with the borrower that if the borrower is to default on the loan, they will take over the debt. The third party purchases the debt from the original lender and agrees to pay it off. With Rite Aid, they have some of their unsecured debt guaranteed. Rite Aid’s unsecured debt is guaranteed by the Company’s wholly owned subsidiaries.

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

“Senior” means that the debt takes priority over the other loans. This means that if the borrower were to go bankrupt, this is the first debt that will be paid off. “Fixed-rate” refers to notes that have a coupon interest rate that stays the same over the life of the note. This means that the borrower will have to pay an interest payment every period that never changes in amount. “Convertible” refers to notes that can be easily turned into equity at an agreed upon price. This means that the value of the note has a call option and can be turned into an investment, such as common stock.

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

Rite Aid has several types of debt with a range of interest rates because they do not want all of their debts to be the same in case the company is to default or go bankrupt. The different interest rates have to deal with the interest rates of the market at the time they received the loans. The interest rate is constantly changing, and therefore, lenders will constantly be issuing loans at different rates. The different interest rates, also, allow Rite Aid to have different amount of interest payments. Notes with higher interest rates will have a higher interest payment. By having different interest rates, Rite Aid can control how much they are paying in interest. The different types of debt help lower the risk of the debt. If Rite Aid has a fixed-rate note, then they are guaranteed to know the amount of interest they are paying each period. This lets them plan ahead, so they can calculate their expenses for the period. A convertible note is useful because it allows Rite Aid to have the possibility of turning their debt into an investment. Also, convertible notes help prevent the company from facing large losses. The different types of notes help Rite Aid diversify their debt, so that if something were to happen, the company would be prepared.



**3) 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 the total debt reported in note 11 with what Rite Aid reports on its balance sheet.**

To calculate the total debt, we can look at Rite Aid's balance sheet that is provided in the notes, then we can determine what to include in the amount of total debt. The calculation is:

Current maturities of long-term debt and lease financing obligations	\$51,502
Long-term debt, less current maturities	6,185,633
Lease financing obligations, less current Maturities	<u>133,764</u>
Total Debt	\$6,370,899

This number is confirmed by the number in note 11 listed by total debt. The amount that is due within the coming fiscal year is \$51,502. This is because this portion are the current maturities of the debt. This number is found on the balance sheet under current liabilities because it is the portion of the debt that must be paid within the current fiscal year. The amounts in the long term liabilities section even state that the current maturities have been removed, so we know that the current maturities are an addition to the 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 of this note is \$500,00. This is known because the value has not changed from 2009 to 2010, which means that the note was issued at par. Because the note was issued at par, we know that the market interest rate at the time the note was issued was also 7.5%, which means that the note was not issued with a discount nor a premium.

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

The journal entry of the issuance of the bond is:

Cash	500,000	
Notes Payable		500,000

This entry shows what we expect of a note. The borrower debits cash because they are receiving cash as funding for their business operations. The company credits note payable because it records the liability of the debt because the liability will have to be paid off in March of 2017. The notes payable is always t for the amount of the principal of the note. The amount received in cash is the face value of the note because the par interest rate was equal to the market interest rate. This transaction increases Rite Aid's assets because of the increase in cash, and it increases liabilities because of the increase in notes payable. This entry does not have any effect on net income.

- 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 journal entry for the annual interest expense is:

Interest Expense	37,500
Cash	37,500

The interest expense is calculated by multiplying the principal by the annual interest rates by a fraction of the number of months in the period that the interest has accrued. The calculation looks like:

$$\$500,000(.075)(12/12)= 37,500$$

This transaction has no effect on assets until the cash is actually paid. However, it does decrease equity because of the debit to an expense and increase liabilities because of the credit to a liability account. Lastly, the journal entry will decrease net income because the interest expense will be deducted.

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

The journal entry that Rite Aid will make when the note matures is:

Notes Payable	500,000	
Cash		500,000

This entry shows Rite Aid paying back the principal amount that was originally borrowed. Again, it is for the face value of the note because that was the original principal amount. This entry decreases liabilities because we are crediting notes payable. Also, the amount decreases assets because we are paying cash to retire the note. Lastly, this entry does not affect net income.

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

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

The face value of the note is \$410,000. This is listed in note 11. The carrying value of the note is \$405,951, which is listed as the balance of the note. This is different because the carrying value is equal to the face value minus an unamortized discount. The note also states that the amount of unamortized discount in 2010 is \$4,049. Therefore,  $410,000 - 4,049 = 405,951$  which is our carrying value. When a note is issued at a discount, the face value and carrying value will differ because every period the discount is amortized into interest expense.

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

In 2009, Rite Aid paid \$38,438 in interest expense. The calculation of this note was done by multiplying the principal by the stated interest rate by the fraction of months in the period. To illustrate:  
 $410,000(.09375)(12/12) = 38,438$ . The interest payment remains the same every period because the face value and the stated rate always remain the same. This value will always be the balance of the cash paid.

- 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 are issued at a discount. The noncash portion of interest expense is the amortization of the discount during the year (that is, the amount by which the discount decreased during the year).**

The total amount of interest expense recorded by Rite Aid is \$39,143. This is a combination of the cash payment that was calculated previously plus the amount of the discount that has been amortized in the period. To calculate the discount amortized for the period, we looked at the difference between the unamortized discount in 2009 and 2010. The calculation is:  $4,754 - 4,049 = 705$ . To amortize this discount, we credit it. Since we are crediting both the cash payment and the discount amortized, we add them together to get the total interest expense. The calculation is:  $38,438 + 705$ .

- 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.**

The journal entry to record interest expense is:

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

The entry shows further how we got the calculation for interest expense. This entry decreases equity and therefore decreases net income because of the interest expense. Also, this entry decreases assets because Rite Aid is paying cash. Lastly, this entry increases liabilities because a discount is a contra account to notes payable. Since we are decreasing the amount in the discount account, the notes payable is increasing, and therefore the total liabilities.

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

The total rate of interest rate recorded is the same as the effective interest rate. The effective interest rate is 9.659%. When creating an amortization table, we use the effective interest rate and multiple it by the beginning carrying value of the note of that period in order to get the amount of interest expense. However, we can work backwards into this rate from the given information by dividing the interest expense by the carrying value of the note from 2009. The calculation is:  $39,143/405,246$

= .09659 = 9.659%. The effective interest rate represents the amount of interest that is actually paid each period.

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

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

The journal entry that Rite Aid when the notes were issued was:

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

Since the proceeds were issued at 98.2%, we know that the note was issued at a discount. This means that the cash Rite Aid received is less than the face value of the note. In order to calculate the amount of cash proceeds, we multiply the face value by the percent it was issued at. The calculation is:  $410,000(.982) = 402,620$ . Then to calculate the discount we find the difference between the face value and the cash proceeds. The calculation is:  $410,000 - 402,620 = 7,380$ . This discount will be amortized over the life of the note. This entry increases assets because Rite Aid is receiving cash. The discount on notes payable decreases the liabilities because it is a contra account, but the notes payable increases the liabilities account by more. Therefore, overall, the total liabilities increase. This entry has no effect on net income.

**ii. At what effective annual rate of interest were these notes issued?**

The effective annual rate of interest is 10.1212%. This percent is used to calculate the amount of interest expense based on the beginning carrying value of the note. The best way to solve for the effective interest rate is to use a Microsoft Excel function. In excel, you must enter “=rate(number of periods, - cash interest payment, the cash proceeds, the face value)”. The number of periods is 7 because the note was issued in 2009 and matures in 2016. The cash interest payment is 39,975, which was calculated by multiplying the principal by the stated interest rate and by the fraction of months of the period. The calculation is:  $410,000(.0975)(12/12) = 39,975$ . The cash proceeds are the amount of cash that Rite Aid, which we calculated to be \$402,620 in the earlier step. Lastly, the face value is \$410,000. Therefore, the equation to be entered into Excel is: =rate(7,-39975,402620,-410000). This will return the answer 10.1212%. This answer can be proved by solving for the present value of the face value and the present value of all of the interest payments.

**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. Notes: Guidance follows the table.**

Date	Interest Payment	Interest Expense	Bond Discount Amortization	Net Book Value of Debt	Straight-line Interest Rate
6/30/09				402620.00	0.101212
6/30/10	39975.00	40749.98	774.98	403394.98	0.101212
6/30/11	39975.00	40828.41	853.41	404248.39	0.101212
6/30/12	39975.00	40914.79	939.79	405188.18	0.101212
6/30/13	39975.00	41009.91	1034.91	406223.08	0.101212
6/30/14	39975.00	41114.65	1139.65	407362.73	0.101212
6/30/15	39975.00	41230.00	1255.00	408617.73	0.101212
6/30/16	39975.00	41357.02	1382.02	409999.75	0.101212

- 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.**

The journal entry on February 27, 2010 is:

Interest Expense	27,267	
Discount on Notes Payable		517
Interest Payable		26,650

Since the interest is paid on June 30<sup>th</sup> of every year, we have to accrue the interest paid at year end. Also, this means that we only have to account for partial years. We can look at our amortization table and find that the interest expense for the entire year is \$40,750. However, from June to February is only eight months so we must multiply this amount by 8/12, which gives us \$27,267. We do the same for our other numbers from the table. The discount amortized for the year is \$775, but when multiplied by 8/12, it is \$517. Lastly, the interest payable for the year is \$39,975, but when multiplied by 8/12 it is \$26,650. Since we are accruing the expense, we credit interest payable to create a liability because we will pay the interest when it is due. If we were paying the interest expense at this time, we would credit cash instead of interest payable. However, since we are accruing the interest we use a liability, and in the future, at year end, when we pay, we will debit interest payable and credit cash. This entry decreases equity because of the expense, and therefore, decreases net income. Also, the entry increases the liabilities because of the accrued interest as well as amortizing the discount. There is no effect on assets.

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

The net book value of the note at February 27, 2010 is \$403,137. The amount of discount that is amortized each period is added to the carrying value of the note. Therefore, when the note matures, the carrying value will have reached its face value. We know from our table that the previous carrying value of the note was \$402,620. Also, from the previous question, we know that the discount that was amortized was \$517. The calculation is:  $402,620 + 517 = 403,137$ .

Olivia Hamilton  
Case 9: Merck & Co., Inc. – Shareholders’ Equity  
Dr. Dickinson  
ACCY 420

**The Honor Code:**

“On my Honor, I pledge that I have neither given, received, nor witnessed any unauthorized help on this case.”

Signed: Olivia Hamilton



## **1) Executive Summary**

Merck & Co. is a pharmaceutical company that develops new medicines to help people and animals improve their health. Merck has provided us with their financial statements, including the income statement, the statement of retained earnings, the balance sheet, the statement of cash flows, and the notes to the financial statements. For the case, we had to search through the financial statements to find information about Merck's shares of stock and its dividends. In the future, I can use the information from this case when I am looking through a client's financial statements, and I am evaluating the information related to their shares issued and their dividends paid. Also, I can use what I learned from this case for when I make decisions about my own personal investments and which companies I should buy stock in. I have learned to evaluate the shares authorized, issued, and outstanding, as well as the dividends paid, which can give me the information I need about how strong a company is and if they pay dividends to their shareholders.

## 2) Concepts

### a. Consider Merck's common shares.

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

Merck is authorized to issue 5,400,000,000 shares. The number of shares that a public company is authorized to issue will be stated in its charter. For our purposes, with Merck, we can find the value in the balance sheet. The balance sheet will list the number of shares that the company is allowed to issue as well as the number of shares the company has actually issued. The authorized number of shares will always be the highest number compared to the amount of shares issued and the number of shares outstanding.

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

Merck has actually issued 2,983,508,675 shares as of 2007. Again, this number can be found on Merck's balance sheet. This represents the number of shares that the company has sold to investors. Also, it includes all treasury stock, which are the shares that the company has repurchased.

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

The balance sheet states that the dollar value of the common stock issued is \$29,800,000. They got this number by multiplying the number of shares issued by the par value of the stock, which in Merck's case is \$0.01. The calculation is:  $2,983,508,675(0.01) = 29,835,086.75$ . The difference is most likely immaterial to the company. The par value represents an arbitrary number that the company assigns their stock, but it is not the value that the stock sells for on the market. A company usually picks a very small number so that they do not run the risk of incurring a liability.

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

As of December 31, 2007, Merck has 811,005,791 shares held as treasury stock. This number can be found listed on the balance sheet. Treasury stock is when a company repurchases their own stocks either by buying them on the open market or by giving a tender offer to specific shareholders. Also, treasury stock is a contra-equity account, so it decreases the total equity value.

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

The number of shares outstanding are 2,172,502,884. This is calculated by subtracting the number of treasury shares from the number of shares issued. The calculation looks like:  $2,983,508,675 - 811,005,791 = 2,172,502,884$ . Outstanding shares are the shares that are only held by shareholders. This is why we must subtract the number of treasury shares because those are held by the company itself.

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

The total market capitalization is \$125,157,891,100. The formula for market capitalization is the number of shares outstanding multiplied by the market price per share. The calculation looks like:  $2,172,502,884(57.61) = \$125,157,891,100$ . The total market capitalization represents the total value of the outstanding shares. It is an important measurement because it can represent the size of a company, and therefore, the risk that the company faces. Both of these are important things for a potential investor to consider.

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

Companies pay dividends on their common shares because it can attract more investors in the long run. Future investors that are researching the company will like to see that the company pays dividends to its shareholders, especially when the dividends are constant. Also, a dividend shows that a company is profitable and successful. If a company was not doing well, they would choose not to pay dividends and instead keep the money to reinvest into the company. Therefore, dividends show investors that the company is doing well and that the company believes it will do well in the future. This attracts more people to want to buy the company's stock, and as the demand increases so does the price of the stock, which provides the company with more money. Usually, right after a dividend is paid, the price of the stock drops slightly. This is because once the dividend is declared; investors buy shares at a premium because they know that soon they will be receiving a dividend. However, once the date has passed where investors can no longer buy stock and receive a dividend, the price drops back down. This is because the investors at this time are not willing to pay a premium because they know they will not receive the dividend payment.

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

Companies repurchase their own shares because it allows them to buy back some of their ownership in the company. Also, if the company buys back their own shares, it is reducing the amount in dividends that the company has to pay to stockholders. The company is essentially investing in themselves, so they can use their retained earnings to better the company instead of paying dividends. Also, buying back shares reduces the total number of shares outstanding, which in turn allows the company to present a higher earnings per share on their financial statements. Also, since the purchase decreases the amount of assets, the return on assets ratio increases. Lastly, since the amount of equity is decreasing because of more treasury stock, the return on equity ratio is increasing. Overall, buying back their own shares, allows a company to improve their financial metrics.

**3) Process**

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

**Prepare a**

**single journal entry that summarizes Merck's common dividend activity for 2007.**

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

This journal entry is combining the date of declaration and the date of payment for dividends. The retained earnings number can be found on the Statement of Retained Earnings. Dividends declared is a reduction of retained earnings, so the number is presented in the financial statement. Retained earnings is debited because we are decreasing it in order to pay the dividends. All dividends are paid out of retained earnings because this is the equity that the company gets to keep and choose what to do with it, and paying dividends is one of the options. Normally, on the date of declaration, a company would debit retained earnings and credit dividends payable, which creates a liability. Then on the date of payment, the company would debit dividends payable and credit cash for the actual amount of cash they paid toward dividends. However, in this case, we are combining the entries to make them simpler. We are crediting dividends payable because the company declared more dividends than they are actually paying in cash for at this time. Therefore, some of the liability still exists. The credit to cash represents the payment of the dividends. This number is found in the Statement of Cash Flows. Then to get the amount for dividends payable, it is just a plug based on the retained earnings and the cash. The calculation for dividends payable is:  $3,310.7 - 3,307.3 = 3.4$ . This journal entry decreases equity and assets, increases liabilities, and has no effect on net income.

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

**i. Describe the method Merck uses to account for its treasury stock.**

Merck uses the cost method to account for its treasury stock. This means that the journal entry would consist of a debit to treasury stock and a credit to cash. In this method, the par value of the stock is ignored, and the treasury stock is recorded at the market value of the stock at the time of the buy back. Therefore, if the company decides to ever resell the treasury stock, they would record it at this market price and use a paid in capital account for any excess over this amount.

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

Merck repurchased 26,500,000 shares during 2007. This number is listed under purchases in the table in note 11.

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

In total, Merck paid \$1,429,700,000 to repurchase the stocks. The amount per share is \$53.95. To calculate this, we divide the total amount paid by the number of shares purchased. The calculation is:  
 $1,429,700,000 / 26,500,000 = \$53.95$  per share.

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

An asset is a resource that a company owns that can provide future benefits. Therefore, treasury stock does not qualify because it does not have a future benefit. Like previously stated, treasury stock is a contra-equity account, which means that it decreases the equity value. Treasury stock can be resold, but its main purpose is for the company to be able to buy back some of its ownership. The company is not buying back the shares in order to receive a future benefit. The company only wants to use its excess capital to reinvest in itself, gain more stake in its ownership, and improve its financial metrics.

#### 4) Analysis

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

(in millions)	2007	2006
Dividends Paid	3,307.3	3,322.6
Shares Outstanding	2,172.502884	2,167.785445
Net Income	3,275.4	4,433.8
Total Assets	48,350.7	44,569.8
Operating Cash Flows	6,999.2	6,765.2
Year-End Stock Price	\$57.61	\$41.94

	2007	2006
Dividends Per Share	\$1.52	\$1.53
Dividend Yield (dividends per share to stock price)	.026:1	.036:1
Dividend Payout (dividends to net income)	1.01:1	.75:1
Dividends to Total Assets	.068:1	.075:1
Dividends to Operating Cash Flows	.47:1	.49:1

Merck's dividends per share, dividend yield, dividends to total assets, and dividends to operating cash flows decrease. The dividend payout ratio has increased. This ratio increased because the net income decreased, but the dividends paid only decreased slightly. If an investor saw these ratios, he might be wary that the ratios are decreasing. However, the numbers are barely changing, and they show that the company is still continuously paying dividends. Investors will be happy to see that even though Merck's net income has decreased, they still pay dividends to their investors. This is a good sign for investors because they see that they will receive dividends if they invest with Merck.

Olivia Hamilton  
Case 10: State Street Corporation – Marketable Securities  
Dr. Dickinson  
ACCY 420

**The Honor Code:**

“On my Honor, I pledge that I have neither given, received, nor witnessed any unauthorized help on this case.”

Signed: Olivia Hamilton



## 1) Executive Summary

State Street is an investment company headquartered in Boston. Their focus is in institutional investing, which means they are a large company that trades in debt and equity securities. Some of their products consist of trading services, investment facilities, research, and investment management. State Street provided us with their income statement, comprehensive income statement, balance sheet, statement of changes in shareholder's equity, as well as notes to the financial statements. Because State Street is an investment company, their financial statements are different than that of most other companies. Therefore, it was our job to filter through these financial statements and their corresponding notes in order to find information about their three different types of securities. These securities consist of trading securities, held-to-maturity securities, and available-for-sale securities.

This case allowed us to learn the accounting treatment for the sale and the fair value adjustment of each of these types of securities. The State Street case was very beneficial because it expanded my knowledge on the different types of securities and their accounting methods. Also, in the future, this case will be beneficial for me in the future when I am working because I might have a financial services company as my client. This case has prepared me to understanding the financial statements of an investment company, and I will be more prepared to handle the differences that occur in these financial statements. Overall, this case has taught me a lot about different types of securities, and I feel more prepared to deal with them in my working career.

## 2) 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 investment instruments that a company holds that are held for the purpose of selling quickly. These securities are short term, which means that they are held for about three months or less and are then sold. Also, trading securities can refer to both debt and equity investments. It is accounted for by adjusting it to its fair market value at the end of each year. Since State Street is an investment company, these securities are technically considered inventory, since they are constantly buying and selling them at a rapid pace. Therefore, trading securities are classified as current assets on the balance sheet. The main way to make money off of these securities is price appreciation, meaning that the firm will buy low and sell high.

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

If the company were to receive \$1 of dividends the journal entry would be:

Cash	1	
Dividend Revenue		1

This entry shows that the company is receiving the \$1 in cash, as well as recording the revenue that is specifically from earning a dividend on an equity investment, such as stocks. The entry for earning \$1 of interest is similar, and would be recorded as:

Cash	1	
Interest Revenue		1

Again, this entry shows that the company is receiving the \$1 in cash, and they are recording the revenue specifically from earning interest on their debt security, such as a bond.

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

The journal entry to adjust the security to the fair market value is:

Fair Value Adjustment – trading	1
Unrealized Holding Gain – income	1

This entry debits the fair value adjustment account which is an adjunct account to the investment. This means that the account moves in the same direction as the investment, so the investment is increasing in value. The entry credits an unrealized holding gain because since the company is still holding onto the investment, the gain is not realized. Also, since the trading security increased in value it is shown as a gain. With a trading security, the unrealized holding gain or loss flows through the income statement, meaning we gain record the unrealized gain in net income under the “Other Gains and Losses” section of the income statement. If the market value of the security had decreased by \$1, then the journal entry would be reversed, and we would credit the fair value adjustment account and debit unrealized holding loss. In that case, the fair value adjustment account would decrease the value of the security, and the loss would go through the income statement.

- b. **Consider securities available-for-sale. Note that State Street calls these, “Investment securities available for sale.”**
- i. **In general, what are securities available-for-sale?**

An available-for-sale security is an investment instrument that cannot be classified as a trading security nor a held to maturity security. This can consist of holding the investment with the intent to sell, but with a longer time span than a trading security. It is accounted for by adjusting it to its fair market value at the end of each year. Like a trading security, an available-for-sale security can be in the form of a debt security and the form of an equity security. Unlike a trading security, however, the unrealized holding gain or loss that is realized when adjusting the security to its fair market value does not go through the income statement, but instead through comprehensive income. The way to earn money off these securities is through price appreciation, as well as dividends with equity securities and interest with debt securities.

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

A company would record \$1 of dividends in exactly the same manner as they would for a trading security. The journal entry would be:

Cash	1	
Dividend Revenue		1

Again, the debit to cash represents the company receiving the payment of the dividend, while the credit is to record and specify the revenue. The entry to record interest received is also the same for available-for-sale securities as it is for trading securities. The journal entry is:

Cash	1	
Interest Revenue		1

The debit to cash represents the company receiving the interest payment, and the credit represents the recognition of revenue. For both cases, if cash is not received and is just accrued, then instead of debiting cash, the company would debit a receivable account.

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

The journal entry to adjust the available-for-sale security to its fair market value is:

Fair value adjustment- Available-For-Sale	1	
Unrealized Holding Gain-Equity		1

Since the market value is increasing, again, we must debit the fair value adjustment account that an adjunct account to the security and increases its value. The debit to the unrealized holding gain shows that the company has incurred a gain on its investment, but no actual revenue has been recognized. Overall, the journal entry is similar to the entry used for adjusting the trading security, however, an available-for-sale security flows through comprehensive income instead. This means that on the balance sheet this amount would show up in the account "Accumulated Other Comprehensive Income". Also, the gain would not be part of net income, but instead would be seen in the comprehensive income. If the market value were to decrease by \$1, then instead we would credit the fair value adjustment account and debit an unrealized holding loss. This would decrease the value of the investment, and the unrealized holding loss would also flow through comprehensive income.

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

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

Held-to-maturity securities are investment instruments held by a company in which management has the intent and the ability to hold the security until its maturity date. This means that the company will not sell the security. This security is different than a trading and an available-for-sale security because it does not have to be adjusted to its fair value. Instead, the accounting method used is the amortized cost method, which helps account for discounts and premiums that the company incurred when they purchased the security. The investment must be amortized because the cash received in interest payments will never equal the amount of interest revenue that is recognized, and this is because of the discounts and premiums. The only exception to this rule is if the security is bought at par, but that scenario is highly unlikely. Equity securities are never classified as held-to-maturity because stocks do not have a maturity date. Therefore, the company would be unable to have the intent and ability to hold the security to its maturity date because that date does not exist. Held-to-maturity securities, therefore, are only debt securities because bonds do have set maturity dates.

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

If the market value of the held-to-maturity securities increased by \$1, then no journal entry would be required. Held-to-maturity securities do not have to be adjusted to their fair market value, so no fair value adjustment is needed. The only journal entries needed for the held-to-maturity security would be when the company recognizes interest revenue and the amortization of costs when each interest payment is made.

### 3) 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?**

The balance in the trading account assets is \$637 million. The market value of the securities at December 31, 2012 is also \$637 million. In footnote 1, State Street specifically states that their trading securities are carried at fair value. Therefore, the amount reported on the balance sheet is the fair value of the securities.

- 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.**

The journal entry to adjust the trading account asset to its market value is (in millions):

Fair Value Adjustment – Trading	85
Unrealized Holding Gain-Income	85

Since the fair value is higher than the unadjusted trial balance, then we know that there has been a gain. However, since the gain has not been realized, it must be classified as an unrealized holding gain. Also, this unrealized holding gain flows through the income statement and increases net income because it is classified as a trading security. The debit to the fair value adjustment account, which is an adjunct account to the investment, increases the value of the security so that it represents its fair value.

**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 year-end balance of the investment securities held to maturity is \$11,379 million. This value can be found in the balance sheet. This represents the amortized cost of the bonds.

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

The balance sheet, also, explains that the fair value of the investments is \$11,661. However, since these are the held-to-maturity securities, they are not adjusted to their fair value. The amortized cost is the balance that we are interested in. The fair value is higher than the balance because the market interest rate must have decreased below the stated rate on the bond, which means that the bond sold at a premium. It sells at a premium because the company is offering a higher interest rate than the market, and therefore, can sell the bond for above par value.

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

The amortized cost of these securities is the same as the year-end balance in the account, which is \$11,379 million. An amortized cost is the original cost of a security that is increased or decreased by any adjustments due to discounts and premiums that are associated with the bond. When dealing with bonds bought above par value, at a premium, or bonds bought below par value, at a discount, the company must amortize the costs. We do this because the cash proceeds received from the interest payment will not equal the interest revenue recorded. Since State Street is the investor, they do not make debits or credits to the premium or discount, instead they just debit or credit the debt investment for the difference between the cash proceeds and the interest revenue. These debit and credits increase or decrease the carrying value of the debt investment, which brings it to its amortized costs. The original cost is the amount that the company paid for the investment on the date of purchase of the investment. The amortized cost is the change of this original cost due to the increases or decreases to the debt investment.

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

The difference between the amortized cost and the market value is the difference between the carrying value of the investment and the fair market value of the investment in the market at that time. The table in footnote 4 shows us that the differences are due to unrealized holding gains and losses, but since it is a held-to-maturity security, we do not adjust the investment to its fair value. This is why in the balance sheet, the balance of the held-to-maturity securities will display the amortized costs and not the fair value like the trading and available-for-sale securities do. Since the fair value is higher than the amortized cost of the investment, this indicates that the market interest rate has decreased. We know it has decreased because if the stated rate on the bond is higher than the market rate, then the bond can be sold for a premium, which means more than its par value. Therefore, since the fair market value is higher, we can assume the bonds are now selling at a premium, which means a lower market interest 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 year-end balance in the investment securities available for sale account is \$109,682 million. This amount can be found stated in the balance sheet, as well as in footnote 4. This balance represents the fair value of the available-for-sale securities. Footnote 4 is a breakdown of all the different securities classified as available-for-sale. Also, it provides totals of the amortized costs, the unrealized holding gains and losses, and the fair value. Therefore, we can see where State Street derived the value found in the balance sheet. To calculate the fair value of the securities, we take the amortized cost of the investment and add the unrealized holding gains and subtract the unrealized holding losses. The calculation is (in millions):

$$108,563 + 2,001 - 882 = 109,682$$

This calculation confirms that the fair value balance in the balance sheet is correct. The fair value of a security is determined by the market because that is the amount that a security would currently sell for in the market.



- 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 amount of net unrealized gains or losses is a gain of \$1,119 million. This number is found by looking at footnote 4 because in the chart, there are totals for net unrealized gains and net unrealized losses. Therefore, we can take these totals and net them together to find our total net unrealized gains or losses. The calculation is (in millions):

$$2,001 \text{ gain} - 882 \text{ loss} = 1,119 \text{ gain}$$

Since we have more gains than losses, our net number is also a gain. If we had more losses than gains, then our net number would be a loss. This number represents how much we have had to adjust the cost of our securities to bring them to their fair value. The amortized cost of the available-for-sale securities is \$108,563 million, so when we add the \$1,119 million gain, we get the fair value of \$109,682. When we make the journal entries to adjust the securities to their fair market value, we use the fair value adjustment account. When the fair value increases, we incur an unrealized gain. On the other hand, when the fair value decreases, we incur an unrealized loss. Since this is for available-for-sale securities, this net gain of \$1,119 million will flow through equity and will be seen in comprehensive income.

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 amount of net realized gains or losses from sales of available-for-sale securities is a gain of \$55 million. In footnote 4, there is another chart which presents the realized gains and losses. The gross realized gains are \$101 million, and the gross realized losses are \$46 million. Therefore, we can net these numbers together to get our total. The calculation is (in millions):

$$101 \text{ gain} - 46 \text{ loss} = 55 \text{ gain}$$

This number can also be confirmed by referring to the income statement because there is a section for gains and losses which includes the net realized gains or losses from sales of securities. The realized gains are caused when a company sells a security for more than the book value of the security. The realized losses are caused when a company sells a security for less than the book value of the security. The gain amount impacts the statement of income by increasing the amount of net income by \$55 million. This can be seen in the income statement that is provided by State Street. The gain also would increase the cash flows. This is because a gain is an increase in equity from operations other than the business main operations. If the net realized gain had instead been a net realized loss, then it would have decreased net income as well as 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):**

<b>Proceeds from sales of available-for-sale securities</b>	<b>\$5,399</b>
<b>Purchases of available-for-sale securities</b>	<b>\$60,812</b>

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

The journal entry to record the purchase of the available-for-sale securities is (in millions):

Investment in Available-for-Sale	60,812	
Cash		60,812

The question provides us with the total amount of purchases for 2012, so we know that this is the total amount that State Street spent on available-for-sale securities. The debit to the investment account is an asset, and adding to the balance of the available-for-sale securities. It is important to classify the investments, so that management and auditors can make sure that they are accounting for them in the proper manner. Since we are purchasing these securities, we must credit cash because that is how we are paying for the investment. Overall, it has no effect on net assets because the investment is increasing assets, while cash is decreasing assets by the same amount.

- iii. **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”**

The journal entry to record the sale of available-for-sale securities is (in millions):

Cash	5,399	
Unrealized Pre-tax Gains	67	
Realized Gains on Available-for-Sale		55
Investment in Available-for-Sale		5,411

The debit to cash represents the proceeds that State Street received from the sale. This number is provided in the question, so we know that this is the correct amount of cash received. The debit to the unrealized pre-tax gain is also an amount given to us in the question. Usually, when making this journal entry, it is not necessary to get rid of the unrealized gains associated with the securities. However, since we do not know the cost basis for the available-for-sale securities, we must use the unrealized gains to solve for this number. We only have the fair value of the available-for-sale securities, which is not the correct value to use when recording the sale of securities. The credit to the realized gains is to recognize that State Street sold the securities for more than they paid for them. We solved for this amount in part f(iii). Since the problem indicates that these are all of the available-for-sale securities sold for the year, then we know that all of the realized gains solved for previously apply to this sale. Lastly, the credit to the investment account is to get rid of the investment from State Street’s books, and they must do this at the cost basis. Since we do not know this amount, we must solve for the value and plug it into our journal entry. The calculation is (in millions):

$$5,399 + 67 - 55 = 5,411$$

This number represents the cost basis for the security being sold, as opposed to its fair market value of 5,399. The debit to cash increases the asset amount, but the credit to the investment account decreases the asset amount by more. The debit to the unrealized gain decreases the equity amount, while the credit to realized gains increases the equity amount.

**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 sold in 2012 is \$5,411 million. We were able to solve for this amount by plugging it into the previous journal entry. The calculation is (in millions):

$$5,399 + 67 - 55 = 5,411$$

We must take the cash proceeds from the sale and add the unrealized gains and deduct the realized gains in order to solve for the original cost. The crucial part to this step is adding the unrealized gains. If we did not do this, we would wind up with the fair value of the available-for-sale securities instead of the original cost. To solve for a realized gain, the equation is the cash proceeds minus the book value of the security. We can rearrange this formula to solve for the book value by subtracting the realized gains from the cash proceeds. This calculation is (in millions):

$$\text{Book Value} = 5,399 - 55 = 5,344$$

However, this number does not match the original cost, therefore, this is why we must account for the unrealized holding gain as well or else our number will be incorrect.

Olivia Hamilton  
Case 11: ZAGG Inc. – Deferred Income Taxes  
Dr. Dickinson  
ACCY 420

**The Honor Code:**

“On my Honor, I pledge that I have neither given, received, nor witnessed any unauthorized help on this case.”

Signed: Olivia Hamilton

## 1) Executive Summary

ZAGG is a company focused on producing mobile device accessories, such as screen protectors, cases, and headphones. The company has continued to expand its market and products throughout the year. ZAGG provided us with its set of financial statements from 2011 and 2012. These financial statements consisted of the balance sheet, the income statement, the statement of cash flows, and the notes to the financial statements. It was our job to search through these financial statements to find information referring to deferred tax assets and deferred tax liabilities. Also, we had to figure out the role these deferred tax assets and liabilities played in determining the income tax expense and the income taxes payable that should be recorded for the current year.

This case was very beneficial because it deepened my knowledge on deferred tax assets and deferred tax liabilities. Also, it helped me to better understand why book income and taxable income can differ in amounts. In the future, I know I will be using this information quite frequently because I will be working in the tax services of a public accounting firm. Especially today, with all of the new tax reform and new tax rate, all of these deferred tax assets and liabilities will have to be taken into account and readjusted to reflect the new tax rate. Once I start working, I feel confident that I will have a good understanding about income taxes, as well as the reasoning we incur deferred income taxes. This is very important because these are very likely items that I will incur during my career.

## 2) 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.**

The book income is the same as the pretax financial income. This number is found on the income statement. This income is found by following the rules of GAAP. The book income for ZAGG is \$23,898 thousand. This number is found by referencing the income statement and finding the income before taxes, which ZAGG refers to as "income before provision for income taxes". Book income differs from taxable income because taxable income is the amount that is reported when filing taxes. Taxable income does not abide by GAAP, but instead by the guidelines set by the Internal Revenue Service, otherwise known as the IRS. These differences in amounts occur from temporary difference or permanent differences from transactions that have already occurred, but affect the company in future years. The differences cause either a future taxable amount, which means that in future years the amount will be taxed as a part of the taxable income, or a future deductible amount, which means that in future years, this amount will be able to be deducted from taxable income. A future taxable amount results in the creation of a deferred tax liability, while a future deductible amount results in a deferred tax asset. The income tax expense recorded is based on the book income, while the income tax payable is based on the taxable income. Therefore, the difference between these two numbers results because of deferred tax liabilities, deferred tax assets, or both.

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

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

A permanent tax difference is a transaction that causes a difference between the book income and the taxable income. This difference, however, is never reversible. A permanent tax difference does not create a deferred tax liability nor a deferred tax asset. Since the permanent differences never reverse, this means that in future years the amounts are neither taxable nor deductible. For example, the revenues would be nontaxable in future years, and the expenses would be nondeductible in the future. A common example of a permanent tax difference is interest revenue on a municipal bond. This amount would cause taxable income to be larger than book income for the year it occurred, but it would not be deductible in future years. An example of a nontaxable amount would be a fine, for example a fine for pollution. This amount would cause book income to be larger than taxable income in the current year, but it would never be taxable in future years.



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

A temporary tax difference is a transaction that causes a difference between book income and taxable income, but the difference is reversible in future years. These differences are due to timing differences at the time of the transactions, but in the future, they will reverse, so the difference will equal out. A temporary difference that leads to a future deductible amount, meaning that in the current year the taxable income is higher than the book income but the amount will be deducted in future years, leads to a deferred tax asset. A temporary difference that leads to a future taxable amount, meaning that in the current year the taxable income is lower than the book income but the amount will be taxed in future years, leads to a deferred tax liability. An example of a future deductible amount is an estimated warranty expense because the expense would be recognized in net income in the current year, but it will not be deductible until future years. An example of a future taxable amount is when a company reports more depreciation expense in their taxable income than they did in their book income. This difference is usually due to the different depreciation methods required by GAAP and the IRS. This expense is not recorded in the net income in the current year making the book income higher than the taxable income, which means that in future years this amount will be taxable.

**iii. Statutory tax rate**

The statutory tax rate is the tax rate that is mandated by law by the government. This rate is a set rate through the tax rules passed by the government. The rate is a set percentage that when multiplied by taxable income will determine the amount that the company owes in taxes. For example, in the United States, the statutory rate for corporations used to be 35%, but after the new tax reform that passed in December, the new statutory rate is mandated to be about 21%.

**iv. Effective tax rate**

The effective rate is equal to the income tax expense divided by the pretax income. Essentially, this means that the effective rate is the average tax rate that the company is being taxed at. This is different than the statutory rate because temporary differences as well as timing differences cause book income and taxable income to differ in amount. Also, it is possible that a company is earning some of its income abroad, and therefore, that income is being taxed at a foreign tax rate. Both the domestic and foreign tax rate plays a role in the income tax expense, and thus alters the set statutory tax rate.

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

Deferred income tax is the amount that a company will owe in taxes to the IRS in a later period. They arise from temporary differences that cause the taxable income to be lower than the book income. This difference results from different tax rules stemming from GAAP and the IRS. When a deferred tax liability is created, the journal entry to record income tax expense consists of a debit to income tax expense, a credit to income tax payable, and a credit to income tax expense. Therefore, the income tax expense is equal to the income tax payable, which is the amount of taxes due to the IRS, plus the deferred tax liability. This means that the deferred income taxes are recorded as part of the total income tax expense.

When we think about the calculations for income tax payable and income tax expense, it is easy to understand why it is included. Taxable income is computed by taking the pretax financial income plus or minus any temporary or permanent differences that may have occurred during the period. Then we take taxable income and multiply it by the statutory tax rate to get the amount for income taxes payable. Any of the temporary differences that were deducted from pretax financial income are future taxable amounts which means they correspond to deferred tax liabilities. Any of the temporary differences that were added to pretax financial income are future deductible amounts which means they correspond to deferred tax assets. For the journal entry, we take the total of the future taxable amounts and multiply it by the tax rate, and this gives us the amount of our deferred tax liability. We do the same with the future deductible amounts to get the amount for the deferred tax liability. From here, we can plug our income tax expense with a simple calculation, which is the income tax payable plus any deferred tax liabilities minus any deferred tax assets. This amount can be checked if it is correct by taking the pretax income and multiplying it by the tax rate. This shows that in order to calculate the correct amount of the income tax expense, the deferred income taxes must be considered.

The Accounting Standards Codification (ASC), specifically ASC 740, is a useful resource to further explain why a company reports deferred income taxes as part of their total income tax expense. This codification establishes the rules for recording and paying the income taxes that are currently payable in the current tax year. Also, the section goes into detail explaining temporary differences and their effects. It states "deferred tax assets and liabilities represent the future effects on income taxes that result from temporary differences and carryforwards that exist at the end of a period". From this, we can see that in the future we will incur the effects of these temporary differences. Therefore, we can conclude that we need to record the expense in the year it was incurred, even if we are not paying it or deducting it for future years. It is similar to how we would treat any normal expense; we record

the expense and accrue the liability. It is the same for deferred income taxes. Also, the codification states that the deferred tax assets and liabilities are subject to the tax rate, meaning that they are calculated to see how much tax expense they would incur if they were due in the current period. Lastly, the codification discusses that these amounts are not subject to the time value of money, so the company knows that the amount that they recognize in their expense, will be the same amount that they recognize in future periods.

All of these points contribute to the question of why companies do not report their current tax bill as their income tax expense. If a company were to do this, they would be neglecting the tax effects of the deferred tax assets and liabilities. Also, they would be incorrectly following the expense recognition rule because they would be recognizing the tax expense in the wrong period. This is what would happen if companies only considered their current tax bill as their tax expense. Therefore, companies must remember that deferred tax assets and deferred tax liabilities can decrease or increase the tax expense, and this change must be recorded in the current year.

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

A deferred tax asset represents future deductible amounts. This means that in future years, we will be able to reverse the deferred tax assets, and use it to offset the amount of income tax we actually have to pay to the IRS. For example, if a company incurs a net operating loss, they are able to carry this loss to future periods in order to offset taxable income. This net operating loss creates a deferred tax asset and an income tax benefit. Therefore, in future years, when the company has a net profit, they can reverse part of the deferred tax asset created, and use the income tax benefit to reduce the amount of income taxes payable. A company is able to do this until it has reversed the entire deferred tax asset that was created from the net operating loss. An example of a situation that would give rise to a deferred tax asset is when a company recognizes a warranty liability. The company must record the warranty expense in the current period, however, the company does not recognize this expense in taxable income. This means that the expense is deducted from the pretax financial income in the current period, but it is not deducted from taxable income in the current period. In future years, this amount will be deducted from taxable income, which in turn will lessen the income taxes payable.

A deferred tax liability represents a future taxable amount. This means that in future years, the company will be able to reverse the deferred tax liability by paying taxes on the amounts. An example of a deferred tax liability that would give rise to its balance on the balance sheet is using different methods for depreciation. When

accounting for depreciation for pretax financial income a firm usually uses a method such as straight-line depreciation. However, while accounting for depreciation for tax purposes, companies use an accelerated depreciation method called MACRS. This accelerated depreciation method causes the company to account for more depreciation for tax purposes than for financial statement purposes. Therefore, pretax financial income is higher than taxable income. This means that this difference in depreciation amount is being accounted for in income tax payable, which means that the company will have to pay taxes on the amount in future years once the amount is realized and reversed. Since book income is higher than taxable income, the amount recorded for income tax expense will be higher than the amount recorded for income taxes payable. Therefore, a deferred tax liability must be recorded as well to make the journal entry balance, and this amount will be equal to the amount of the difference multiplied by the tax rate. A deferred tax liability caused by differences in depreciation expense is usually reversed over several years. As the amount is reversed, the deferred tax liability is reduced, and the amount of income tax payable in those years is higher than income tax expense.

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

A deferred income tax valuation allowance is an account to offset a deferred tax asset. The account is a contra-asset account because it reduces the amount of the deferred tax asset account. It is used when a company does not believe it will realize all of its deferred tax asset. A valuation is usually determined by a third party or management. The valuation should be recorded when it is realized that the deferred tax asset most likely will not be realized and fully reversed. The valuation allowance can be used whether the deferred tax asset will not be fully or partially recognized. For example, if a company has a net operating loss and plans to carry forward the income tax benefit, they have created a deferred tax asset. If the company is evaluated and told that they will most likely not utilize all of the net operating loss, then they will not reverse all of the deferred tax asset. The valuation allowance account is used to find the net value of the deferred tax asset, which needs to equal the actual amount the company will reverse. The journal entry would consist of a debit to the income tax expense account and a credit to the valuation allowance for deferred tax asset account. The debit to the income tax expense account is the same as reducing the income tax benefit account that was created from the net operating loss. A valuation allowance account is not necessary for a deferred tax liability because a company cannot overvalue a liability.

### 3) Process

f. Consider the information disclosed in Note 8 – Income Taxes to answer the following questions:

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?

The journal entry to record the income tax provision in 2012 is (in thousands):

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

The income tax expense refers to the same thing as the income tax provision, which is what ZAGG calls it. We debit the income tax expense because we are increasing our expenses. The amount can be found in ZAGG's income statement, and it is listed under "Income tax provision". This represents the amount of taxes that should be recorded based on the pretax financial income multiplied by the tax rate. This amount can also be located in Note 8 under "Total (provision) benefits" in the first table. The debit to the deferred tax asset represents that we have increased the account. This increase is due to a temporary difference that has caused the taxable income to be larger than the book income. It is important to indicate that this account is the net deferred tax asset account because this shows that is less any deferred tax liabilities. This means that the company has more deferred tax assets than deferred tax liabilities. Lastly, we credit income taxes payable to create a liability account of the amount of taxes that ZAGG actually owes. Again, this amount can be found in Note 8 under "Total Current" in the first table. It is listed as current because it is due currently to the IRS, so the company must pay off the liability soon.

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

The broken-down journal entry to record the tax provision in 2012 is (in thousands):

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

The debit to the income tax expense account is the same as the previous journal entry because ZAGG is still recording the same amount of income tax expense. We debit the deferred tax asset account because the amount has increased. To calculate this number, we look at the third table in Note 8, and consult the row titled “Total deferred tax assets”. Then we take the difference between the amounts in years 2011 and 2012, so the calculation is  $14,302 - 6,300 = 8,002$  (in thousands). Since the amount has increased from 2011 to 2012, then we know the deferred tax asset increased and should be debited. Also, we know that the overall net deferred tax asset increased, so that means the individual deferred tax asset must increase as well. We debit the deferred tax liability because the amount has decreased from 2011 to 2012 when we look at the third table in Note 8. A debit to a deferred tax liability means that some of the deferred tax liability is being reversed. To calculate this amount, we take the difference between the amounts in the third table of Note 8, so the calculation is (in thousands)  $1,068 - 794 = 292$ . However, due to rounding errors and to make our journal entry balance, we round this number to \$291 thousand. The credit to the income tax payable account is increasing the liability, and this is the amount that ZAGG actually owes in taxes. This is the same amount that was used in the previous journal entry, and it is located in Note 8 in the first table. Again, this is a current liability because it is the amount that ZAGG must pay for the current year.

- 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?**

The effective tax rate is 39.3% To calculate this amount, we take the income tax expense divided by the pretax income. The calculation is (in thousands):  
$$9,393/23,898 = .393 = 39.3\%$$

Both of the values in the calculation can be found in ZAGG's income statement. The income tax expense is found on the row called "Income tax provision", and the pretax income is found on the row called "Income before provision for income taxes". The effective tax rate is different from the statutory tax rate because the effective tax rate is the actual amount of our income that we pay in taxes. In general, the amount we pay in taxes can differ due to items such as tax deductions, tax credits, temporary differences, permanent differences, or using foreign tax rates. For ZAGG specifically, we can look at the second table in Note 8 and see that the differences could be due to deductions, non-domestic production activities, or the federal surcharge rate.

- 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 income tax asset of \$13,508 thousand was found by netting the total deferred tax assets with the total deferred tax liabilities. In the third table in Note 8, we see that the total deferred tax assets are \$14,302 thousand, and that the total deferred tax liabilities is \$794 thousand. Since we have more deferred tax assets than deferred tax liabilities, we know that the net amount will be a deferred tax asset. The calculation for the total net deferred tax asset is (in thousands)  $14,302 - 794 = 13,508$ . This amount is net of both deferred tax liabilities, as well as net of the valuation allowance for deferred tax assets. The amount can be confirmed in ZAGG's balance sheet. On the balance sheet, there are two different rows referring to deferred tax assets, and this is because one is the current portion and one is the noncurrent portion of the deferred tax asset. The current portion is \$6,912 thousand, and the noncurrent portion is \$6,596. Therefore, when we add these two amounts together ( $6,912 + 6,596 = 13,508$ ), we get the net deferred tax asset balance of \$13,508 thousand. A current deferred tax asset is expected to be utilized or reversed in the next twelve months, while a noncurrent deferred tax asset will not be reversed for a period of longer than a year.

Olivia Hamilton  
Case 12: Apple Inc. – Revenue Recognitions  
Dr. Dickinson  
ACCY 420

**The Honor Code:**

“On my Honor, I pledge that I have neither given, received, nor witnessed any unauthorized help on this case.”

Signed: Olivia Hamilton



## **1) Executive Summary**

Apple is probably one of the best-known companies in the world in society today. It is well known for its products including laptops, desktops, cell phones, softwares, and iPods. The company is always coming out with new and innovative products that are changing the world. In this case, Apple provided their financial statements, which include the income statement, the balance sheet, the statement of shareholders' equity, the statement of cash flows, and the notes to the financial statements. With this case, the most important information was found in the notes to the financial statements because it provides all the details about Apple's revenue recognition procedures.

With the new changes in the revenue recognition rules in the ASC 606, this case is more relevant than ever. It was very helpful to take what I have learned about the rules and apply them to a real company. I feel more confident in my ability to know and understand these rules and apply them in the work force. When I am going through a client's financial information, one of the key components to look for is to make sure the company is recognizing revenue properly. This case has helped me to understand the importance of companies abiding by these rules and remaining ethical when reporting their information. Revenue recognition is going to always be a major part of an accountant's career, so I feel that I have dived deep into the rules and an example of a company in order to have a better grasp on this new change in the profession.

## 2) Concepts

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

Revenues are the increases in equity that are due to the core operations. It is income that is ordinary and consistent every period. These would include sales of the goods or services that the company provides. Gains are increases in income from activities outside the core operations of the business. These increases in equity are not regular and not recurring every period. An example of a gain would be when a company sells a piece of equipment, that they use in their production, for more than the equipment’s book value. The company is not in the business of selling equipment, but they still have a form of increase in equity from this transaction. It is important to distinguish between revenues and gains because it shows the company and investors what income is regular and what income was just a one-time occurrence. This allows for more predictability when it comes to the financial statements and future period because the company should expect to earn similar revenues, but not expect to earn similar gains every period.

- 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.**

In order for a business to recognize revenue, they must have fulfilled the obligation promised to the customer. Revenue can only be recognized when the income is actually earned by the company. For example, if a customer prepays for a service from a company, this sale is accounted for as unearned revenue, which is a liability account, until the company performs the service for the customer. Very recently, there has been new revenue recognition rules placed into effect. It has only just gone into effect for public companies in December of 2017, and it will go into effect for non-public companies in December of 2018. These revenue recognition rules apply to contracts with customers and use an asset-liability approach. These steps can be found in the codification ASC 606. The first step of the process is to identify the contract with the customer. This contract must follow all the legal rules of forming a contract. Next, the company must identify the performance obligation. A performance obligation is the good or service that the company is contractually obligated to provide to its customer. This can consist of multiple performance obligations, in which case the revenue must be allocated to each performance obligation. The third step is to identify the transaction price. This is the amount the company can be expected to receive from its customer in exchange for the good or service. The fourth step is to allocate the transaction price. If there is only one performance obligation, then the entire transaction price is allocated to that single obligation. However,

like previously stated, a contract may consist of more than one performance obligation. In this case, the company must take the total transaction price identified earlier and allocate it to each performance obligation based on their fair values. The fair value is determined by measuring or estimating how much the good or service would sell for on its own. The individual fair value is then divided by the total of the fair values of all of the performance obligation. This percent is then multiplied by the transaction price in order to determine the amount to allocate to that specific performance obligation. The last step in the process is to recognize the revenue when the performance obligation has been completely satisfied. A company can determine if the performance of the obligation has been met when they have completed the service promised or the control of the good has exchanged to the customer. Lastly, it is important for the company to know that the collection of the money from the sale is probable. This is to ensure that Apple will receive the payment it has earned in the future.

The accounts that are affected by the recognition of revenue are assets, either cash or accounts receivable, which is recorded at the time of the sale. Also, a liability account called unearned revenue could be affected if performance obligation is not met at the time of the sale. In this case, the company would increase their liabilities until the obligation is met. Lastly, revenue recognition would increase the equity account revenue once the performance obligation has been satisfied and the company has recognized the revenue. The financial statements that are affected are the income statement when the revenue is recognized because that is increasing net income. Also, it affects the balance sheet because the assets are increasing, and if there is unearned revenue, then the liabilities are also increasing. Also, when the revenue is recognized, it will be closed out to retained earnings at the end of the year which will increase the equity section of the balance sheet. Lastly, when the revenue is recognized, it will affect the statement of cash flows because the net income is a part of the cash flows from operations section in the financial statement.

- 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?**

In general, Apple recognizes revenue when the product has shipped and the transfer of risk has occurred. According to Apple's most recent 10-K, Apple recognizes revenue when there is persuasive evidence of an arrangement exists, delivery has occurred, the sales price is fixed or determinable, and collection is probable. This does apply to the criteria of ASC 606 that are listed above. The evidence that an arrangement exists is the same as identifying that a contract has been made. When delivery has occurred, this is when the performance obligation has occurred so Apple is able to recognize the revenue. The fact that the sales price is fixed or determinable is the same as the steps of identifying and allocating the transaction price. This lets the company know how much they should expect to earn from the transaction. Lastly, Apple wants to know that collection is probable because it is important to know that the company will actually receive the money that is associated with the revenue. All of the points in Apple's revenue recognition criteria agree very well with the ASC 606, so it is clear that Apple is abiding by the revenue recognition rules.

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

Multiple-element contracts are contracts with customers that consist of more than one performance obligation. Like stated previously, when this occurs, the company must allocate the transaction price based on each obligation's fair value. These contracts pose problems for revenue recognition because the transaction price must be allocated, as well as there might be timing differences as to when the revenue can be recognized. Under the accrual method, the revenue is recognized when the performance obligations have been satisfied, so if a contract has multiple elements, then each might be satisfied at different times. Therefore, the company can only recognize the amount of revenue allocated to that specific performance obligation at that time. For example, if a company sells a dishwasher to a customer and along with this dishwasher, the customer purchases the installation of the dishwasher as well as a two-year warranty on the dish washer. The company would have to first allocate the transaction price to each of these aspects of the contract, and then recognize revenue when each obligation is satisfied. The sale of the dish washer is satisfied when the customer gains control of the dish washer, which could be when it is delivered to his house. The company can recognize the revenue from the installation when they successfully install the dish washer in the customer's house. Lastly, the company will recognize the warranty revenue when it fulfills the liability or at the end of the two years when the warranty has expired,

meaning that the company has satisfied the entire warranty liability. The company cannot recognize the entire revenue for all three obligations when the good transfers control because at that time two of the obligations are still not completed. This would lead to an incorrect matching of revenues in the financial statements because revenues can only be recognized when it is earned. In Apple's case, they allocate revenue based on the sales price of each of the individual elements of the contract. Apple will recognize revenue on each individual product when their respective performance obligation has been met.

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

Managers do well when the company does well. Therefore, as the company earns more revenues, the managers do better. Managers have incentives to do whatever it takes to earn the most revenues possible in order to meet goals or opportunities that the company offers. If managers earn more money when they meet a certain sales goal, then they will do whatever it takes to meet these goals. These incentives can lead to managers ignoring the rules of revenue recognition so that they can present revenues in the best light for themselves. However, ignoring the rules set in place by GAAP can cause the company to get themselves in a lot of trouble. An example would be if a manager got a bonus if he met a certain revenue goal for the period. Let's say the manager is just short of meeting his goal. He made a sale, but the contract will not be fulfilled until the next period, so technically the manager is not allowed to recognize the revenue. However, he could go against the rules and recognize the revenue when the contract was formed just to meet his goal. This is considered fraud and against the rules, but it is an occurrence that can happen when it comes to self-serving revenue recognition choices. On the other hand, self-serving revenue recognition choices do not always do not have always highlight a bad action. If managers have an incentive, such as a bonus for reaching certain revenue goals, then this could encourage the managers to make sure that all of the performance obligations of the contract are fulfilled in a timely manner so that the revenue is able to be recognized. Lastly, a manager should want the company that he works for to succeed, so he has an incentive to keep the company profitable, which is done by earning and recognizing revenues.

### 3) 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.**

Songs on iTunes are considered third party content; therefore, Apple does not have control over setting the prices of these products. Because of this, Apple recognizes revenue on a net basis. Apple only earns income on the sale of songs through commissions. The main percent of the cost goes to the third party, such as the artist. Apple, therefore, only recognizes revenue on this commission. Since when a customer purchases a song on iTunes the song is made immediately available to them, Apple can recognize revenue at the time of the sale. Apple is not responsible for any recognition of the revenue earned by the third party. This follows the codification because a contract is made when the customer chooses to buy the song, and the performance obligation is met when the is bought and available in the customer's iTunes library. At the time of purchase, the customer has accepted the asset and Apple has the right to payment. Both of these are change in control indicators, so it proves that revenue recognition may occur.

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

Sale of Mac-branded accessories are recognized as revenue when the product has shipped to the customer or the customer has purchased the product in the store and has left with it. In both instances, this is when Apple transfers the title and the risk of the product, so they can call the performance obligation satisfied and recognized the revenue. If the products are bought online and then shipped to the customer, Apple treats this transaction slightly different. Apple does not recognize revenue on the sale until the product is delivered to the customer. This is because Apple still bears some of the risk related to the product, so it is not until all of this risk has been transferred to the customer that the performance obligation has been met. One of the change in control indicators is that the customer has the risks and the rewards that come to the ownership of the

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

Revenue is recognized when Apple fulfills the order of the third-party reseller. Apple treats this like a normal sale, and the third-party reseller is like an ordinary customer. Therefore, Apple recognizes revenue when the product has shipped or have been delivered the third-party. It will depend on who has the assumption of the risk. Once Apple has transferred the risk and reward of the products to the third-party, it may recognize the revenue for the gross amount for all the products that the reseller purchased. This follows the change in control when the customer assumes the risk of the products.

**iv. Revenue from gift cards.**

When a customer purchases a gift card, Apple records a deferred revenue because the performance obligation has been met. The performance obligation is met when the gift card is actually used to purchase a product. A gift card is just a place holder until it is actually used to buy an Apple product. The performance obligation is for Apple to actually provide the product or service that the person uses the gift card to purchase. Once the customer claims his purchase, then Apple can recognize revenue from the initial sale of the gift card. This is when Apple has the right to payment and when Apple physical transfers the product. These are change in control indicators, which means that the performance obligation has been met.

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