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ACCOUNTING STANDARDS AND TOPICS IMPLEMENTED AND ANALYZED

by
Makenzie Courtland McNeill

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

Oxford
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Approved by

Advisor: Dr. Victoria Dickinson

Reader: Dean Mark Wilder

ABSTRACT

MAKENZIE COURTLAND MCNEILL: Accounting Standards and Topics Implemented and Analyzed

(Under the direction of Dr. Victoria Dickinson)

The objective of this thesis is to report on multiple accounting standards and topics through the use of twelve different cases. The cases that were researched included the topics of evaluation of financial statements, profitability and earnings, accounts receivable, and working through a time value of money problem. Additionally, subjects such as research and development costs, the data analytics tool IBM Watson, long-term debt, stockholders' equity, marketable securities, deferred income taxes, and revenue recognition were also analyzed throughout this paper. These cases were written to help the reader, and others, learn from their questions. The questions in the cases, as shown in this paper, are meant to act as a guidance and learning tool though the various accounting standards listed above.

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CASE ONE
Home Heaters, Inc.: Financial Statements Analyses

This case surrounded two companies, Glenwood Heating, Inc. and Eads Heaters, Inc., which both sell home heating units. Throughout the year, both businesses had identical operations and transactions, including the issuance of stock, purchases of equipment, and payments of dividends. These transactions are described and listed throughout Part A of this case. At year end, the managers of each company were faced with accounting decisions that would affect how their accounting statements would be prepared. Thus, Part B of this case described how Glenwood Heating, Inc. and Eads Heaters, Inc. differentiated in recording five transactions. Because both companies began the year identically, this case helps us understand the effects that various manager's accounting decisions can have on a company's financial statements at the end of the year.

As a whole, this case was very beneficial as a learning tool for many reasons. First, I feel that I learned a significant amount about how to read and draw data from sizable text into a spreadsheet, such as Excel. I haven't had much experience with this before, so spending a great deal of time on this case familiarized myself with the process. This case also helped me with my organizational, time management, and group skills, which I needed in order to finish such a project. In addition, the case encompassed several accounting skills that I had not used in a while. It pushed me to review a few ideas, as well as follow through the complete process from journaling transactions to financial statements, like I would in the real world. I can see my experience from this case benefiting me in the future, specifically in my other classes.

Part A

**Home Heaters
Recording of
Basic Transactions**

	Assets				=	Liabilities			+	Stockholder's Equity	
	Cash	Accounts Receivable	Inventory	Land	Building	Equipment	Accounts Payable	Note Payable	Interest Payable	Common Stock	Retained Earnings
No. 1	\$160,000									\$160,000	
No. 2	400,000							400,000			
No. 3	(420,000)			70,000	350,000						
No. 4	(80,000)					80,000					
No. 5			239,800				239,800				
No. 6		398,500									398,500
No. 7	299,100	(299,100)									
No. 8	(213,360)						(213,360)				
No. 9	(41,000)							(20,000)			(21,000)
No. 10	(34,200)										(34,200)
No. 11	(23,200)										(23,200)
No. 12									6,650		(6,650)
Balances	\$47,340	\$99,400	\$239,800	\$70,000	\$350,000	\$80,000	\$26,440	\$380,000	\$6,650	\$160,000	\$313,450

Table 1

**Home Heaters
Trial Balance - Part A**

	Debit	Credit
Cash	\$47,340	
Accounts Receivable	99,400	
Inventory	239,800	
Land	70,000	
Building	350,000	
Equipment	80,000	
Accounts Payable		26,440
Note Payable		380,000
Interest Payable		6,650
Common Stock		160,000
Dividend	23,200	
Sales		398,500
Other Operating Expenses	34,200	
Interest Expense	27,650	
Total	\$971,590	\$971,590

Part B

Glenwood Heating, Inc.:

1. Bad Debt Expense	994	
Allowance for Doubtful Accounts		994
(99,400 * .01)		
2. Cost of Goods Sold	177,000	
Inventory		177,000
3. Depreciation Expense – Equipment	9,000	
Accumulated Depreciation – Equipment		9,000
((80,000-8000)/8)		
Depreciation Expense – Building	10,000	
Accumulated Depreciation – Building		10,000
((350,000-50,000)/30)		
4. Rent Expense	16,000	
Cash		16,000
5. Income Tax Expense	30,914	
Cash		30,914
((398500-177000-16000-10000-9000-34200-27650-944)*.25)		

Eads Heaters, Inc.:

1. Bad Debt Expense	4,907	
Allowance for Doubtful Accounts		4,907
(99,400 * .05)		
2. Cost of Goods Sold	188,800	
Inventory		188,800
3. Depreciation Expense – Equipment	20,000	
Accumulated Depreciation – Equipment		20,000
(1/8 * 2 * 80,000)		
Depreciation Expense – Building	10,000	
Accumulated Depreciation – Building		10,000
4. Lease Equipment	92,000	
Lease Payable		92,000
Lease Payable	8,640	
Interest Expense	7,360	
Cash		16,000
Depreciation Expense	11,500	
Accumulated Depreciation		11,500
(92,000 / 8)		
5. Income Tax Expense	23,505	
Cash		23,505
((398500-188800-10000-20000-34200-7360-27650-4970-11500)*.25)		

Part B

Glenwood Heating, Inc.

Part B – Recording of Additional Information

Transaction	Assets						
	Cash	Accounts Receivable	Allowance for Bad Debts	Inventory	Land	Building	Accumulated Depreciation
Balances: Part A	\$47,340	\$99,400		\$239,800	\$70,000	\$350,000	\$80,000
Part B (1) Bad Debts			994				
Part B (2) COGS				(177,000)			
Part B (3) Depreciation Building						10,000	
Equipment							9,000
Part B (4) Equipment Rental Payment		(16,000)					
Part B (5) Income tax		(30,914)					
Balances	\$426	\$99,400	\$994	\$62,800	\$70,000	\$350,000	\$10,000
						\$80,000	\$9,000
						\$80,000	\$9,000

Table 2

Glenwood Heating, Inc.

Part B – Recording of Additional Information (continued)

<u>Liabilities</u>	<u>Stockholder's Equity</u>
--------------------	-----------------------------

	Accounts Payable	Interest Payable	Note Payable	Common Stock	Retained Earnings
Balances: Part A	\$26,440	\$6,650	\$380,000	\$160,000	\$313,450
Part B (1) Bad Debts					(994)
Part B (2) COGS					(177,000)
Part B (3) Depreciation					
Building					(10,000)
Equipment					(9,000)
Part B (4) Equipment Rental Payment					(16,000)
Part B (5) Income tax					(30,914)
Balances	<u>\$26,440</u>	<u>\$6,650</u>	<u>\$380,000</u>	<u>\$160,000</u>	<u>\$69,542</u>

Glenwood Heating, Inc.
Part B: Trial Balance
December 31, 20X1

	Debits	Credits
Cash	\$426	
Accounts Receivable	99,400	
Allowance for Bad Debts		994
Inventory	62,800	
Land	70,000	
Building	350,000	
Accumulated Depreciation - building		10,000
Equipment	80,000	
Accumulated Depreciation - equipment		9,000
Accounts Payable		26,440
Interest Payable		6,650
Note Payable		380,000
Common Stock		160,000
Dividend	23,200	
Sales		398,500
Cost of Goods Sold	177,000	
Other Operating Expenses	34,200	
Bad Debt Expense	4,970	
Depreciation Expense - Building	10,000	
Depreciation Expense - Equipment	9,000	
Rent Expense	12,024	
Interest Expense	27,650	
Provision for Income Tax	30,914	
Total	\$991,584	\$991,584

Glenwood Heating, Inc.
Income Statement
For Year Ended December 31, 20X1

Sales	\$398,500
Cost of Goods Sold	<u>(177,000)</u>
Gross Profit	221,500
Operating Expenses	
Depreciation Expense - Building	(10,000)
Depreciation Expense - Equipment	(9,000)
Rent Expense	(16,000)
Bad Debt Expense	(994)
Other Operating Expenses	<u>(34,200)</u>
Income from Operations	151,306
Other Expenses	
Interest Expense	<u>(27,650)</u>
Income Before Income Tax	<u>123,656</u>
Income Tax	<u>(30,914)</u>
Net Income for the Year	<u><u>\$92,742</u></u>

Glenwood Heating, Inc.
Statement of Retained Earnings
For Year Ended December 31, 20X1

Retained earnings, January 1	-
Add: Net Income	<u>92,742</u>
	92,742
Less: Dividends	<u>(23,200)</u>
Retained earnings, December 31	<u><u>\$69,542</u></u>

Glenwood Heating, Inc.
Balance Sheet
December 31, 20X1

ASSETS

Current Assets		
Cash		\$426
Accounts Receivable	99,400	
Less: Allowance for Doubtful Accounts	<u>(994)</u>	98,406
Inventories		<u>62,800</u>
Total Current Assets		<u>161,632</u>
Property, Plant, and Equipment		
Land - at cost		70,000
Buildings - at cost	350,000	
Less: Accumulated Depreciation	<u>(10,000)</u>	<u>340,000</u>
Equipment - at cost	80,000	
Less: Accumulated Depreciation	<u>(9,000)</u>	<u>71,000</u>
Total Property, Plant, and Equipment		<u>481,000</u>
Total Assets		<u><u>\$642,632</u></u>

LIABILITIES AND EQUITY

Current Liabilities		
Accounts Payable		\$26,440
Interest Payable		<u>6,650</u>
Total Current Liabilities		33,090
Long-Term Liabilities		
Notes Payable		<u>380,000</u>
Total Liabilities		413,090
Stockholder's Equity		
Common Stock		160,000
Retained Earnings		<u>69,542</u>
Total Stockholder's Equity		<u>229,542</u>
Total Liabilities and Stockholder's Equity		<u><u>\$642,632</u></u>

Eads Heaters, Inc.

Part B – Recording of Additional Information

Transaction	Assets										
	Cash	Accounts Receivable	Allowance for Bad Debts	Inventory	Land	Building	Accumulated Depreciation Building	Equipment	Accumulated Depreciation Equipment	Leased Equipment	Accumulated Depreciation Lease
Balances: Part A	\$47,340	\$99,400		\$239,800	\$70,000	\$350,000		\$80,000			
Part B (1) Bad Debts			4,970								
Part B (2) COGS				(188,800)							
Part B (3) Depreciation Building							10,000				
Equipment								20,000			
Part B (4) Equipment Lease									92,000		
Lease Payment			(16,000)							7,360	
Depreciation											11,500
Part B (5) Income tax			(23,505)								
Balances	\$7,835	\$99,400	\$4,970	\$51,000	\$70,000	\$350,000	\$10,000	\$20,000	\$99,360		\$11,500

Table 3

Eads Heaters, Inc.

Part B – Recording of Additional Information (continued)

	Liabilities				Stockholders' Equity	
	Accounts Payable	Interest payable	Notes Payable	Lease Payable	Common Stock	Retained Earnings
Balances: Part A	\$26,440	\$6,650	\$380,000		\$160,000	\$313,450
Part B (1) Bad Debts						(4,970)
Part B (2) COGS						(188,800)
Part B (3) Depreciation						
Building						(10,000)
Equipment						(20,000)
Part B (4) Equipment						
Lease				92,000		
Lease Payment				(8,640)		(7,360)
Depreciation						(11,500)
Part B (5) Income tax						(23,505)
Balances	\$26,440	\$6,650	\$380,000	\$83,360	\$160,000	\$47,315

Table 2 (continued)

Eads Heaters, Inc.
Part B: Trial Balance
December 31, 20X1

	Debits	Credits
Cash	\$7,835	
Accounts Receivable	99,400	
Allowance for Bad Debts		4,970
Inventory	51,000	
Land	70,000	
Building	350,000	
Accumulated Depreciation - Building		10,000
Equipment	80,000	
Accumulated Depreciation - Equipment		20,000
Leased Equipment	92,000	
Accumulated Depreciation - Leased Equipment		11,500
Accounts Payable		26,440
Interest Payable		6,650
Note Payable		380,000
Lease Payable		83,360
Common Stock		160,000
Dividend	23,200	
Sales		398,500
Cost of Goods Sold	188,800	
Other Operating Expenses	34,200	
Bad Debt Expense	4,970	
Depreciation Expense - Building	10,000	
Depreciation Expense - Equipment	20,000	
Depreciation Expense - Leased Equipment	11,500	
Interest Expense	27,650	
Provision for Income Tax	23,505	
Total	\$1,101,420	\$1,101,420

**Eads Heaters, Inc.
Income Statement
For Year Ended December
31, 20X1**

Sales	\$398,500
Cost of Goods Sold	(188,800)
Gross Profit	<u>209,700</u>
Operating Expenses	
Depreciation Expense – Building	(10,000)
Depreciation Expense - Equipment	(20,000)
Depreciation Expense - Leased Equipment	(11,500)
Bad Debt Expense	(4,970)
Other Operating Expenses	(34,200)
Income from Operations	<u>129,030</u>
Other Expenses	
Interest Expense	(27,650)
Interest Expense – Leased Equipment	(7,360)
Income Before Income Tax	<u>94,020</u>
Income Tax	(23,505)
Net Income for the Year	<u><u>\$70,515</u></u>

**Eads Heaters, Inc.
Statement of Retained
Earnings
For Year Ended December
31, 20X1**

Retained earnings, January 1	-
Add: Net Income	70,515
	<u>70,515</u>
Less: Dividends	(23,200)
Retained earnings, December 31	<u><u>\$47,315</u></u>

Eads Heaters, Inc.
Balance Sheet
December 31, 20X1

ASSETS

Current Assets		
Cash		\$7,835
Accounts Receivable	99,400	
Less: Allowance for Doubtful Accounts	<u>(4,970)</u>	94,430
Inventories		51,000
Total Current Assets		<u>153,265</u>
Property, Plant, and Equipment		
Land - at cost		70,000
Buildings - at cost	350,000	
Less: Accumulated Depreciation	<u>(10,000)</u>	340,000
Equipment - at cost	80,000	
Less: Accumulated Depreciation	<u>(20,000)</u>	60,000
Leased Equipment	92,000	
Less: Accumulated Depreciation	<u>(11,500)</u>	80,500
Total Property, Plant, and Equipment		<u>550,500</u>
Total Assets		<u><u>\$703,765</u></u>

LIABILITIES AND EQUITY

Current Liabilities		
Accounts Payable		\$26,440
Interest Payable		6,650
Total Current Liabilities		<u>496,450</u>
Long-Term Liabilities		
Notes Payable		380,000
Lease Payable		83,360
Total Long-Term Liabilities		<u>463,360</u>
Total Liabilities		496,450
Stockholder's Equity		
Common Stock		160,000
Retained Earnings		47,315
Total Stockholder's Equity		<u>207,315</u>
Total Liabilities and Stockholder's Equity		<u><u>\$703,765</u></u>

The financial information provided by the two companies is valuable to present and possible equity lenders and creditors in making decisions about providing resources or investments to companies. According to the information from this case, I would rather invest or lend money to Glenwood Heating, Inc. for several reasons. First, from their income statement, it is seen that they have a net income of \$92,742, and a gross profit of \$221,500. Both of these outweigh Eads Heaters, Inc.'s net income and gross profits of \$70,515 and \$209,700, respectively, leading me to believe that they are more profitable. From the statement of retained earnings, it can be seen that Glenwood Heating, Inc. has a year-end retained earnings balance of \$139,084, which is \$37,094 more that can be reinvested in its business than its competitor, that had a year-end retained earnings balance of \$101,990. In addition, it can be concluded from the balance sheet that Glenwood has a larger amount of current assets on hand, at \$161,632, rather than \$145,430 for Eads. Also, the proportion of current assets to current liabilities is more concerning in Eads case than in Glenwood, because of the higher amount of current liabilities that Eads has collected. For these reasons, I would choose to invest or lend money to Glenwood Heating, Inc.

CASE TWO
Molson Coors: Profitability and Earnings Persistence

This case was focused on Molson Coors Brewing Company, which formed when Adolph Coors Company joined with Molson Inc. in 2005. The case included the company's financial statements, followed by notes. The financial statements that were included were the consolidated statements of operations, the consolidated statements of comprehensive income, and the consolidated balance sheets. The notes to the consolidated financial statements went into greater detail about several items on the financial statements to help the user better understand the numbers and totals on the statements. Some of the items discussed in the notes section include excise taxes, cost of goods sold, special items, other income and expense, income tax, and revenue recognition.

After having to review the income statement, its major parts, and its importance in the accounting cycle, I feel that I have a greater understanding of the purpose of financial statements. It is important to know how to predict for the future using the items given to you in the financial statements. You hope that the numbers are precise so that you can make the most accurate prediction possible regarding your business or investments. In addition, I have a better knowledge of what comprehensive income is, and how it differs from net income after answering the questions in this case. Also, I learned about some classification items that I was not familiar with prior to this case, such as "Special items". The categorization of items on the financial statements is important, because the misplacement of one thing could throw off the ending balance completely.

Molson Coors Brewing Company – Profitability and Earnings Persistence

Concepts

a. What are the major classifications on an income statement?

The major classifications that an income statement contains are the operating section, nonoperating section, income tax, discontinued operations, noncontrolling interest, and earnings per share. The operating section would include sales, cost of goods sold, selling expenses, and administrative or general expenses. Nonoperating section additionally comprises of other revenues and gains and other expenses and losses. Also, discontinued operations is material gains or losses resulted from the disposition of a component of the business. Finally, noncontrolling interest can be described as the allocation of income to noncontrolling shareholders.

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

Companies are required to provide classified income statements because it leaves less room for dishonestly, in addition to making them easier for the user to read. According to the Full Disclosure Principle, companies must include all details sufficient enough to make a difference to users in their financial statements. Thus, most income statements will have to be detailed, and classified income statements help keep the increased information organized. This helps the reader analyze the information efficiently.

The types of information that a classified income statement provides includes subtotals for three specific sections. These sections include the gross margin, operating expenses, and non-operating expenses sections of an income statement. When there are many line items, by being able to easily spot subtotals for these sections allows the user to gather information. From a classified income statement, a user could make conclusions as to whether the company had a net profit or loss for the period or was able to produce a profit. This could lead a user to want to invest in a company, or vice versa.

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

Financial statement users want to have a level of trust when reading their financial statements, and are expecting that the information given is free from error. They are hopeful that they can make accurate predictions about the future based off of the income from the financial statements. An example of users that might benefit from this information include investors and creditors, investment analysts, and competitors. Competitors might use financial statements of a rival company to gauge how well they might do in the future.

- d. Define comprehensive income and discuss how it differs from net income.**

Comprehensive income is the change in equity of an entity during a period from transactions and other events and circumstances from nonowner sources. It includes all changes in equity during a period except those resulting from investments by owners and distributions to owners. Net Income can be defined as the residual amount of earnings after all expenses have been deducted from sales. Where comprehensive income is used to measure the change in an owner's interest in a business, net income is really just the measure of earnings for a period.

Process

- e. The income statement reports "Sales" and "Net sales." What is the difference? Why does Molson Coors report these two items separately?**

Sales are the total revenues for the company for the period. Net sales are sales after returns, discounts, and any excise taxes are deducted. Molson Coors Brewing Company reports these two items separately so that it can show the effect of an excise tax on beer.

- 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?**

Molson Coors includes infrequent or unusual items, impairment or asset abandonment-related losses, restructuring charges and other atypical employee related costs, and fees on termination of significant operating agreements and gains (losses) on disposal of investments in the “Special items” line item.

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

Special items are reported on a separate line item rather than including them with another expense item because they are not indicative of core operations. Yet, they are included so investors can more accurately compare the company’s numbers across accounting periods. I agree that it is important to separate these items, but they should be included so that investors can be made aware of them.

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

Other income expenses do not directly affect the income portion of the income statement; thus they are classified as a nonoperating expense. However, Molson Coors is directly impacted by the Special items, which is why they are classified as operating expenses.

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 amount of comprehensive income in 2013 is \$760.20 (million). The amount of net income in 2013 is \$567.30 (million). The comprehensive income is \$192.90 (million) greater than the net income.

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 between the net income and comprehensive income in 2013 include foreign currency translation adjustments, unrealized gain (loss) on derivative instruments, reclassification of derivative (gain) loss to income, pension and other postretirement benefit adjustments, amortization of net prior service (benefit) cost and net. These items are related because the items have not been realized yet, and therefore would be challenging to record them.

Analysis

j. Consider the information on income taxes, in Note 7. What is Molson Coors' effective tax rate in 2013?

$$\begin{aligned} \text{Effective Tax Rate} &= \frac{\text{Income Tax Expense}}{\text{Pre-tax income}} \\ &= \frac{8,400,000}{65,450,000} \\ &= 12.8\% \end{aligned}$$

CASE THREE
Pearson plc – Accounts Receivable

Pearson Inc. is a case that concentrates on the topic of accounts receivable, and the various components that can go into this subject. It is important to note that Pearson is an education and business information company located in London, England, therefore their financial statements are recorded in millions of pounds, not U.S. dollars. Included in this case are the focuses of accounts receivables, notes receivables, contra accounts (such as sales returns and allowances, allowance for sales returns and allowances, and allowance for doubtful accounts), and bad debts expense. In addition, this case asks several times for t-accounts and journal entries, which I feel is significant to do to understand the fundamental basis of what I am doing in a problem.

First, after reviewing the major elements of receivables, I feel more understanding of the importance of accounts receivable, and how they are used in major business operations such as this one. Additionally, this case taught me several things about the critical thinking needed to consider when financial statements are done in one country and are needed to be converted and analyzed by another country. These are things that happen in the real world every day, and it is crucial that I begin to implement my accounting knowledge to everyday situations. I also learned about the term "provision" and that they use it to mean "allowance" in the UK.

Pearson plc – Accounts Receivable

Concepts

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

Accounts receivable is money owed to a company by its debtors. Other names this asset goes by may include trade receivables and receivables.

b. How do accounts receivable differ from notes receivable?

A notes receivable is an asset of a company that holds a written promissory note from another party (resulting from sales, financing, or other transactions), whereas an accounts receivable does not require a written promissory note for the receivable. An accounts receivable is simply an on an oral promise to pay. Accounts receivable are usually short-term, collected within 30 to 60 days, but notes receivable can either be short-term or long-term. Additionally, notes receivable are often interest-bearing, while accounts receivable are not.

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

A contra account is a general ledger account which is intended to have its balance reduce the normal balance for its corresponding account. Contra accounts allow some flexibility in the presentation of financial information. The two contra accounts associated with Pearson's trade receivables are allowance for bad debts (called provision for bad and doubtful debts in the UK) and allowance for sales returns (called provision for sales returns in the UK). Managers might consider customers' credit histories or credit scores when estimating allowance for bad debts and allowance for sales returns. Companies must also take into consideration economic conditions.

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

The percentage-of-sales procedure is using credit sales from the period to estimate the uncollectible accounts receivable as a percentage. The formula for this is:

$$\text{Bad Debts Expense} = \text{Estimated \%} \times \text{Credit Sales.}$$

From this, historical data and other various factors are used to determine which accounts should be uncollectible.

The aging-of-account procedure organizes a company's accounts receivable according to the length of time an invoice has been outstanding. Those that have been unpaid for a longer period of time are deemed to have a higher likelihood of default, and are more likely to be considered uncollectible.

I feel that the aging-of-accounts procedure results in a more accurate estimate of net accounts receivable because it considers the factors affecting each individual customer.

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.

One reason companies will extend credit to customers in the first place is because it could encourage sales because of the ease of payment up front. Also, it is very difficult for a company to know a person's inability to pay prior to a sale. There is always risk that the debtor will fault in payment with any type of credit, but as a company it may be less of a risk than not offering the use of credit to customers at all.

Provision for Bad and Doubtful

Debts £72,000,000

26,000,000

Process

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.

5,000,000	
	20,000,000

At the beginning of the period, £72,000,000 is the balance in the provision for bad and doubtful debts account. The exchange differences line item accounts for the exchange rate that differed from country to country, and thus resulted in a debit of £5,000,000. The £26,000,000 credit is the estimate of bad debts expense for 2009, and then the £20,000,000 debit is the actual bad debt being written off in 2009, also called housekeeping. An additional credit balance of £3,000,000 is made from acquiring another business. At the end of 2009, Pearson Inc. is left with a credit balance of £76,000,000 in this account.

ii. Prepare the journal entries that Pearson recorded during 2009 to capture 1) bad and doubtful debts expense for 2009 (that is, the “income statement movements”) and 2) the write-off of accounts receivable (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.

1) 1/1/09	Bad Debt Expense	26,000,000	
			Provision for Bad and Doubtful Debts 26,000,000
2) 12/31/09	Provision for Bad and Doubtful Debts	20,000,000	
			Accounts Receivable 20,000,000

Bad debts expense is an income statement account, and provision for bad and doubtful debts and accounts receivable are both balance sheet accounts.

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

This account would be included in the current expense portion of the income statement. It is included in operating expenses, which is separated from the other expenses section of the income statement. Estimated sales returns are deducted from gross sales, and thus this reaches the total of net sales.

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

£372,000,000

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

443,000,000	

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.

1) 1/1/09	Sales Returns and Allowances	425,000,000
	Provision for Sales Returns	425,000,000
2) 12/31/09	Provision for Sales Returns	443,000,000
	Accounts Receivable	443,000,000

The sales returns and allowances and provisions for sales returns accounts are income statement accounts, and accounts receivable is a balance sheet account.

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

The estimated sales returns would appear in the sales line item of an income statement as a contra-revenue account, because this account has the opposite effect on net income from sales.

Trade Receivables
 £1,474,000

5,624,000

h. Create a T-account for total or gross trade receivables (that is, trade receivables before deducting the provision for bad and doubtful debts and the provision for sales returns). Analyze the change in this T-account between December 31, 2008 and 2009. (Hint: your solution to parts f and g will be useful here). 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.

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12/31/2009	Trade Receivables	5,624,000	
	Sales		5,624,000
12/31/2009	Cash	5,679,000	
	Trade Receivables		5,679,000

The trade receivables account begins with a £1,474,000 debit balance from 2008. It has been told to us that all the sales in 2009 were credit sales, thus that number is £5,624,000. So the credit balance for the trade receivables account is £5,679,000.

CASE FOUR
Time Value of Money Accounting Problem

This is a difficult problem from Chapter 6 (Accounting and the Time Value of Money) from intermediate accounting. I am working out this problem as if I was teaching a poorly skilled intermediate student.

Problem 6-4:

Julia Baker died, leaving her husband Brent an insurance policy contract that provides that the beneficiary (Brent) can choose any one of the following four options.

- (a) \$55,000 immediate cash.
- (b) \$4,000 every 3 months payable at the end of each quarter for 5 years.
- (c) \$18,000 immediate cash and \$1,800 every 3 months for 10 years, payable at the beginning of each 3-month period.
- (d) \$4,000 every 3 months for 3 years and \$1,500 each quarter for the following 25 quarters, all payments payable at the end of each quarter.

If the money is worth $2\frac{1}{2}\%$ per quarter, compounded quarterly, which option would you recommend that Brent exercise?

First, to do this problem, you would need to understand the difference between present values and future values, and ordinary annuity and annuity dues. Present values are the value now of a future sum or sums discounted assuming compound interest. Future value is the value at a future date of a given sum or sums invested assuming compound interest. Ordinary annuities are annuities where the rents occur at the end of

each period, and annuity dues are where the rents occur at the beginning of each period.

For this problem, I will calculate each parts (b)-(d) in present value in order to compare it to (a) \$55,000 that Brent could receive immediately.

For part (b) I would use the formula:

$$PV = \text{Rent} (\text{PVF } n=15, i=2 \frac{1}{2})$$

I got 15 periods from multiplying 5 x 12, and then dividing by 4 (since it compounded quarterly). Then I would plug in the rent and number found from Table 6-4 Present Value of an Ordinary Annuity.

$$\begin{aligned} PV &= 4,000 (12.38138) \\ &= \$ 49,525.52 \end{aligned}$$

For part (c) I would calculate for an annuity due, since it is payable at the beginning of each of the 3 periods. It would go as follows:

$$\begin{aligned} PV &= \text{Rent} (\text{PVF } n=30, i=2 \frac{1}{2}) \\ &= 1,800 (21.45355) \\ &= \$ 38,616.39 + (\text{the immediate cash}) \$18,000 \\ &= \$ 56,616.39 \end{aligned}$$

I got the period amount of 30 my multiplying 10x12 and then dividing by 4.

For part (d), I would calculate by using the present value for ordinary annuities formula and table. I would calculate the amounts for this part as follows:

$$\begin{aligned} PV &= \text{Rent} (\text{PVF } n=9, i=2 \frac{1}{2}) \\ &= 4,000 (7.97087) \end{aligned}$$

$$= \$ 31,883.48$$

I calculated the period amount of 9 by multiplying 3x12 and then dividing by 4.

$$PV = \text{Rent} (PVF_{n=25, i=2 \frac{1}{2}})$$

$$= 1,500 (18.42438)$$

$$= \$ 27,636.57$$

When you add these two amounts together you get a total of \$59,520.05.

Thus, I would recommend option (d) to Brent, as it results in the greatest amount of money for him. He might not get it all immediately, but it allows him the greatest return from his wife's insurance policy.

CASE FIVE
Palfinger AG – Property, Plant, and Equipment

Palfinger AG is a company that manufactures large machines such as cranes, forklifts, and tailgates for various industries. These industries include construction, agriculture and forestry, and transport. In order to construct these hefty machines and solutions, Palfinger requires a great deal of property, plant, and equipment. This case follows this company in the 2007 fiscal year, and lists their consolidated balance sheet and income statement, as well as the corresponding notes related to these financial statements. These notes give the reader a better understanding of the property, plant, and equipment acquired by Palfinger. This company is located in Austria and reports their financial statements in Euros.

This case was helpful in getting a better understanding of property, plant, and equipment for a large company such as Palfinger. I grew in my knowledge of how to analyze depreciation, using and comparing both the straight-line and double-declining balance depreciation methods for the same time period. I also learned what “prepayments and assets under construction” meant, which I did not know prior to this case. It was beneficial for me to have to calculate gains or losses for the period under the two depreciation policies, and compare them against each other. This gave me a greater understanding of what certain calculations mean.

Palfinger AG – Property, Plant, and Equipment

Concepts

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

From the description of Palfinger given, I believe the company has property and equipment containing large warehouses and workshops to make their cranes, platforms, and forklifts; heavy machinery that is used to melt and mold metal; and machinery used to transport and put together forklifts and cranes. In addition, any assembly lines and the land that the warehouses are contained on would also be included in the property and equipment that this company owns.

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

This number represents the acquisition cost of property, plant, and equipment less the accumulated depreciation and impairment costs. In the notes to the consolidated financial statements in 2007, the carrying amounts at December 31, 2007 add up to this amount of €149,990.

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

In the notes to the financial statements, Palfinger reports machinery, and other plant, fixtures, fittings, and equipment (which may include other smaller, movable pieces of equipment) as types of equipment.

- d. **In the notes, Palfinger reports “Prepayments and assets under construction.” What does this subaccount represent? Why does this account have no accumulated depreciation? Explain the reclassification of €14,958 in this account during 2007.**

This subaccount represents a self-constructed asset, where you would debit “construction in progress” as the building is being built. This account has no accumulated depreciation because the building is not yet available for use. Once the building is done being constructed, it can begin being depreciated. The

reclassification of €14,958 would account for Palfinger finishing a building, and taking it out of the prepayments and assets under construction account.

- 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.**

Palfinger depreciates its property and equipment on a straight-line basis, based on the useful life. On a straight-line basis, they use the same rate each year. For buildings and investments in third-party buildings, Palfinger uses a useful life of 8-50 years, for plant and machinery they use a useful life of 3-15 years, and for fixtures, fittings, and equipment they use a useful life of 3-10 years. This policy seems reasonable, except for the fact that the useful life of buildings and investments have a useful life of 8 to 50 years. I feel that with the use of another method or a more realistic useful life of buildings, they could have a more notable outcome.

- 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 capitalizes these investments and depreciates them over either the new or the original useful life. In addition, maintenance and repair work are booked as current expenses in the year in which they occur. The alternative accounting treatment is to write it off as an expense.

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 cost of new property, plant, and equipment in fiscal 2007 was €61,444.

ii. Government grants for purchases of new property, plant and equipment in 2007. Explain what these grants are and why they are deducted from the property, plant, and equipment account.

There are government grants of €733 for purchases of new property, plant, and equipment in the 2007 year. These grants are presented as reductions of the manufacturing or acquisition, and thus reduces how much is depreciated from assets during their life.

iii. Depreciation expense for fiscal 2007.

Depreciation expense for fiscal 2007 was €12,557.

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

The net book value of property, plant, and equipment disposed of in fiscal 2007 was €1,501, which was calculated by taking €13,799 and subtracting €12,298.

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.

Palfinger incurred a gain of €154 on this transaction, which was calculated by taking the proceeds on the sale of property, plant, and equipment (€1,655) and subtracting the net book value (€1,501).

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.

$$€10,673 - €1,273 / 5 = €1,880 \text{ per year}$$

Year	Depreciation Expense	Accumulated Depreciation	Book Value
0			€10,673
1	€1,880	€1,880	8,793
2	1,880	3,760	6,913
3	1,880	5,640	5,033
4	1,880	7,520	3,153
5	1,880	9,400	€1,273

ii. Double-declining-balance depreciation.

Year	Book Value (Beginning of Year)	Depreciation Expense	Balance Accumulated Depreciation	Book Value (End of Year)
0				€10,673
1	€10,673	€4,269	€4,269	6,404
2	6,404	2,562	6,831	3,842
3	3,842	1,537	8,368	2,305
4	2,305	922	9,290	1,383
5	1,383	110	9,400	€1,273

j. Assume 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.).

To find this, take €8,793 (book value after year 1 when the company used straight-line depreciation) less €7,500 (proceeds), which equals a loss of €1,293 on disposal. From this information, it is found that there is a total income statement impact of €3,173 (€1,880 + €1,293) on the equipment for the two years that the company owned it.

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

To find this, take €6,404 (book value after year 1 when the company used double-declining depreciation) less €7,500 (proceeds), which equals a gain of €1,096 on disposal. From this information, it is found that there is a total income statement impact of €3,173 (€4,269 - €1,096) on the equipment for the two years that the company owned it.

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

For both the straight-line and the double-declining balance depreciation policies, the impact on the income statement of the equipment was the exact same at €3,173. While the straight-line depreciation has a loss on disposal, the double-declining balance depreciation has a gain on disposal. Both end up giving you the same amount, worked different ways, because the cost of equipment was €10,673 less the proceeds of €7,500 equals the same total of €3,173.

CASE SIX
Volvo Group – Research & Development Costs

Volvo Group is a company that is headquartered in Sweden that supplies commercial vehicles such as trucks, engines, buses, and aircraft engine components out to customers, in addition to financial solutions. This case is focused on Volvo Group's research and development (innovative activities undertaken by corporations or governments in developing new services or products, or improving existing services or products), which cost them around 13 billion SEK a year. The Group focus their R&D on restraining their effect on the environment all over the globe. Volvo also has production facilities around the world in 19 different countries, in addition to generating sales in 180 countries.

I take away from this case an intensified knowledge of research and development costs. Whereas prior to this case I understood the basics of R&D, this case helped me understand exactly what kinds of expenditures can be classified as research and development costs and how to specifically capitalize and expense these costs. Also, I was introduced to IAS 38, which this company follows for their research and development expenditures as their accounting requirements for intangible assets. Becoming familiar with the excerpt of IAS 38 that was present in this case I feel was beneficial to me as I continue to work with intangible assets in my future courses. Finally, becoming acquainted with the differences between the U.S. and international research and development classifications (where 95% never match to revenue in the U.S., and you just capitalize the development aspect of the expenditures internationally) is always important for me to learn from these cases.

Volvo Group – Research & Development Costs

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?**

Research and development expenses can include development of new products, production systems, and software. In addition, improvisation of existing products and services can also be included in these amounts. In the “research and development expenses” section of the notes to consolidated financial statements, Volvo reports new products, production systems, and software as intangible assets. These will be amortized over their estimated useful life.

- 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?**

According to IAS 38, Volvo Group would have to consider factors such as whether an expenditure on research should be recognized as an expense or capitalized, such as:

- If a business cannot differentiate between the research phase from the development phase of an internal project, it is treated as an expense.
- Expenditure on research is expensed when incurred. (No intangible asset from research is recognized.)
- If no future economic benefit can be shown from an intangible asset, then the expenditure is recognized as an expense.

- 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?**

Factors that the company would consider in determining the amortization period for particular costs would include the useful life of the asset, as well as any legal, regulatory, or contractual provisions that may limit the useful life.

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

Since R&D spending does not come to fruition 95% of the time, and thus you cannot match revenues to expenses under these conditions, I feel that the IFRS is a better reflection of costs and benefits of periodic R&D spending. This allows companies to just capitalize the Development aspect of R&D.

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 capitalized product and software development costs at the end of 2009 equals 11,409 SEK (25,148 – 13,739). The line item of "Intangible assets" reports this intangible asset on the balance sheet.

Capitalized Product and Software, net
23,290

13,739

11,409
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.

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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	1,858
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	11,925

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?

The proportion of Total R&D costs incurred by Volvo Group that were capitalized in 2007 were 19.1% ($2,057 / 10,759 \times 100$). In 2008, this proportion was 15.8% ($2,150 / 13,634 \times 100$) and in 2009 this proportion was 15.6% ($1,858 / 11,925 \times 100$).

- 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	2007	2008	2009
Net sales from manufactured products, for Navistar	3.15% (375/11,910)	2.67% (384/14,399)	3.83% (433/11,300)
Volvo	2007	2008	2009
Net sales from manufactured products, for Volvo	3.9% (10,759/276,795)	4.6% (13,634/294,932)	5.7% (11,925/208,487)

The proportion of Volvo is steadily increasing over the past three years. This shows how the company is increasing its R&D costs to its net sales each year. Yet, in 2009 even though it was a proportional increase, Volvo did decrease in both its costs and sales. Navistar's percentages see a drop in 2008 from a large increase in net sales, which goes back down in 2009. This company also has a steady increase in R&D costs from 2007 to 2009 from \$375 to \$433.

CASE SEVEN
Data Analytics Case – IBM Watson

This case focuses on the topics of 11 various data analytics tools. In particular, our group was assigned the tool IBM Watson to explore in more detail. The case first details the history and background of the tool, as well as the functions of the device in the business realm. This includes how it is used to make business decisions and benefit businesses in their operations. Next, this case looks at the skills that are needed to properly use and draw business conclusions from Watson. Specifically, the skills and abilities that students my age would require when working with a tool such as Watson. Then, we look at how IBM Watson could be used in certain business settings, particularly in Auditing, Tax Planning, and Advisory situations. And finally, this case asks us to place ourselves in a Partner position, and request for the investment of this tool for the firm. This makes us think outside of the box, and places us in a business mindset. All of these activities helped me understand the tool IBM Watson and its purpose.

After analyzing this device, it is amazing to me how far technology has grown. This tool specifically shows how scary the world of technology can become. It is magnificent and advantageous because it can teach us and help us learn new things in business and science. Yet, it is also frightening because it almost seems to be more powerful than humans (such as when Watson overcame the *Jeopardy!* champions). It seems that humans are making great strides in the progress of technology, but we need to be cautious in what motives we have for these devices. In addition, I also learned a great deal about the IBM Watson itself that I did not know prior to this case. Having a better understanding of devices such as this one can help me in the future, such as in my career.

Data Analytics Case - IBM Watson

- 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 recourses that need to be in place to fully utilize the functionality of the tool.**

In 2011, IBM Watson famously went up against the quiz show *Jeopardy!*'s top two winners, and beat them both. Watson was developed as a data technology question answering device, created by IBM Research. It has a total of 2,880 processor cores and 90 servers, and over years' time has been equipped with millions of pages of information. After being fed a question, it has over 100 algorithms analyze the question, and can spit out an answer in under three seconds.

Businesses can use Watson in various ways. With this device, research can primarily be conducted faster. Watson can comb through immense sources of data to obtain the most significant details. Also, this technology can anticipate issues before they arise, because Watson monitors the condition of the business' systems constantly. This is extremely beneficial because it could save the business from hefty costs. Furthermore, Watson helps create a sense of certainty when understanding and drawing conclusions from a large set of data. Because of the tool's great intelligence and logic, it can aid managers in making decisions when looking at a wide variety of information.

Watson has distinctive skills to benefit businesses as well. This device can understand text mining, which is data enclosed in natural language text. This can be beneficial to a business organization in reading content that is text-based in documents and on social media, giving them insight into information they could have missed without the technology of Watson. Also, Watson can look at previous buying and selling patterns, and compute leads based on the given information, giving them another way to gain insight on the business.

Watson generates better evidence based decisions from complex volumes of data, revolutionizing the way businesspeople become experts. The capabilities of this device allow organizations to stretch their capacity further than previously possible, while saving valuable time and money.

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

IBM Watson is such a developed technology that it does most of the work for you. In order for a student like myself to grow special skills that would be needed to use this tool to aid in business decision making, they would need to engage in tutorials and training that would heighten their data analytics and development skills.

IBM has a “Learning Lab” that gives tutorials in many things from data analytics to cloud computing, Internet of Things, blockchain, and even Java. Each of these courses range in time to complete, usually a few hours, and consist of videos, tutorials, and online labs. Having a greater understanding of each of these topics would better enhance the decision-making process for a user of IBM Watson. This would be because if a person comprehended what data analytics, for example, was prior to using the device, it would help them to decipher with better discernment what Watson was saying or suggesting for a business.

3) How, specifically, would 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

- i. The device of IBM Watson can assist auditors in checking for completeness of items such as financial statements. Where humans can make errors, and may miss factors during an actual audit, a tool such as Watson could be a fault corrector. Watson could begin checking for accuracy and completeness before the auditor even touches the client’s paperwork. This could be an extremely beneficial factor for a business because it would save them time, and in turn, save them money.
- ii. Valuation – Watson can also be a great judgement of valuation in financial statements and other various data that a company gives. The device can make sure that everything is measured correctly, that all numbers add up, and that all data matches to each other and to other outside sources – if necessary. Watson can act as an extra mind to the audit team.

- iii. This device can help gain insight from the data presented from clients, and allow auditors to quickly assess large amounts of data so that they can spend more time on items like risk assessment. KPMG is just one firm that is putting this technology to use today. They are using Watson to enhance their customer relations and increase the use technology in their workplace.
- b. Tax Planning
 - i. A company would be able to use IBM Watson to understand global tax rates for various countries, and when doing business with them, would allow them to easily organize business transactions. Because different tax rates effect the bottom line, being able to keep them systematized in a tool such as Watson for large companies could be very beneficial.
 - ii. This tool could be used to push a firm forward and help foster breakthrough ideas to push through challenges. Tax Interns and Associates at KPMG Ignition in Denver, called the Innovation Lab, use technologies such as IBM Watson to develop and maintain tax software to perform at the best capable function. Watson can inspire and help these professionals create tools to use in tax practice to advance business in beneficial ways.
 - iii. IBM Watson can be given data and help a company work out financials so that they can be able to limit their overall legal worldwide payment. In order to do this, a company could decrease expenses and cut costs as much as possible, as well as decrease taxes where possible. Watson can analyze data and see where this is possible, and assist a company plan for cutting expenditures.
- c. Financial Statement Analysis / Valuation / Advisory
 - i. IBM Watson would be specifically helpful in the job of forensic accounting, where they concentrate in analysis of electronic data to back up the claim of financial fraud. Watson would collect, prepare, analyze, and report on data, which would help an accountant review and draw conclusions to make their case against fraud.
 - ii. Being able to value a company's assets or liabilities for financial reporting purposes is important in any accounting system. Understanding the correct valuation to place on said assets or liabilities is crucial to reporting a company correctly. IBM Watson

could aid in asset valuation by assessing book values vs market values, evaluating cash flow potential, and accumulated depreciation.

- iii. Equity research – IBM Watson can help a firm search through financials and carry out ratio analysis with great ease and accuracy. Once it completes these steps, this tool can make predictions for the future from these calculations of data. This can help a company explore its options of buying and selling stock investment, thus Watson can make proposals for what it thinks would be the best decisions for them.

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.

IBM Watson is data technology we need in our accounting firm. It will change the way we do business.

The training that would be necessary for this tool will only be beneficial for our employees and associates, where the skills they obtain from training will help them not only with the use and decision making of this device, but in other parts of business. It will be well worth the time and money, and we will get a return on our investment from our staff.

IBM Watson will give us an advantage over the competition. This device can generate leads from substantial amounts of previous data, and can help us as a business predict for the future. In addition, it is a tool that can read text mining, and can analyze the other firm's social media and documents that we as humans might not be able to read. Also, it is a machine that never stops. It is constantly at work, which can save us as a firm valuable time and keep us ahead of the game.

This technology will help us to make better evidence based decisions and allow us as a firm to grow with our clients and staff. I believe it is in our best interest to invest in the acquirement and the training of the IBM Watson and I hope you will agree.

CASE EIGHT
Rite Aid Corporation – Long-Term Debt

This case was centered around Rite Aid, a retail pharmacy that is in the United States. It is considered the third largest in its market, and in 2009, the company filled over 300 million prescriptions. While 68% of its sales are attributed to its pharmaceuticals, the chain also sells merchandise such as food, photo processing, beauty supplies, and seasonal items. For a company as large as this one, it is bound to have long-term debt and other debt related requirements. Included in this case are the distinctions between secured and unsecured debt, as well as different loan terms. The case then goes into the specifics of Rite Aid's balance sheet and note 11, which focuses on indebtedness and credit agreements. The case then considers three different notes at varying face values and analyzes them. An amortization schedule is also created after the consideration of the third note.

All in all, the topic of long-term debt is something that I have dipped my toes into, but have not studied in great depth. This case widened by understanding of how a company shows these items on financial statements, how I need to read and analyze them from statements and notes, and how to analyze such items correctly. I was also refreshed on how to journalize basic accounting entries, as well as how to create an amortization schedule, both of which I have done many times. Yet, I learned new skills as well, such as new calculations that I did not know prior to this case that I will take with me going forward in the future.

Rite Aid Corporation – Long-Term Debt

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 an asset (such as a home or car), known as collateral. The lender of a loan is allowed to capture the collateral in the case that the borrower defaults on the loan. An unsecured loan is not backed by such collateral. It is important for a company such as Rite Aid to distinguish between these two types of debts so that the company can differentiate between interest rates and borrowing limits, and so that creditors can understand which loans are secured and which are not.

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?**

If the borrower of a loan defaults to pay, a guaranteed loan is a promise by another party (known as the guarantor) to pay a debt responsibility. The guaranteed loan can be limited or unlimited, which would make the party responsible for either just a part of the debt that the borrower did not pay, or the entire balance. In note 11, it states that Rite Aid’s “wholly-owned subsidiaries” guarantee the company’s unsecured debt.

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

The term “senior” is used to describe a note or bond that has priority for repayment by the borrower. A “fixed-rate” means that the interest rate remains constant for the life of the loan. And finally, the term “convertible” are debt security that the holder can convert to a certain quantity of shares of common stock at specific times of the bond’s life.

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

Rite Aid has varying types of debt (such as senior secured, guaranteed unsecured, and unsecured unguaranteed debts) in order to deal with certain business and credit activities in the best way possible. The range of interest rates can best be described because different bonds are issued at different times of the year.

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.**

(All numbers in thousands)

Total amount of debt for 2010 = \$6,370,899

Current Maturities of Long-Term Debt	\$51,502
Long-Term Debt	6,185,633
Capital Lease Obligations	<u>133,764</u>
Total Debt	<u>\$6,370,899</u>

The current maturities of long-term debt are what is due within the coming fiscal year, which is \$51,502.

This total debt is less than the total amount of assets for 2010, giving the company a debt to asset ratio of 0.79, which tells us the total amount of assets that were financed by liabilities. The current maturities of long-term debt are the liabilities that are due within the current fiscal year and long-term debt are a part of long-term liabilities. As each of these increase, the corresponding liabilities categories increase. Finally, net income is impacted by debt by when new debt is taken on, net income is decreased.

What is the effect on assets, liabilities, and net income, and discuss on each part.

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 these notes (i.e. the principal) is \$500,000. This is known because there are no unamortized discounts.

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

Note at Issuance:

Cash	500,000
Notes Payable	500,000

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

Interest Expense (500,000 x .075)	37,500
Cash	37,500

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

Notes Payable	500,000
Cash	500,000

Interest Expense went up in part c, thus the net income of Rite Aid would decrease as it becomes greater. Notes Payable are items that affect the liabilities portion of a balance sheet, and cash are assets of Rite Aid. As seen here, the bonds will fully mature in 2017, and will be written off those accounts.

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?

At February 27, 2010, the face value (or principal) amount of these notes is \$410,000, while the carrying value (or net book value) is \$405,951. These amounts differ because there is an unamortized discount.

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

The cash interest payment of this note in 2009 for Rite Aid was \$38,438. $(410,000 \times .09375 \times 12/12)$

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

The total amount of interest expense recorded by Rite Aid on these notes for the year ended February 27, 2010 is \$39,143. (This is calculated by taking \$38,438 and adding the discount on notes payable of \$705).

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

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

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

The total rate of interest recorded for fiscal 2009 on these notes is 9.64%.

$$\left(\frac{\text{Interest Expense}}{CV} = \frac{39,143}{405,951} = .0964 \right)$$

The interest expense of \$39,143 for Rite Aid will affect net income, and will make it less than the last interest payment of \$37,500 would have because it is a larger amount. As before, the note will be what effects the assets and liabilities. Because of the discount, there is extra interest that must be paid over the life of the note which we must account for.

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

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

6/2009	Cash	402,620	
	Disc. on Notes Payable	7,380	
	Notes Payable		410,000

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

The effective annual rate of interest that the notes were issued at was 10.1212%.

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. Note: Guidance follows the table.

Date	Cash Interest Payment	Interest Expense	Discount Amortization	Carrying Value
6/30/09	---	---	---	\$402,620
6/30/10	\$39,975	40,750	775	403,395
6/30/11	39,975	40,828	853	404,248
6/30/12	39,975	40,915	940	405,188
6/30/13	39,975	41,010	1,035	406,233
6/30/13	39,975	41,115	1,140	407,363
6/30/14	39,975	41,230	1,255	408,618
6/30/15	39,975	41,357	1,382	\$410,000

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.

Interest Expense	27,167	
Disc. on Notes Payable		517
Interest Payable		26,650

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

The net book value of the notes at February 27, 2010 would be \$403,137. ($\$403,395 + 517$)

Here, we have a smaller interest expense of \$27, 167 which would have less of an impact on our net income, leaving it larger. Our discount on notes payable is less compared to part d, at \$517 compared to \$705.

CASE NINE
Merck & Co., Inc. and GlaxoSmithKline plc – Shareholders' Equity

The part of the case that we were centered on was the company of Merck & Co., Inc., which is a pharmaceutical company that focuses on improving human and animal health worldwide. They do a great deal of research in their daily business operations, and are headquartered in New Jersey. They do have publicly traded stock that are listed on both the New York and Philadelphia Stock Exchanges. This case first analyzes the company's common shares. It then discusses topics such as dividends and stock repurchases. A dividend activity journal entry is asked to be made, and the topic of treasury stock is also explored. Various ratios are calculated for both 2006 and 2007 for the company and then dividend ratios are calculated for Merck Co., Inc. at the end of the case.

Dividends are a topic I enjoy studying and understand a little bit more each time we touch on the topic in my different classes. Treasury stock, buybacks, and share repurchases are something I grasped at a surface level, but after doing my own research I now understand the greater reasons behind why a company would want to repurchase their own shares. Just having to review financial statements and answer questions to understand what numbers are coming from where, really show the importance of why we do these case studies. In the first part of this case, we are asked to identify items such as common shared authorized and issued, held in treasury, and outstanding. This was a great exercise to be able to distinguish these numbers from the same information. This case also focused on a journal entry for common dividend activity and dividend related ratios.

**Merck & Co., Inc. and GlaxoSmithKline plc – Shareholders' Equity
Concepts**

a. Consider Merck's common shares.

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

Merck has 5,400,000,000 common shares to issue.

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

2,983,508,675 shares have actually been issued at December 31, 2007.

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

The \$29.8 million-dollar value of common stock reported on the balance sheet can be found by multiplying the 2,983,508,675 shares of common stock by the par value of one cent.

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

The number of shares held in treasury at December 31, 2007 is equal to 811,005,791 shares.

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

The number of common shares outstanding at December 31, 2007 is equal to 2,172,502,884 shares.

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 of Merck on that day is \$125,157,891,147.24.

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

Dividends are a way to regularly pay shareholders of a company out of its retained earnings. Investors enjoy the steady income that comes with dividends, so they are more likely to buy company's stock. Investors put in money in a company with high hopes for their future income. Yet, when a company pays dividends, their share price usually falls by the amount of the payout.

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

This can be known as a share repurchase, or buyback. This can happen in one of two ways – tender offers or on the open market. There are several reasons behind why a company might want to repurchase their own shares. First, it could be to improve their financial ratios. Buybacks reduces the number of shares outstanding, reduces the assets on the balance sheet, and has less equity outstanding. Thus, ROA and ROE both increase. In addition, when stock is undervalued, companies are more prone to repurchase their stock. When the stock price goes back up, they will then re-issue them on the market without having to issue any additional shares.

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	3,310,700,000	
	Cash	3,307,300,000
	Dividends Payable	3,400,000

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 transactions.

The method that Merck uses to account for its treasury stock transactions is the cost method. This method overlooks the par value of the shares and the total received from investors when the shares were initially issued.

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

Merck repurchased 26.5 million shares on the open market during 2007.

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

Merck paid in total \$1,429,700,000 and \$53.95 per share to buy back its stock during 2007. This represents a financing cash flow.

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

Treasury stock by definition is considered a contra-equity account, thus should not be disclosed as an asset.

Analysis

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

Merck

(in millions)

	2007	2006
Dividends paid	\$3,307.30	3,322.60
Shares outstanding	2,172,502,884	2,167,785,445
Net income	3,275.40	4,433.80
Total assets	48,350.70	44,569.80
Operating cash flows	6,999.20	6,765.20
Year-end stock price	\$57.61	\$41.94

Some dividend related ratios to consider could include the dividend payout ratio, dividends to total assets ratio, and dividend yield for Merck. First, the difference in dividend payout across the two years was 74.94% in 2006 to 100.97% in 2007. This was the biggest jump in dividend ratios because of the company's ratio of dividends to net income, as net income decreased more than its dividends paid decreased. Next, the dividends to total assets ratio in 2006 was 7.44%, while it was 6.84% in 2007. This remained fairly constant. Finally, the dividend yield was 3.65% in 2006, and dropped slightly to 2.64% in 2007.

CASE TEN
State Street Corporation – Marketable Securities

State Street Corporation is a financial holding company that launched in 1792. Beginning with the founding of the Union Bank, the corporation is now dedicated on assisting institutional investors. State Street manages two lines of business, Investment Management and Investment Servicing. Within these lines are a variety of products which include risk and investment research, trading services, performance, securities finance, and brokerage, to name a few. They are headquartered out of Boston. This case follows the company through the 2010 through 2012 fiscal years, as seen through their financial statements.

This case was focused on the topic of marketable securities. I grew in my knowledge of how to distinguish trading, available-for-sale, and held-to-maturity securities from each other (each will be defined later on in this case). Understanding the differences between debt and equity securities, and how to make money from each are important topics to comprehend. The beginning sections of this case allowed me to practice my skills in a journal entry to increase the market value of a trading, available-for-sale, or held-to-maturity securities account. Additionally, this case also reminded me how to record dividends received for both trading and available-for-sale securities. This case also allowed me to practice the journal entries for securities purchases, sales, and year-end adjustments. All in all, after State Street Corporation's case, I feel more confident about the topic of marketable securities.

State Street Corporation – Marketable Securities

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 short-term (usually within 3 months) securities bought and held primarily for sale to generate income. These include both debt and equity securities and are reported at fair value.

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

Cash	1	
Dividend Revenue		1
Cash	1	
Interest Revenue		1

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

Trading Securities	1	
Unrealized Holding Gain (or Loss)		1

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

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

Securities not classified as held-to-maturity or trading securities, which are bought with the purpose of selling before maturity. These include both debt and equity securities and are reported at fair value.

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

Cash	1	
Dividend Revenue		1
Cash	1	
Interest Revenue		1

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

Available for Sale Securities	1	
Unrealized Holding Gain (Equity or OCI)		1

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

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

Securities that the company has the positive intent and ability to hold to maturity. These only include debt securities and are reported at amortized cost.

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

In this case, there would be no entry.

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 on the “Trading account assets” on December 31, 2012 is \$637,000,000. The market value of the securities on this date is also \$637,000,000 because they were recorded at fair value.

- 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.**

Trading Account Assets	85,000,000	
Unrealized Holding Gain		85,000,000

- 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 2012 year-end balance in the “Investment securities held to maturity” account is \$11,379,000,000.

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

The market value of State Street’s investment securities held to maturity is \$11,661,000,000.

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

The amortized cost of these securities is \$11,379,000,000. The amortized cost (\$11,379,000,000) is lower than the original cost (\$11,661,000,000) because the carrying value of the bonds is represented by the amortized cost.

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

The difference between the market value and the amortized cost represents that the investments are worth more than what they are listed for, because the amortized cost is lower than the market value. This means that the rate of interest on held-to-maturity securities has dropped since the purchase of the securities held by State Street.

- 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 2012 year-end balance in the “Investment securities available for sale” account is \$109,162,000,000. This balance represents a fair value.

- 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 on the available-for-sale securities held by State Street at December 31, 2012 is \$1,119,000,000.

- 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 from sales of available-for-sale securities for 2012 is \$55,000,000. This amount would increase State Street’s income statement and cash flows for 2012.

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

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

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

Investment in AFS	60,812	
Cash		60,812

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

Cash	5,399	
Unrealized Holding Gain	67	
Investment in AFS		5,411
Realized Gain on AFS		55

- 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 during 2012 was \$5,344,000,000.

$$(\text{Gain} = \text{Proceeds} - \text{BV})$$

$$(55 = 5,399 - \text{BV})$$

$$(\text{BV} = 5,344)$$

CASE ELEVEN
ZAGG Inc. – Deferred Income Taxes

ZAGG Inc. is a company that specializes in mobile device accessories. ZAGG, which stands for “Zealous About Great Gadgets” started in 2005 just creating plastic protections for wristwatches. Today, their wide range of accessories include cases, headphones, mobile keyboards, portable power, and a patented invisibleSHIELD that can be placed on smartphone and tablet screens. iFrogz, a manufacturer of digital audio accessories, was acquired by ZAGG in 2011 to promote expansion. The company is not a market leader, and is publicly traded on the NASDAQ.

This case on ZAGG Inc. gave great insight into deferred income taxes. Deferred income taxes can be outlined as an obligation to pay taxes on a company’s balance sheet that are attributable to taxable temporary differences. In this case, I defined the difference between book and taxable income, and evaluated this difference on ZAGG’s financials. In addition, I now better understand the differences between permanent and temporary tax differences, as well as effective and statutory tax rates following this case. After analyzing the Codification 740, I have a greater understanding of why a company reports deferred income taxes as part of their total income tax expense, as well as the difference between a deferred income tax asset from a deferred income tax liability. Additionally, I became familiar with what a deferred income tax valuation allowance is, and when it should be used in accounting. This case also helped me understand the journal entries that go along with deferred income tax.

ZAGG Inc. – Deferred Income Taxes

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 firm's book income is pre-tax financial income that is reported in the Income Statement. This is the amount that is required to be computed by U.S. GAAP to be used by investors and creditors at the end of the fiscal year. The number in ZAGG's statement of operation that captures this notion for fiscal 2012 is \$23,898 (in thousands). A company's book income and taxable income have different objectives. Taxable income is computed for a company's tax return that is submitted to the IRS.

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

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

Permanent tax differences are defined as a transaction that is stated differently at book income and taxable income. This difference can never be eradicated. Some examples of permanent tax differences include penalties and fines, life insurance proceeds, and interest on municipal bonds.

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

When revenues or expenses are recognized for different periods for the book and tax values, it produces temporary tax differences. This results in a transaction that reports differently at book income and taxable income, but that eventually eradicates itself over time because it is temporary. Examples of temporary tax differences include depreciation and accrued liabilities.

iii. Statutory tax rate

The statutory tax rate is the rate of tax that is mandated by law, that is stated as a percentage.

iv. Effective tax rate

The effective tax rate is the rate that an individual or corporation is taxed on income. It is calculated by taking tax expense and dividing it by pretax income.

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 taxes are liabilities on a company's balance sheet that are attributable to taxable temporary differences. They represent the increase in taxes payable in future years as result of taxable temporary differences existing at the end of the current year. The amount is usually due to the way a company calculates its income for financial purposes and tax purposes. The computation for income tax expense has two components – current tax expense and deferred tax expense. When you increase deferred tax liabilities from the beginning of the period to the end of the period, it results in a deferred tax expense.

A company reports deferred income taxes as part of their total income tax expense for several reasons. First, GAAP requires that matching principle be followed by companies. Under the matching principle, expenses must be matched with, and thus expensed, in the same period the revenue was earned that caused the expenses to be incurred. Often, due to tax rules, income taxes aren't paid in the same period in which the income was earned that generated the tax. Investors pay attention to deferred income tax to better ascertain a company's short-term liabilities and obligations that will require the use of cash in the near future.

When looking at the Codification ASC 740, the two objectives of accounting for income taxes are listed as "recognize the amount of taxes payable or refundable for the current year" and "recognize deferred tax liabilities and assets for the future tax consequences of events that have been recognized in an

entity's financial statements or tax returns." In section 740-10-10-3, it states that the objective is the measure the deferred tax asset or liability using the tax rates and apply that to taxable income in the periods in which the asset or liability is expected to be settled or realized. This is all about matching the items to the correct periods so that revenues can match expenses.

In part b of 740-10-25-2 it states that "a deferred tax liability or asset shall be recognized for the estimated future tax effects attributable to temporary differences and carryforwards." This is meaning that deferred taxes should be recognized for the estimations based on timing differences or deductions that cannot be utilized on the tax return.

Companies are required to show the components of income tax expense either in the income statement or in the financial statement notes. Some experts dismiss deferred income taxes when evaluating the strength of a company, but the FASB indicates that they are liabilities because they result from a past transaction, are a present obligation, and represent a future sacrifice. Deferred taxes do provide incremental information about future tax payments.

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

Deferred income tax assets are deferred tax consequences that are attributable to deductible temporary differences and carryforwards. They are measured using the applicable enacted tax rate and provisions of the enacted tax law. They are reduced by a valuation allowance if it is more likely than not that some portion or all of a deferred tax asset will not be realized. Some reasons why deferred tax assets are necessary include that revenues are recognized in one period for tax purposes and in a different period for accounting purposes, the company paid too much tax and deserves some money returned, or some assets have a different tax base for governmental agencies compared to accounting practices. An example of a situation that would give rise to a deferred tax asset would be the carry-over of losses.

On the other hand, deferred income tax liabilities are deferred tax consequences attributable to taxable temporary differences. They are measured using the applicable enacted tax rate and provisions of the enacted tax law as well. It is the differences in the way net income is calculated for financial purposes and the

way it is calculated for income tax purposes. The most common book income and tax income difference for this issue is depreciation, where tax rules may allow for accelerated depreciation methods that are not allowed for financial reporting. Another example of deferred tax liability is an installment sale, where credit is paid off in equal amounts over time.

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

A company should reduce a deferred tax asset by a valuation allowance if it is more than 50% likely that it will not realize some portion or all of the deferred tax asset. Companies recognize a deferred tax asset for all deductible temporary differences.

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?**
(entries in thousands)

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

- 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.**
(entries in thousands)

Income Tax Expense	9,393	
DTA, net of VA (14302 – 6300)	8,002	
DTL	291	
		Income Tax Payable
		17,686

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

ZAGG's effective tax rate in 2012 is 39.3%, which was calculated by dividing the company's tax expense of \$9,393 by its taxable income of \$23,898. The difference between the statutory rate and ZAGG's effective tax rate can be accounted by the difference in its book and taxable income.

- 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.**

Net DTA	14,302
Net DTL	<u>(794)</u>
Total Net DTA Balance, net of VA, net of DTL	\$13,508

This balance appears on ZAGG's balance sheet as Current Deferred Income Tax of \$6,912 and \$6,596, which when added together equal \$13,508.

CASE TWELVE
Apple Inc. – Revenue Recognition

Apple Inc. is a major company in today's market. The corporation is responsible for a variety of electronics on the market, including personal computers, portable music and video players, and phones. They also sell related software, services, and networking solutions that coordinate with their products. Apple Inc. specializes in marketing and designing products that make them stand out from their competitors. The company is able to sell their merchandise worldwide through an array of outlets including retail stores, direct sales force, resellers, online stores, and third-party wholesalers.

This case focused on the topic of revenue recognition. First, I took a look back on the differences between gains and revenues. This distinction was important for me to remember before diving into the rest of the case. I also analyzed Apple's revenue recognition policies, while looking alongside the FASB's Statement of Concepts No. 5 and the ASC 606. I feel that it is important for me to be looking at the Revenue Recognition Standard, the Codification, and the Statement of Concepts so that I am familiar with them before grad school or even going into work. In addition, I defined multiple-element contracts and how they interfered with revenue recognition. This is something that I had never heard of before. Finally, I went through Apple's footnotes and evaluated how they recognized revenues for four different situations: iTunes songs sold online, Mac-branded accessories, iPods sold to third party reseller in another country, and sales from gift cards. This was an interesting case for me because Apple is such a prevalent company in my everyday activities, so it was intriguing to be able to get to analyze their financials and learn a little more about how they recognize their revenues.

Apple Inc. – Revenue Recognition

Concepts

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

Revenues can be defined as a company’s income that it gathers from conducting business, such as selling goods or services, after discounts and subtractions have been made. They can also be referred to as sales. Gains, on the other hand, are additions in net assets from peripheral operations of a business.

- 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.**

The core principle of the new standard of ASC 606 states that companies recognize revenue in order to depict the transfer of promised goods or services to customers in an amount that reflects the consideration of which the business expects to be entitled in exchange for those goods or services. The specific accounts and financial statements that are affected by the process of revenue recognition include Accounts Receivable on the Balance Sheet and Revenues or Sales on the Income Statement. The revenue recognition criteria outlined in the FASB’s Statement of Concepts No. 5 sets forth recognition criteria on what information should be incorporated into the financial statements and when it should be done. It states that recognition is the process of properly recording an item in the financial statements, and disclosure by other means is not considered recognition.

- 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, Note 1 states that Apple recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred, the sales price is fixed or determinable, and collection is probable. First, by having persuasive evidence of an arrangement exists, this means that a business must have a contract or an

agreement with its customer to establish clear and persuasive evidence that the customer intends and agrees to buy from the business. Next, once a product has been shipped and title and risk of loss have been transferred, the company deems the product delivered. Most of Apple's sales are considered delivered at the time of shipment. Yet, for online sales the company defers revenue until the customer obtains the product because of risk of loss during transit. Thirdly, Apple decides selling prices contractually, depending on what agreement it is specifically. The company uses a hierarchy to determine the price to use for allocating revenue – starting with vendor-specific objective evidence of fair value, followed by third-party evidence of selling price, and ending with best estimate of the selling price. Finally, the collection that it is able to make will not include accounts payable deemed uncollectable at year's end from customers. Apple's revenue recognition conditions are aligned with the criteria that I described in part b above.

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

Multiple-element contracts are when vendors provide multiple products or services to their customers as part of a single arrangement or a series of related arrangements. These deliverables may be provided at different points over time. This can cause issues because it is difficult for the vendor to separate these multiple deliverables and how to allocate the overall arrangement consideration.

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

Thinking in general terms, Apple sells most of its products in a retail store setting. These managers make their revenue by selling their products. Incentives that would be beneficial to the store, and that would potentially make store profitability increase would be coupons, bundling products, prizes, sales, etc. Thus, this would make the store manager look good from a corporation standpoint.

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.

For certain sales made through iTunes, Apple is not the owner of the software. Thus, third-party creators establish the selling price of the software. Apple accounts for the sales of these products on a net basis

recognizing only the commission it retains from each sale and including that commission in net sales.

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

When in store, revenues are recognized when these accessories are sold, at the point of sale. If it is an online sale to an individual, Apple defers revenue until the customer receives the product because of the risk of loss during transit. Once they acquire the product, then the company recognizes revenues. Codification 605-45-45-12 states that “physical loss inventory risk exists if title to the products is transferred to an entity at shipping point... Physical loss inventory risk also exists if an entity takes title to the product after a customer order has been received but before the product has been transferred to a carrier for shipment.”

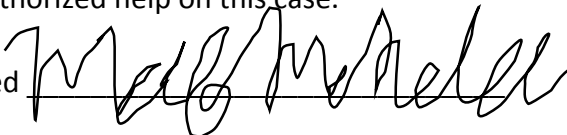
iii. iPods sold to a third-party reseller in India.

Apple can recognize the gross amount billed from the third-party once the other company makes a sale. The Codification 605-45-55-12 states that “revenues from sales of products from the overseas source should be reported based on the gross amount charged to customers.”

iv. Revenue from gift cards.

The company records deferred revenue upon the sale of the card, which is relieved upon redemption of the card by the customer.

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

Signed 

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