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A Comprehensive Review of Accounting through Case Studies

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A Comprehensive Review of Accounting through Case Studies

by
Ellen Rebecca Duncan

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: Professor Victoria Dickinson

Reader: Dean Dr. Mark Wilder

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ABSTRACT

ELLEN DUNCAN: A Comprehensive Review of Accounting through Case Studies
(Under the direction of Victoria Dickinson)

As a student of both The Sally McDonnell Barksdale Honors College and The Patterson School of Accountancy, I have the opportunity to pursue an alternative thesis, comprised of a study of technical accounting through case studies. I compiled this research of accounting theories, principles, and data analytics systems over the course of two semesters, while simultaneously seizing bi-weekly opportunities to network with professional firms and interview for accounting internships. The opportunity to pursue an alternative thesis not only impacted my academic growth, but also my professional success. With the help of Doctor Victoria Dickinson, I was able to put the principles I had learned in the classroom to practice, gaining an understanding of the laws and theories governing specific transactions, and how small variations can have a magnified effect on financial statements. Dr. Dickinson also scheduled all of the Big 4 accounting firms, along with regional and local firms, to speak in class about 6 times a semester. These interactions helped me to gain additional exposure to the firms, and increased my chances of securing an internship with the firm and city of my choice. I have recently returned from a Big 4 internship in Nashville, Tennessee, where I have already accepted a full-time job offer upon completion of my Master's degree and CPA. The following review of accounting through case studies is certainly a reflection of this growth and success over the course of my time at the University and as a student of the SMBHC.

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CASE 1: Analyses of Eads and Glenwood Heating Companies

Executive Summary

In completing this case study, I learned several significant skills. I first learned how to use the data contained in a company's business transactions to create meaningful financial statements. Then, from those statements, I learned to analyze financial performance. Finally, I became familiar with accounting for operating leases and capital lease agreements.

Financial Statement Analyses and Investment Decision

Eads Heater, Inc. and Glenwood Heating, Inc. are two newly-established home heater distributors with similar operations and economic conditions. Given that the two companies share many identical transactions in the first year of business, one might overlook significant differences between Eads and Glenwood, including their inventory and depreciation methods, and specific terms related to the use of manufacturing equipment. Upon further analysis of their independent financial statements and a comparison of certain financial ratios, Eads Heaters, Inc. appears to be the most advantageous investment.

Table 1-1, found in Appendix A, summarizes the financial ratios for both Eads and Glenwood. In regard to liquidity, Glenwood has a higher current ratio and acid-test ratio. These ratios measure the company's short-term ability to pay maturing debt obligations. Consider, however, the cash account for both Glenwood and Eads. On the December 31, 20XI balance sheet, Glenwood has only \$426 remaining to pay maturing debt obligations, while Eads has \$7,835. Although Glenwood carries less liabilities on the balance sheet, its shortage of cash is a red flag from an investor's perspective.

Eads Heater, Inc. has higher accounts receivable turnover and inventory turnover ratios. These activity ratios measure how effectively the company uses its assets. In regard to the use of assets, perhaps the most significant difference between Eads and Glenwood is their use of operating equipment. While Glenwood avoids recording its operating equipment on the balance sheet through the use of an operating lease, there is no guarantee that the rental expense will be the same in subsequent periods. This uncertainty could persuade investors to favor Eads, whose management negotiated a capital lease agreement with more definite terms.

Glenwood Heating, Inc. outweighs Eads Heaters, Inc. in overall profitability, with a higher Profit Margin on Sales by approximately five percent. This ratio measures net income generated by each dollar of sales. Because both companies have completed only one year of business, however, this ratio is not the primary focus of potential investors.

Finally, consider the coverage ratios for both companies. These ratios, measuring the degree of protection for long-term creditors and investors, are significant factors from the investor's perspective. Glenwood, with a higher debt-to-assets ratio, has a higher percentage of total assets provided by creditors. Eads, with a higher times-interest-earned ratio, has a greater ability to meet interest payments on outstanding debt as they come due. Again, because both companies are in their first year of business, the ability to meet interest obligations holds more weight than the amount of assets provided by creditors. Between Glenwood Heating, Inc. and Eads Heater, Inc., Eads is the most advantageous investment decision.

Table 1-1: Summary of Financial Ratios

	Eads Heater, Inc.	Glenwood Heating, Inc.
Liquidity:		
Current Ratio	2.455	3.044
Acid-Test Ratio	1.638	1.862
Activity:		
Accounts Receivable Turnover	4.220	4.050
Inventory Turnover	3.702	2.818
Profitability:		
Profit Margin on Sales	17.695%	23.273%
Coverage:		
Debt to Assets Ratio	70.542%	64.281%
Times Interest Earned	3.686	5.472

Table 1-2: Income Statement – Glenwood

Glenwood Heating, Inc.		
Income Statement		
For the Year Ended December 31, 20XI		
Sales Revenue	\$398,500	
Cost of Goods Sold	\$177,000	
Gross Profit		\$221,500
Operating Expenses		
Rent Expense	\$16,000	
Depreciation Expense	\$19,000	
Bad Debt Expense	\$994	
Other Operating Expenses	\$34,200	\$70,194
Income from Operations		\$151,306
Other Expenses and Losses		
Interest Expense		\$27,650
Income before Income Tax		\$123,656
Income Tax Expense		\$30,914
Net Income		<u>\$92,742</u>
Earnings per Common Share		<u>\$28.98</u>

Table 1-3: Income Statement – Eads

Eads Heater, Inc.		
Income Statement		
For the Year Ended December 31, 20XI		
Sales Revenue	\$398,500	
Cost of Goods Sold	\$188,800	
Gross Profit		\$209,700
Operating Expenses		
Depreciation Expense	\$41,500	
Bad Debt Expense	\$4,970	
Other Operating Expenses	\$34,200	\$80,670
Income from Operations		\$129,030
Other Expenses and Losses		
Interest Expense		\$35,010
Income before Income Tax		\$94,020
Income Tax Expense		\$23,505
Net Income		<u>\$70,515</u>
Earnings per Common Share		<u>\$22.04</u>

Table 1-4: Balance Sheet – Glenwood

Glenwood Heating, Inc.			
Balance Sheet			
December 31, 20XI			
Assets			
Current Assets			
Cash		\$426	
Accounts Receivable	\$99,400		
Less: Allowance for Bad Debts	<u>\$994</u>	\$98,406	
Inventory		<u>\$62,800</u>	
Total Current Assets			\$161,632
Property, Plant, and Equipment			
Land		\$70,000	
Building	\$350,000		
Less: Accumulated Depreciation-Building	<u>\$10,000</u>	\$340,000	
Equipment	\$80,000		
Less: Accumulated Depreciation- Equipment	<u>\$9,000</u>	<u>\$71,000</u>	
Total Property, Plant, and Equipment			<u>\$481,000</u>
Total Assets			<u>\$642,632</u>
Liabilities and Stockholders' Equity			
Current Liabilities			
Accounts Payable		\$26,440	
Interest Payable		\$6,650	
Note Payable		\$20,000	
Total Current Liabilities			\$53,090
Long-Term Debt			
Note Payable		\$360,000	
Total Long-Term Debt			<u>\$360,000</u>
Total Liabilities			<u>\$413,090</u>
Stockholders' Equity			
Common Stock		\$160,000	
Retained Earnings		<u>\$69,542</u>	
Total Stockholders' Equity			<u>\$229,542</u>
Total Liabilities and Stockholders' Equity			<u>\$642,632</u>

Table 1-5: Balance Sheet – Eads

Eads Heater, Inc.			
Balance Sheet			
December 31, 20XI			
Assets			
Current Assets			
Cash		\$7,835	
Accounts Receivable	\$99,400		
Less: Allowance for Bad Debts	\$4,970	\$94,430	
Inventory		\$51,000	
Total Current Assets			\$153,265
Property, Plant, and Equipment			
Land		\$70,000	
Buildings	\$350,000		
Less: Accumulated Depreciation-Buildings	\$10,000	\$340,000	
Equipment	\$80,000		
Less: Accumulated Depreciation-Equipment	\$20,000	\$60,000	
Leased Equipment	\$92,000		
Less: Accumulated Depreciation-Leased Equipment	\$11,500	\$80,500	
Total Property, Plant, and Equipment			\$550,500
Total Assets			\$703,765
Liabilities and Stockholders' Equity			
Current Liabilities			
Accounts Payable		\$26,440	
Interest Payable		\$6,650	
Lease Payable		\$9,330	
Note Payable		\$20,000	
Total Current Liabilities			\$62,420
Long-Term Debt			
Notes Payable		\$360,000	
Lease Payable		\$74,030	
Total Long-Term Debt			\$434,030
Total Liabilities			\$496,450
Stockholders' Equity			
Common Stock		\$160,000	
Retained Earnings		\$47,315	
Total Stockholders' Equity			\$207,315
Total Liabilities and Stockholders' Equity			\$703,765

Table 1-6: Statement of Retained Earnings – Glenwood

Glenwood Heating, Inc.	
Retained Earnings Statement	
For the Year Ended December 31, 2017	
Retained Earnings, January 1	-
Add: Net Income	\$92,742
Less: Dividends	\$23,200
Retained Earnings, December 31	<u>\$69,542</u>

Table 1-7: Statement of Retained Earnings – Eads

Eads Heater, Inc.	
Retained Earnings Statement	
For the Year Ended December 31, 20XI	
Retained Earnings, January 1	-
Add: Net Income	\$70,515
Less: Dividends	\$23,200
Retained Earnings, December 31	<u>\$47,315</u>

Table 1-8: First-Year Transactions – Glenwood

Glenwood Heating, Inc.						
First-Year Transactions						
Assets						
Transaction	Cash	Accounts Receivable	Inventory	Land	Building	Equipment
No. 1	\$160,000					
No. 2	\$400,000					
No. 3	\$420,000			\$70,000	\$350,000	
No. 4	\$80,000					\$80,000
No. 5			\$239,800			
No. 6		\$398,500				
No. 7	\$299,100	\$299,100				
No. 8	\$213,360					
No. 9	\$41,000					
No. 10	\$34,200					
No. 11	\$23,200					
No. 12						
Balances	<u>\$47,340</u>	<u>\$99,400</u>	<u>\$239,800</u>	<u>\$70,000</u>	<u>\$350,000</u>	<u>\$80,000</u>

Table 1-9: First-Year Transactions – Glenwood (Continued)

Glenwood Heating, Inc.					
First-Year Transactions					
	Liabilities			Stockholders' Equity	
Transaction	Accounts Payable	Note Payable	Interest Payable	Common Stock	Retained Earnings
No. 1				\$160,000	
No. 2		\$400,000			
No. 3					
No. 4					
No. 5	\$239,800				
No. 6					\$398,500
No. 7					
No. 8	\$213,360				
No. 9		\$20,000			\$21,000
No. 10					\$34,200
No. 11					\$23,200
No. 12			\$6,650		\$6,650
Balances	<u>\$26,440</u>	<u>\$380,000</u>	<u>\$6,650</u>	<u>\$160,000</u>	<u>\$313,450</u>

Table 1-10: First-Year Transactions – Eads

Eads Heater, Inc.						
First-Year Transactions						
	Assets					
Transaction	Cash	Accounts Receivable	Inventory	Land	Building	Equipment
No. 1	\$160,000					
No. 2	\$400,000					
No. 3	\$420,000			\$70,000	\$350,000	
No. 4	\$80,000					\$80,000
No. 5						
No. 6		\$398,500				
No. 7	\$299,100	\$299,100	\$239,800			
No. 8	\$213,360					
No. 9	\$41,000					
No. 10	\$34,200					
No. 11	\$23,200					
No. 12						
Balances	<u>\$47,340</u>	<u>\$99,400</u>	<u>\$239,800</u>	<u>\$70,000</u>	<u>\$350,000</u>	<u>\$80,000</u>

Table 1-11: First-Year Transactions – Eads (Continued)

Eads Heater, Inc.					
First-Year Transactions					
	Liabilities			Stockholders' Equity	
Transaction	Accounts Payable	Note Payable	Interest Payable	Common Stock	Retained Earnings
No. 1				\$160,000	
No. 2		\$400,000			
No. 3					
No. 4					
No. 5	\$239,800				
No. 6					\$398,500
No. 7					
No. 8	\$213,360				
No. 9		\$20,000			\$21,000
No. 10					\$34,200
No. 11					\$23,200
No. 12			\$6,650		\$6,650
Balances	<u>\$26,440</u>	<u>\$380,000</u>	<u>\$6,650</u>	<u>\$160,000</u>	<u>\$313,450</u>

Table 1-12: End-of-Year Transactions – Glenwood

Glenwood Heating, Inc.							
Part B: Recording Additional Information							
	Assets						
Transaction	Cash	Accounts Receivable	Allowance for Bad Debts	Inventory	Land	Building	Accumulated Depreciation Building
Balances: Part A	<u>\$47,340</u>	<u>\$99,400</u>	-	<u>\$239,800</u>	<u>\$70,000</u>	<u>\$350,000</u>	-
Part B (1) Bad Debts			\$994				
Part B (2) COGS				\$177,000			
Part B (3) Depreciation							
Building							\$10,000
Equipment							
Part B (4) Equipment							
Rental Payment	\$16,000						
Part B (5) Income Tax	\$30,914						
Balances	<u>\$426</u>	<u>\$99,400</u>	<u>\$994</u>	<u>\$62,800</u>	<u>\$70,000</u>	<u>\$350,000</u>	<u>\$10,000</u>

Table 1-13: End-of-Year Transactions – Glenwood (Continued)

Glenwood Heating, Inc.					
Part B: Recording Additional Information					
	Liabilities				Stockholders' Equity
Transaction	Accounts Payable	Interest Payable	Notes Payable	Common Stock	Retained Earnings
Balances: Part A	<u>\$26,440</u>	<u>\$6,650</u>	<u>\$380,000</u>	<u>\$160,000</u>	<u>\$313,450</u>
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>

Table 1-14: End-of-Year Transactions – Eads

Eads Heaters, Inc.							
Part B: Recording Additional Information							
	Assets						
Transaction	Cash	Accounts Receivable	Allowance for Bad Debts	Inventory	Land	Building	Accumulated Depreciation Building
Balances: Part A	<u>\$47,340</u>	<u>\$99,400</u>	<u>-</u>	<u>\$239,800</u>	<u>\$70,000</u>	<u>\$350,000</u>	<u>-</u>
Part B (1) Bad Debts			\$4,970				
Part B (2) COGS				\$188,800			
Part B (3) Depreciation							
Building							\$10,000
Equipment							
Part B (4) Equipment							
Lease							
Lease Payment	\$16,000						
Depreciation							
Part B (5) Income Tax	\$23,505						
Balances	<u>\$7,835</u>	<u>\$99,400</u>	<u>\$4,970</u>	<u>\$51,000</u>	<u>\$70,000</u>	<u>\$350,000</u>	<u>\$10,000</u>

Table 1-15: End-of-Year Transactions – Eads (Continued)

Eads Heater, Inc.							
Part B: Recording Additional Information							
Transaction	Assets				Liabilities		
	Equipment	Accumulated Depreciation Equipment	Leased Equipment	Accumulated Depreciation Lease	Accounts Payable	Interest Payable	Notes Payable
Balances: Part A	\$80,000	-	-	-	\$26,440	\$6,650	\$380,000
Part B (1) Bad Debts							
Part B (2) COGS							
Part B (3) Depreciation							
Building							
Equipment		\$20,000					
Part B (4) Equipment Lease			\$92,000				
Lease Payment							
Depreciation				\$11,500			
Part B (5) Income Tax							
Balances	\$80,000	\$20,000	\$92,000	\$11,500	\$26,440	\$6,650	\$380,000

Table 1-16: End-of-Year Transactions – Eads (Continued)

Eads Heater, Inc.			
Part B: Recording Additional Transactions			
Transaction	Liabilities	Stockholders' Equity	
	Lease Payable	Common Stock	Retained Earnings
Balances: Part A	-	\$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			\$11,600
Part B (5) Income Tax			\$23,505
Balances	\$83,360	\$160,000	\$47,315

Table 1-17: First-Year Journal Entries – Glenwood

Glenwood Heating, Inc.			
First-Year Transactions			
	Account Title	Debit	Credit
Transaction 1	Cash	160,000	
	Common Stock		160,000
Transaction 2	Cash	400,000	
	Note Payable		400,000
Transaction 3	Building	350,000	
	Land	70,000	
	Cash		420,000
Transaction 4	Equipment	80,000	
	Cash		80,000
Transaction 5	Inventory	239,800	
	Accounts Payable		239,800
Transaction 6	Accounts Receivable	398,500	
	Sales		398,500
Transaction 7	Cash	299,100	
	Accounts Receivable		299,100
Transaction 8	Accounts Payable	213,360	
	Cash		213,360
Transaction 9	Note Payable	20,000	
	Interest Expense	21,000	
	Cash		41,000
Transaction 10	Other Operating Expenses	34,200	
	Cash		34,200
Transaction 11	Dividends	23,200	
	Cash		23,200
Transaction 12	Interest Expense	6,650	
	Interest Payable		6,650

Table 1-18: End-of-Year Journal Entries – Glenwood

Glenwood Heating, Inc.			
End-of-Year Transactions			
	Account Title	Debit	Credit
Transaction 13	Bad Debt Expense	994	
	Allowance for Bad Debts		994
Transaction 14	Cost of Goods Sold	177,000	
	Inventory		177,000
Transaction 15	Depreciation Expense	10,000	
	Accumulated Depreciation-Building		10,000
Transaction 15	Depreciation Expense	9,000	
	Accumulated Depreciation-Equipment		9,000
Transaction 16	Rent Expense	16,000	
	Cash		16,000
Transaction 17	Provision for Income Tax	30,914	
	Cash		30,914

Table 1-19: First-Year Journal Entries – Eads

Eads Heater, Inc.			
First-Year Transactions			
	Account Title	Debit	Credit
Transaction 1	Cash	160,000	
	Common Stock		160,000
Transaction 2	Cash	400,000	
	Note Payable		400,000
Transaction 3	Building	350,000	
	Land	70,000	
	Cash		420,000
Transaction 4	Equipment	80,000	
	Cash		80,000
Transaction 5	Inventory	239,800	
	Accounts Payable		239,800
Transaction 6	Accounts Receivable	398,500	
	Sales		398,500
Transaction 7	Cash	299,100	
	Accounts Receivable		299,100
Transaction 8	Accounts Payable	213,360	
	Cash		213,360
Transaction 9	Note Payable	20,000	
	Interest Expense	21,000	
	Cash		41,000
Transaction 10	Other Operating Expenses	34,200	
	Cash		34,200
Transaction 11	Dividends	23,200	
	Cash		23,200
Transaction 12	Interest Expense	6,650	
	Interest Payable		6,650

Table 1-20: End-of-Year Journal Entries – Eads

Eads Heater, Inc.			
End-of-Year Transactions			
	Account Title	Debit	Credit
Transaction 13	Bad Debts Expense	4,970	
	Allowance for Bad Debts		4,970
Transaction 14	Cost of Goods Sold	188,800	
	Inventory		188,800
Transaction 15	Depreciation Expense	10,000	
	Accumulated Depreciation, Building		10,000
Transaction 15	Depreciation Expense	20,000	
	Accumulated Depreciation, Equipment		20,000
Transaction 16	Leased Equipment	92,000	
	Lease Payable		92,000
Transaction 16	Lease Payable	8,640	
	Interest Expense	7,360	
	Cash		16,000
Transaction 16	Depreciation Expense	11,500	
	Accumulated Depreciation, Leased Equipment		11,500
Transaction 17	Provision for Income Tax	23,505	
	Cash		23,505

CASE 2: Profitability and Earnings Persistence

Executive Summary

In completing this case, “Molson Coors Brewing Company – Profitability and Earnings Persistence,” I successfully explained why income statements are “classified” and gained better understanding of specific income statement items and interpreted their impact on firm performance. When investors evaluate the future profitability of a company, it is crucial that the financial statements provide decision-useful information, differentiating between recurring and nonrecurring revenues and expenses. Failure to disclose the nature of financial activities is a red flag to current and potential investors. Companies like Molson Coors should intentionally disclose as much as possible on the face of the income statement rather than hiding certain items in the notes to the financial statements.

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

- Operating Section
 - The operating section is a report of the revenues and expenses of the company’s principal operations. Operating income consists of net sales or revenue, with a subsection showing the cost of the goods that were sold to produce the sales. Operating expenses are classified as either selling or general and administrative.
- Nonoperating Section
 - The nonoperating section is a report of the revenues and expenses resulting from secondary activities of the company. Any infrequent or unusual gains or losses are reported in this section, classified as either “Other Revenues and Gains” or “Other Expenses and Losses.”
- Income Tax

- The income tax section reports any federal or state taxes levied on income from continuing operations.
- Discontinued Operations
 - The discontinued operations section reports any material gains or losses resulting from the disposition of a component of the business.
- Noncontrolling Interest
 - The noncontrolling interest section reports the allocation of income to noncontrolling shareholders.
- Earnings Per Share
 - The earnings per share section serves as a measure of performance over the reporting period.

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

Under U.S. GAAP, companies are required to provide “classified” income statements in order to provide the most decision-useful information to current and potential investors. This means that the income statement must separate operating and nonoperating information, differentiating between regular and non-recurring or incidental activities.

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

Persistent income consists of regular income that can be maintained in future periods. This measure of earnings allows financial statement users to estimate current and future profitability, ignoring income resulting from irregular or incidental activities.

4. Define comprehensive income and discuss how it differs from net income.

Comprehensive income includes all changes in equity during a period, with the exception of changes resulting from investments by owners and distributions to owners. The items included in comprehensive income include all revenues, gains, expenses, and losses reported in net income, and all gains and losses that bypass net income but affect stockholders' equity. These comprehensive items include translation gains and losses on foreign currency, unrealized gains and losses on available for sale securities, and adjustments related to pensions.

1. The income statement reports “Sales” and “Net Sales.” What is the difference? Why does Molson Coors report these two items separately?

Because Molson Coors is a beer brewery, they must pay a special excise tax before distributing their products to buyers. Molson Coors' distinguishes between Gross Sales and Net Sales in order to highlight their revenues before the affect of excise tax. This classification may be more desirable from the investor's perspective.

2. Consider the income statement item “Special items, net” and information in Notes 1 and 8.

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

Molson Coors defines its special items as “charges incurred or benefits realized that [they] do not believe to be indicative of [their] core operations” (Note 1). These items include infrequent or unusual items, impairment or asset abandonment-related losses, restructuring charges and other atypical employee-related costs, fees on termination of significant operating agreements, and gains or losses on the disposal of investments.

b. 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.

The company reports these activities on a separate line item to separate them from “Marketing, general, and administrative expenses,” which are more closely related to primary operating expenses. I do not concur with this classification, because in general, the activities listed in “Special Items” are irregular and non-recurring, thus providing misleading information to financial statement users regarding operating income and expenses. Also, to abide by the principal of faithful representation, these activities should be listed on the face of the income statement, rather than subjectively buried in the notes to the financial statements.

3. 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 as a nonoperating expense, and “Special items, net” which Molson Coors classifies as operating expense?

Molson Coors defines “Other income (expense), net” as “gains and losses associated with activities not directly related to brewing and selling beer” (Note 1). These items include gains and losses on foreign exchange and on sales of nonoperating assets. The activities included in “Other income (expense)” are considered recurring, while the activities included in “Special Items, net” are considered nonrecurring.

4. Refer to the statement of comprehensive income. 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 \$760.2 million, while the amount of net income for 2013 is \$572.5 million. This difference results from changes in equity including foreign currency translation adjustments, unrealized gains on derivative instruments, and pension adjustments.

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

Molson Coors' effective tax rate in 2013 is calculated as follows:

$$\begin{aligned} & \text{Income Tax Expense/Income Before Income Tax Expense} \\ & = \$84,000,000.00/\$654,500,000.00 \\ & = 0.1283 \end{aligned}$$

Molson Coors' effective tax rate in 2013 is 12.83 percent. The difference between the federal tax rate of 35 percent and the effective tax rate of 12.83 percent is due to the effect of foreign tax rates, reducing income tax by 27.4 percent.

Case 3: Accounts Receivable

Executive Summary

For credit-based companies, Accounts Receivable constitute a major portion of income. In order to provide financial statement users with the most decision-useful information, managers must consider the best way to account for receivables, specifically those which become uncollectible. In this case, Pearson plc, I learned how to examine a company's financial statements and notes and further analyze financial data related to the allowance for sales returns and allowances, allowance for doubtful accounts, and gross receivables. I also compared various methods of estimating uncollectibles, concluding that the aging-of-accounts method provides the closest representation of net realizable value for accounts receivable.

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

- Accounts receivable are oral promises of the purchaser to pay for goods and services sold. They represent "open accounts" resulting from short-term extensions of credit.
- Accounts Receivable are also referred to as trade receivables.

b. How do accounts receivable differ from notes receivable?

- Accounts receivable are oral promises of the purchaser to pay for goods and services sold, while notes receivable are written promises to pay a certain sum of money on a specified future date.
- Accounts receivable are normally collected within thirty to sixty days, while notes receivable may be short-term or long-term.

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

- A contra account is an account with a balance opposite the normal balance of the accounts under its classification. For example, a contra account on the balance sheet reduces either an asset, liability, or owners' equity account. It offsets the related asset, liability, or equity account on the balance sheet.
- The two contra accounts associated with Pearson's trade receivables are "Provisions for Bad and Doubtful Debts" and "Anticipated Future Sales Returns." These accounts are also referred to as "Allowance for Doubtful Accounts" and "Allowance for Sales Returns and Allowances."
- "Provisions for Bad and Doubtful Debts" or "Allowance for Doubtful Accounts" both estimates uncollectible receivables at the end of the period and offsets actual uncollectible receivables during the period. "Allowance for Doubtful Accounts" shows the estimated amount of claims on customers that the company expects it will not collect in the future. This account has a normal credit balance. It increases with estimated Bad Debt Expense and decreases with the write-off of uncollectible receivables.
- "Anticipated Future Sales Returns" or "Allowance for Sales Returns and Allowances" serves as a provision for estimated returns. "Allowance for Sales Returns and Allowances" is a contra account to Accounts Receivable. This account has a normal credit balance, which increases with estimated Sales Returns and Allowances and decreases with actual Sales Returns and Allowances.
- When deciding how to estimate the balance in "Allowance for Doubtful Accounts," managers use either a percentage-of-sales or aging-of-accounts approach. Expected uncollectible accounts are estimated based information about past events and loss experience, adjusted for current conditions and reasonable forecast of factors that would affect uncollectible accounts. While much judgment is involved, the goal is to develop the best estimate of expected uncollectible receivables.

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 two approaches do you think results in a more accurate estimate of net accounts receivable?

- The percentage-of-sales approach, often referred to as the income statement approach, estimates Bad Debt Expense as a percent of total sales. Although this approach may provide a better “matching” of bad debt expense to sales, the balance in Allowance for Doubtful Accounts likely will not provide a representationally faithful estimate of net realizable value.
- The aging-of-accounts approach, also referred to as the balance sheet approach, estimates uncollectible debt as a percentage of the Accounts Receivable balance. Companies may apply this method using one composite rate that reflects an estimate of the uncollectible receivables, or they may set up an aging schedule of accounts receivable, which applies a different percentage based on past experience to the various age categories. This procedure provides a reasonably accurate estimate of the receivables’ net realizable value.

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.

- To be profitable, a company based on credit sales must extend credit to customers under the assumption that its receivables will be collected. Losses from bad debt expense are a normal and necessary risk of doing business on a credit basis. Included in the risks managers must consider are the credit risk of potential customers, the customer’s liabilities, and general economic conditions.

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 account during the year. Explain, in your own words, the line items that reconcile the change in account during 2009.

Table 3-1: T-Account – Provision for Bad and Doubtful Debts

Provision for Bad and Doubtful Debts	
	£72,000,000
£5,000,000	
	£26,000,000
£20,000,000	
	£3,000,000
	<u>£76,000,000</u>

- In 2009, the beginning balance in “Provision for Bad and Doubtful Debts,” also referred to as “Allowance for Doubtful Accounts,” was £72,000,000.
- Income Statement Movements increased the Allowance for Doubtful Accounts balance by £26,000,000. This change is attributed to estimated Bad Debt Expense.
- The write off of accounts receivable, or the amount of the provision utilised in 2009, decreased the Allowance for Doubtful Accounts balance by £20,000,000.
- Also included in the end balance of the allowance are exchange differences of £5,000,000 and an acquisition of an additional £3,000,000 allowance through business combination.

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 “utilised”) during 2009. For each account in your journal entries, note whether the account is a balance sheet or income statement account.

Table 3-2: Bad-Debt Journal Entries

	Account Title	Debit	Credit
Transaction 1	Bad Debt Expense (I/S)	20,000,000	
	Allowance for Doubtful Accounts (B/S)		20,000,000
Transaction 2	Allowance for Doubtful Accounts (B/S)	26,000,000	
	Accounts Receivable (B/S)		26,000,000

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

- The Provision for Bad and Doubtful Debts Expense, or Bad Debt Expense, is included on the income statement as an operating expense.

g. Note 22 reports that the balance in Pearson’s provision for sales returns was £372,000,000 at December 31, 2009 and £354,000,000 at December 31, 2009. Under U.S. GAAP this contra account is typically referred to as an “allowance” and reflects the company’s anticipated sales returns.

i. Complete a T-account that shows the activity in the provision for sales returns account during the year. Assume that Pearson estimated returns relating to 2009 Sales to be £425,000,000. 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.

Table 3-3: T-Account – Provision for Sales Returns

Provision for Sales Returns	
	£372,000,000
	£425,000,000
£443,000,000	
	<u>£354,000,000</u>

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.

Table 3-4: Sales Returns Journal Entries

	Account Title	Debit	Credit
Transaction 1	Sales Returns and Allowances	425,000,000	
	Allowance for Sales Returns and Allowances		425,000,000
Transaction 2	Allowance for Sales Returns and Allowances	443,000,000	
	Accounts Receivable		443,000,000

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

- The amount of 2009 estimated sales returns appears on the income statement as line item reducing gross sales.

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, 2009 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.

Table 3-5: T-Account – Trade Receivables, Gross

Trade Receivables, Gross	
£1,030,000,000	
	£5,627,000,000
	£20,000,000
	£443,000,000
£6,049,000,000	
£989,000,000	

Table 3-6: Calculation of Gross Credit Sales

Calculation of Gross Credit Sales	
Net Sales	£5,624,000,000
Estimated Sales R&A	£425,000,000
Gross Credit Sales	<u>£6,049,000,000</u>

- In 2009, Gross Trade Receivables has a beginning balance of £1,030,000, found from observing its ending balance in 2008. This balance increases with gross credit sales of £6,049,000,000 and decreases with cash collections of £5,627,000,000, uncollectible write-offs of £20,000,000, and actual sales returns and allowances of £443,000,000. Thus, the end balance of gross trade receivables is £989,000,000.

	Account Title	Debit	Credit
Transaction 1	Accounts Receivable	6,049,000,000	
	Sales Revenue		6,049,000,000
Transaction 2	Cash	5,627,000,000	
	Accounts Receivable		5,627,000,000

Case 4: Long-Term Contracts

Executive Summary

Two primary methods exist for the recognition of profit or loss related to long-term construction contracts. These methods are the percentage-of-completion method and the completed-contract method. The examples below will outline the effects of the differences between the two methods, explaining the theories and journal entries therein.

Example: Long-Term Contract with an Overall Loss

- On July 1, 2014, Torvill Construction Company Inc. contracted to build an office building for Gumbel Corp, for a total contract price of \$1,900,000. On July 1, 2016, Torvill estimated that it would take between 2 and 3 years to complete the building. On December 31, 2016, the building was deemed substantially completed. Following are accumulated contract costs incurred, estimated costs to complete the contract, and accumulated billings to Gumbel for 2014, 2015, and 2016.

Table 4-1: Long-Term Contract: Beginning Balances

	At 12/31/14	At 12/31/15	At 12/31/16
Contract costs incurred to date	\$300,000	\$1,200,000	\$2,100,000
Estimated costs to complete the contract	1,200,000	800,000	0
Billings to Gumbel	300,000	1,100,000	1,850,000

- Using the percentage-of-completion method, prepare schedules to compute the profit or loss to be recognized as a result of this contract for the years ended December 2014, 2015, and 2016. (Ignore income taxes.)
- Using the completed-contract method, prepare schedules to compute the profit or loss to be recognized as a result of this contract for the years ended December 2014, 2015, and 2016. (Ignore income taxes.)

Solution: Percentage-of-Completion Method

From the above information, the contract price of this transaction is \$1,900,000. Using the percentage-of-completion method, revenues, costs, and gross profit will be recognized as Torvill makes progress toward completion of their long-term contract. The ratio of estimated costs to date and estimated total costs provides the percentage of total recognized gross profit. Then, gross profit recognized in prior years is deducted from the total amount of gross profit recognized to find the current year amount. This concept is demonstrated below.

Table 4-2: Percentage-of-Completion: Gross Profit Recognition Schedule

	2014	2015	2016
Estimated costs to date	\$300,000	\$1,200,000	\$2,100,000
Estimated costs to complete	1,200,000	800,000	0
Estimated total costs	\$1,500,000	\$2,000,000	\$2,100,000
Estimated gross profit	\$400,000	-\$100,000	-\$200,000
Percent complete	20%	60%*	100%
Recognized gross profit (total)	\$80,000	-\$100,000	-\$200,000
Recognized gross profit (prior years)	0	80,000	-100,000
Recognized gross profit (current year)	\$80,000	-\$180,000	-\$100,000

Notice the interim loss in the year 2015. In the previous year, only 20% of gross profit was recognized, but since there was a net loss in 2015, Torvill was required to recognize the entire loss in the current year. To recognize this loss and eliminate the profit from the prior year, the gross profit recognized in 2014 was deducted from the loss in 2015 to arrive at a cumulative loss of \$180,000.

To journalize transactions for the percentage-of-completion method, Torvill must make an entry to record the cost of construction, to record progress billings, to record collection of receivables, and to recognize revenue and gross profit. The table below demonstrates each entry. (Note: Because the problem provides no information regarding the collection of receivables, the entry uses “xx” to demonstrate the journal entry.)

Table 4-3: Percentage-of-Completion Method: 2014 Journal Entries

Account	Debit	Credit
Construction in progress	300,000	
Materials, Cash Payables, Etc		300,000
Accounts Receivable	300,000	
Billings on Construction in Progress		300,000
Cash		xx
Accounts Receivable		xx
Construction in Progress	80,000	
Construction Expense	300,000	
Revenue from Long-Term Contracts		380,000

Torvill will record similar entries for 2015 and 2016. At the end of 2016, however, Torvill will make an additional entry to record the completion of the contract, debiting billings on construction in progress and crediting construction in progress for the contract price.

Table 4-4: Percentage-of-Completion Method: 2015 Journal Entries

Account	Debit	Credit
Construction in progress	900,000	
Materials, Cash Payables, Etc		900,000
Accounts Receivable	800,000	
Billings on Construction in Progress		800,000
Cash		xx
Accounts Receivable		xx
Construction Expense	940,000	
Construction in Progress		180,000
Revenue from Long-Term Contracts		760,000

Notice the entry to recognize revenue and gross profit in 2015. Because there is an interim loss in this year, the Construction Expense account is used as a plug for the credits to Construction in Progress and Revenue from Long Term Contracts. The Construction in Progress account is credit for the \$180,000 loss, and the Construction Expense account includes the loss recognized in the current period that has not yet been recognized.

Table 4-5: Percentage-of-Completion Method: 2016 Journal Entries

Account	Debit	Credit
Construction in Progress	900,000	
Materials, Cash Payables, Etc		900,000
Accounts Receivable	750,000	
Billings on Construction in Progress		750,000
Cash		xx
Accounts Receivable		xx
Construction Expense	860,000	
Construction in Progress		100,000
Revenue from Long-Term Contracts		760,000
Billings on Construction in Progress	1,900,000	
Construction in Progress		1,900,000

Notice the additional journal entry to record the completion of the contract in 2016. To record completion of the contract, Torvill debits Billings on Construction in Progress and credits Construction in Progress for the total contract price.

Solution: Completed-Contract Method

Using the completed-contract method, Torvill will record the same entries to record cost of construction, to record progress billings, and to record collections at the end of each period. However, because the completed-contract method does not recognize profit until the end of the contract period, there will be no entries to recognize revenue and gross profit until the end of 2016.

Also, Torvill will recognize the interim loss from 2015 immediately after it is incurred. The related journal entry is as follows:

Table 4-6: Completed-Contract Method: 2015 Journal Entries

Account	Debit	Credit
Loss on Long Term Contract	100,000	
Construction in Progress		100,000

At the end of 2016 when the contract is completed, Torvill will make the following entry to recognize gross profit (loss).

Table 4-7: Completed-Contract Method: 2016 Journal Entries

Account	Debit	Credit
Loss on Long Term Contract	100,000	
Construction in Progress		100,000

Case 5: Property, Plant and Equipment

Executive Summary

In the Palfinger AG – Property, Plant and Equipment case, students learned to use information from the financial statements of a manufacturing company to analyze fixed asset and depreciation transactions. Upon completing the case, each student gained a better understanding of why and how certain costs are capitalized, and which costs are included in determining the gains or losses on the disposals of fixed assets. Additionally, students were asked to research the accounting guidelines surrounding government grants in relation to self-constructed assets. A final comparison of the income effects of two common depreciation methods helped students to understand the benefits and potential adverse effects behind the company's preferred accounting methods.

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

Palfinger's property, plant and equipment is composed of the resources and machinery required to produce their inventory. This includes a factory building, the land upon which the factory is built, and all machinery required to produce their various types of hydraulic systems, cranes, and other construction materials. Examples of machinery are assembly machines, robotics, or even mobile machines to aid in the construction of large, heavy-duty products.

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

The 2007 balance sheet amount for property, plant, and equipment represents the net amount of all land, building structures, and equipment after taking into consideration any changes due to acquisition costs, depreciation, impairment, direct costs, and manufacturing overhead.

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

The types of equipment reported in the notes to the financial statements include plant fixtures, fittings, and machinery. These items, because of their permanent nature, are additions to the plant that are capitalized under property, plant and equipment rather than expensed.

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.

The subaccount “Prepayments and assets under construction” represents Palfinger’s self-constructed assets. Cost is allocated to these assets based on a pro-rata portion of the fixed overhead to construct the asset. These assets are not depreciated until construction is completed and the asset is ready for its intended use. The reclassification is due to the completion of the self-constructed asset. The amount is taken out of “Prepayments and assets under construction” and reclassified into “Plant and Machinery” and “Land and Buildings.”

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, plant and equipment on a straight-line basis over the prospective useful lives of the assets. Assets are depreciated as soon as they are put into operation, and the anticipated economic or technical life is used to determine the expected useful life of the asset.

This policy may not be the most reasonable, because it relies on the assumptions that the assets’ economic usefulness is the same each year and that the maintenance and repair expense is essentially the same each period. The double-declining balance approach, or a hybrid method, may be more appropriate for the depreciation of Palfinger’s property, plant and equipment.

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 any expenditures made to enhance or improve equipment and buildings. Using this approach, the company capitalizes improvements and keeps the carrying amount of the old asset on its books. This approach is generally used if the company is unable to determine the carrying amount of the asset.

An alternative approach in situations where the carrying amount of the asset is unavailable is to charge the expenditure to accumulated depreciation rather than the asset account. This approach supports the idea that because the expenditure extends the useful life of the asset, some or all of the past depreciation is recaptured.

Finally, the company could use the substitution approach in treating these expenditures. This approach is correct if the carrying amount of the old asset is known. Instead of capitalizing the expenditure, the cost of the old asset is directly replaced by the cost of the new asset.

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.

From the notes to the financial statements, the amount of additions included in the calculation for 2007 acquisition cost is €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.

Palfinger uses government grants to fund the construction and purchases of new property, plant and equipment. Government grants are recognized through the Construction in Progress account over the periods in which the entity recognizes expenses for the related costs for which the grants are intended to compensate. Initially, the grant is deducted from the carrying amount of the asset, and is recognized over the period necessary to match the income with related costs. The €733 decrease in property, plant and equipment in 2007 represents a reduction in acquisition cost of new property, plant and equipment.

iii. Depreciation expense for fiscal 2007.

From the notes to the financial statements, the amount of depreciation expense recognized in the 2007 fiscal year is €12,557.

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

From the notes to the financial statements, the net book value of property, plant and equipment disposed of in the 2007 fiscal year is €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.

The net book value of the disposals of Palfinger's property, plant and equipment in the 2007 fiscal year is €12,298. If Palfinger receives cash proceeds of €1,655 in exchange for the sale of these assets, they will record a loss of €10,643. Supporting calculations are below.

Table 5-1: Calculation of Loss on PP&E

PP&E Net Book Value	€ 12,298
Cash Proceeds from the Sale of PP&E	€ 1,655
Gain/(Loss) on Sale of PP&E	€ 10,643

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.

Table 5-2: Straight-Line Depreciation Schedule

Straight-Line Depreciation Schedule				
Year	Beginning of Year Book Value	Depreciation Expense	Accumulated Depreciation	End of Year Book Value
1	€ 10,673	€ 1,880	€ 1,880	€ 8,793
2	€ 8,793	€ 1,880	€ 3,760	€ 6,913
3	€ 6,913	€ 1,880	€ 5,640	€ 5,033
4	€ 5,033	€ 1,880	€ 7,520	€ 3,153
5	€ 3,153	€ 1,880	€ 9,400	€ 1,273

ii. Double-Declining Balance Depreciation

Table 5-3: Calculation of Double-Declining Balance Rate

Rate on Declining Balance	
100%	$= \frac{1}{5} \times 2 =$
Useful Life	40%

Table 5-4: Double-Declining Balance Depreciation Schedule

Double-Declining-Balance Depreciation Schedule					
Year	Beginning of Year Book Value	Rate on Declining Balance	Depreciation Expense	Accumulated Depreciation	End of Year Book Value
1	€ 10,673	40%	€ 4,269	€ 4,269	€ 6,404
2	€ 6,404	40%	€ 2,562	€ 6,831	€ 3,842
3	€ 3,842	40%	€ 1,537	€ 8,368	€ 2,305
4	€ 2,305	40%	€ 922	€ 9,290	€ 1,383
5	€ 1,383	40%	€ 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.

Using the straight-line depreciation method, the gain recorded on the disposal of the equipment in 2008 is calculated in the following table. Because Palfinger does not record depreciation in the year of sale, only one year of depreciation is considered in the calculation.

Table 5-5: Straight-Line Depreciation: Gain/Loss on Disposal of PP&E

Cost	€ 10,673.00
Accumulated Depreciation	€ 1,880.00
Net Book Value	€ 8,793.00
Cash Proceeds	€ 7,500.00
Gain/(Loss) on Disposal	€ 1,293.00

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.

Using the double-declining-balance method, the loss recorded on the disposal of the equipment in 2008 is calculated in the following table. Because Palfinger does not record depreciation in the year of sale, only one year of depreciation is considered in the calculation.

Table 5-6: Double-Declining Balance Depreciation: Gain/Loss on Disposal of PP&E

Cost	€ 10,673
Accumulated Depreciation	€ 4,269
Net Book Value	€ 6,404
Cash Proceeds	€ 7,500
Gain/(Loss) on Disposal	€ 1,096

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

Using the straight-line depreciation method, depreciation is consistent over the useful life of the asset. This means that the amount of depreciation expense in the early years of the asset's useful life will be a smaller amount than in the case of the double-declining-balance method. Because the double-declining balance method calculates annual depreciation based on a double-declining rate rather than a consistent depreciation amount, depreciation expense is higher in the early years of the asset's useful life. This explains why, under the straight-line depreciation method, Palfinger records a gain on the disposal of the equipment as opposed to the loss recorded using the double-declining-balance method.

Case 6: Research and Development Costs

Executive Summary

In completing the case, “Volvo Group – Research and Development Costs,” I learned the difference between accounting for R&D under GAAP and under IFRS. I examined comparative financial statements to find relationships between sales, R&D expenditures, and capitalized development costs. In comparing the principles of GAAP and IFRS, I conclude that the principle under GAAP best reflects the future benefits and costs of R&D. The criteria for capitalizing development costs under IFRS are extremely subjective, and the best way to remain conservative in accounting for these expenditures is to expense all costs as they are incurred.

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

The costs likely associated with these research and development expenses are as follows:

- Costs to fund the planned search or critical investigation aimed at the discovery of new knowledge
- Costs to translate research findings into a plan or design for a new product or process

Not included in research and development costs are routine or periodic alterations to existing products, production lines, manufacturing processes, or other ongoing operations.

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?

In determining which research and development costs to capitalize and which to expense, Volvo Group applies IAS 38. This standard mandates that research expenditures are expensed when incurred and that certain expenditures for the development of new products, production systems, and software are capitalized and reported as intangible assets. The criteria to capitalize these development expenditures are as follows:

- If the technical and commercial feasibility of the asset for sale or use has been established
- The entity must be able to demonstrate how the asset will generate future economic benefits

If the entity cannot distinguish the research phase of an internal project to create an intangible asset from the development phase, the entity treats the expenditure for that project as if it were incurred in the research phase only.

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?

To determine the amortization period for particular costs, Volvo Group would consider the future economic benefit of the asset, the tangible or intangible nature of the asset, and perhaps the useful lives granted by other entities for similar product and software development costs.

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?

Two major difficulties arise in accounting for R&D expenditures – identifying the costs associated with particular activities, projects, or achievements, and determining the magnitude of future benefits and length of time over which such benefits may be realized. In my opinion, the accounting principle under U.S. GAAP provides financial statements that better reflect the costs and benefits of periodic R&D spending. While the criteria under IFRS to capitalize specific development costs are highly subjective, U.S. GAAP requires that all R&D costs be expensed as incurred.

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

i. What is the amount of the capitalized product and software development costs, net of accumulated amortization at the end of fiscal 2009? Which line item on Volvo Group’s balance sheet reports this intangible asset?

The amount of the capitalized product and software development costs, net of accumulated amortization at the end of fiscal 2009 is calculated as follows:

Table 6-1: Calculation of Capitalized Product and Software Development Costs, Net

Product and software development, gross	25,148
Accumulated depreciation and amortization, net	<u>11,409</u>
Product and software development, net	13,739

Volvo Group reports this intangible asset under “Intangible Assets” on its balance sheet.

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.

Table 6-2: T-Account: Product and Software Development, Net

Product and Software Development, net	
Balance, 12/31/08	12,381
	Accumulated depreciation and amortization, 2,830 2009
Capitalized expenditures	1,858
Balance, 12/31/09	11,409

f. Refer to Volvo’s balance sheet, footnotes, and the eleven-year summary. Assume that the product and software development costs reported in footnote 14 are the only R&D costs that Volvo capitalizes.

i. Complete the table below for Volvo’s Product and software development intangible asset.

Table 6-3: Comparative Research and Development Schedule

(in SEK millions)	2007	2008	2009
1) Product and software development costs capitalized during the year	2,057	2,150	2,830
2) Total R&D expense on the income statement	11,059	14,348	13,193
3) Amortization of previously capitalized costs (included in R&D expense)	2,357	2,864	3,126
4) Total R&D costs incurred during the year = 1+2-3	10,759	13,634	12,897

ii. What proportion of Total R&D costs incurred did Volvo Group capitalize (as product and software development intangible asset) in each of the three years?

Table 6-4: Comparative Capitalized Research and Development Costs Schedule

	2007	2008	2009
Capitalized product and software development costs	2,057	2,150	2,830
Total R&D expense	11,059	14,348	13,193
Proportion of capitalized costs	19%	15%	21%

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.

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

Table 6-5: Comparative Schedule of Net Sales and Total Assets

In SEK (millions)	2007	2008	2009
Net Sales, industrial operations	285,405	303,667	218,361
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?

Table 6-6: Comparison of Proportion of R&D to Net Sales

	Volvo	Navistar
R&D Costs Incurred	13193	433
Net Sales from Operations	218,361	11,300
Proportion	6%	4%

Volvo's proportion of total research and development costs incurred to net sales from operations is twice as high as Navistar's. This indicates that research and development, if executed properly, can provide future economic benefit sufficient enough to increase sales dramatically.

Case 7: Data Analytics

Executive Summary

As the importance of data analytics tools grows increasingly in the public accounting industry, those still obtaining their education are wise to be knowledgeable of the many tools used to comb through large sets of data. Among these is a tool called ‘Splunk,’ which is described below in further detail.

History

Splunk, an American corporation based in San Francisco, California. Founded in 2003 by Michael Baum, Erik Swan, and Rob Das, Splunk’s initial aim was to improve the process of weeding through log file data. Current Splunk CEO, Michael Baum, was previously running Yahoo’s e-commerce applications for over 12,000 servers. His prior experience spurred the motivation behind creating Splunk, after collectively realizing the amount of time and resources weeding through log file data with primitive tools (Robb).

Purpose

The concept of Big Data is becoming increasingly relevant in the modern business environment. Over the last decade, there has been exponential growth in machine data. Because this large amount of data has such potential to drive efficiency and productivity for firms, Splunk was founded with the following purpose: to make sense of machine generated log data (Vardhan). Perhaps Splunk’s most prominent selling-point is the software’s ability to accomplish real-time processing. This provides firms with an enhanced ability to make real-time business decisions.

Other Benefits associated with the software’s implementation include the following:

- You can create knowledge objects for Operational Intelligence
- Your input data can be in any format.
- You can configure Splunk to give alerts at the onset of a machine state.
- You can accurately predict the resources needed for scaling up the infrastructure.

Type of Technology Platform

Splunk is a software platform able to search, analyze, and visualize machine generated log data. This data is gathered and summarized from all of the sources making up a firms IT infrastructure, including websites, applications, sensors, and devices.

Resources needed

Splunk is a software platform that can be installed into a firm's already existing network system. To implement Splunk within a firm, servers and hardware must be sized for the deployment and installation of operating systems. The "core" of the software consists of Splunk's enterprise security element. This is typically setup in a distributed Splunk deployment, which consists of several different systems dedicated to running the software ("Installing Splunk"). These integrated systems serve the following functions: indexing information, acting as search heads for license masters and other applications, and forwarding data sources like Linux and Windows.

What special skills are needed to use this tool to aid in business decision making, and how might a student gain those skills?

Individuals are not required to have extensive experience in the realm of data analytics, or familiarity with the related technology platforms and applications in order to effectively use Splunk software. After Splunk is connected with a firm's data network, any educated individual can work with Splunk to arrange the data into an understandable visual format. Splunk has improved its effectiveness even more by signing a recent deal with Apache Hadoop, where users are now able to conduct real-time searches, analyses and visualizations.

A student can gain the skills needed to use this software tool by becoming more familiar with it. This software is relatively user-friendly, so an individual will not need special skills to use it effectively. A user will only need knowledge about their specific firm, so that they can effectively arrange the data in a way that will be useful for those making decisions within the firm.

How, specifically, would you use the tool in the following business settings?

Auditing

First, consider a scenario wherein an individual is performing an internal audit, in the process of evaluating employee behavior. Obtaining this information can lead to better managerial effectiveness within a firm, and Splunk can help to gather and organize data about employees within the network. The internal auditor could use the various features Splunk has to offer and choose how to format and communicate the results. The auditor could use this information in regard to the audit, and then pass it along to executive members of the firm to make management more efficient.

Next, consider a scenario where an individual is performing an external audit on a particular company. This may be a retail company with large sales volume, where a significant amount of data being generated each day. Using the real-time data capabilities associated with Splunk, an external auditor may be able to perform a more effective audit by having a more relevant sample of data from which to analyze. This can also provide more relevant and decision-useful information for potential creditors and investors.

Finally, consider a scenario in which an individual is performing an IT audit on a firm. These types of audits are important because they are an examination of the controls in place within a firm's IT infrastructure. An IT auditor can use his or her knowledge of Splunk to evaluate the security of the firm's IT infrastructure, and can consequently evaluate the effectiveness of all associated and linked applications within the firm's network.

Tax Planning

First, consider a scenario where an individual is generating the initial information needed to perform tax work for a business with a large volume of payroll expenses. The accountant is likely responsible for filing 1099-S paperwork with the IRS. Splunk can likely assist with this process by sifting through the various vendors and employees, and helping the accountant to determine which individuals to file forms for, and their related information. This can increase efficiency for the firm by cutting down on the time to manually sift through the large volume of data.

Next, consider a scenario where a tax accountant is trying to find new ways to reduce taxes for firms. With the help of Splunk, the tax accountant can use real-time data generated from various regions to find trends and improve results. This can help to make the specific firm more efficient by cutting down on expenses and thus promoting growth.

Finally, consider a scenario where a tax analyst is conducting tax work for a large corporation with multiple subsidiaries. Splunk could help the accountant to perform more efficiently by bringing all relevant data into one place. The tax accountant can then organize the data accordingly using the various features Splunk has to offer.

Financial statement analysis/valuation/advisory

First, consider a scenario where a financial consultant is working to improve customer relations within a firm. Using Splunk, the consultant can gather data from customer surveys and arrange it in a way that is meaningful to management. This can increase the effectiveness of the firm by providing a more tangible way for improving customer relations.

Next, consider a scenario where a financial analyst is working to find trends about the cost of specific goods within a manufacturing firm. If the price of raw materials is constantly fluctuating, a technology platform like Splunk can allow the analyst to find trends and estimate the average cost of the finished goods for the firm. This can allow the firm to make predictions about future costs and revenues, thus allowing them to operate more efficiently.

Finally, consider a scenario where an accountant working in an advisory position is working to help a firm implement a plan for a large-scale expansion. With the help of Splunk, the accountant can generate data related to the most effective revenue areas within the firm, and generate a plan for expansion that highlights those areas.

Why would an engagement team want to invest in Splunk?

The team should invest in Splunk within the existing IT infrastructure because it's implementation not only has the potential to improve efficiency within the firm, but also gives employees an additional resource with which to provide decision-useful information to investors and clients. Splunk has something to offer to improve operations in all areas of accounting, including Auditing, Taxation, and Advisory services. If the firm finds that the cost to implement Splunk is manageable, I highly recommend

investing in the software because of the benefit that it poses both internally and externally.

Ultimately, Splunk stands out from other software platforms because of its ability to organize large volumes of general log file data in real-time. Consider the potential benefits that this capability could pose to the auditing profession! An auditor could provide an even greater quality of assurance to firms and related parties if their audits included the real-time data generated from Splunk software. Additionally, Splunk software could help accountants in general to cut down on the time to manually sift through information, thus reducing administrative costs and increasing the amount of time that the individual can devote to serving the client.

Finally, Splunk has the potential to improve customer relations and other qualitative aspects within the firm. Its ability to compile and organize large amounts of data goes beyond financial services and has the potential to help management better understand the needs of employees and consumers. I would highly encourage you to look into this program!

Case 8: Long-Term Debt

Executive Summary

Rite Aid Corporation, the largest retail pharmacy in the United States, provides financial statements that allow students to analyze and learn about various types of debt and debt-reporting requirements. In this case study analysis, students were asked to differentiate between the various types of debt in the company's debt portfolio, reconcile reported amounts in the balance sheet to detailed note disclosures, and calculate interest expense and discount amortization for various types of 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?

In Rite Aid's 2009 financial statements, debt is categorized as secured and unsecured. Secured debts are those in which the borrower promises collateral as security for the loan or note. Unsecured debts, on the other hand, require no collateral. Rite Aid distinguishes between these two types of debt because it is important for shareholders to know that certain outstanding liabilities have a potential affect on the company's assets.

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?

Guaranteed debt ensures that if one party defaults on repayment, the other party will be responsible for payment. In the case of Rite Aid, a certain portion of Rite Aid's unsecured debt is guaranteed by the senior secured credit facility.

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

Rite Aid further categorizes its debt under the terms “senior,” “fixed-rate,” and “convertible.” “Senior” debt refers to borrowed money that a company is obligated to prioritize for repayment in the case of bankruptcy. “Fixed-rate” debt pays the same rate of interest over the life of the debt. “Convertible” debt has the capacity to be converted into company equity at certain times during the life of the debt.

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

Many times, companies aim to diversify their debt portfolio because of its impact on interest rates and company credit risk. Rite Aid is wise to hold so many different varieties of debt, because it can obtain lower interest rates and secure larger amounts of capital to expand business ventures.

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.

From note 11, Indebtedness and Credit Agreement, Rite Aid reports \$6,370,899 in total debt as of February 27, 2010. In the coming fiscal year, \$51,502 is due from their total debt obligations. The total debt reported is reconciled below.

Table 8-1: Calculation of Rite Aid’s Total Debt

Current Maturities of Long Term Debt and Lease Financing Obligations	\$51,502
Lease Financing Obligations	152,691
Long Term Debt Less current Maturities	6,185,633
Total Debt	<u>\$6,370,899</u>

- 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 Rite Aid's 7.5% senior secured notes due March 2017 is \$500,000. This is evident because the bonds were issued at par, meaning there was no initial discount or premium associated with the notes. The notes would be listed on the company's financial statements at face value over the entire life of the notes.

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

Because the notes were issued at par, the journal entry at the date of issuance contains no premium or discount. The journal entry at the date of issuance is as follows:

Table 8-2: Journal Entry for Issuance of Notes at Par

<i>Debit</i>	<i>Credit</i>	<i>Amount</i>
Cash		500,000
	Notes Payable	500,000

This journal entry would increase both current assets and current liabilities on the balance sheet. There would be no effect on income.

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

Again, because the notes are issued at par, interest expense will remain constant over the life of the notes. The annual interest expense is computed by multiplying the face value of the notes by the stated rate, 7.5%. The journal entry to record interest is as follows:

Table 8-3: Journal Entry to Record Annual Interest Payment on Notes Outstanding

<i>Debit</i>	<i>Credit</i>	<i>Amount</i>
Interest Expense		37,500
	Cash	37,500

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

When the notes mature in 2017, Rite Aid will repay the notes at their face value. The journal entry to record the retirement of the notes is as follows:

Table 8-4: Journal Entry to Record Retirement of Notes

<i>Debit</i>	<i>Credit</i>	<i>Amount</i>
Notes Payable		500,000
	Cash	500,000

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

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

The face value of the 9.375% senior notes due December 2015 is \$410,000. The carrying value of these notes at February 27, 2010 is \$405,951. These amounts are different because the stated rate of the notes is less than the effective interest rate. These notes were issued at a discount, so their carrying value will increase by the amount of discount amortization each period.

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

During fiscal 2009, Rite Aid paid \$38,437.50. This amount is calculated by multiplying the note's face amount by the stated rate of interest.

- 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 amount of interest expense recorded by Rite Aid on these notes for the year ended February 27, 2010 is \$39,142.50. This amount is calculated by multiplying the prior year's end-of-year book value by the

effective interest rate. Note that the amortization of the discount increases interest expense.

Table 8-5: Amortization Schedule of Outstanding Notes

<i>Year</i>	<i>Beginning of Year Book Value</i>	<i>Cash Payment</i>	<i>Interest Expense</i>	<i>Discount Amortization</i>	<i>End of Year Book Value</i>
2009	--	--	--	--	\$405,246.00
2010	\$405,246.00	\$38,437.50	\$39,142.50	\$705.00	\$405,951.00

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

The journal entry to record interest expense for fiscal 2009 is as follows:

Table 8-6: Journal Entry to Record Interest Expense on Notes

<i>Debit</i>	<i>Credit</i>	<i>Amount</i>
Interest Expense		39,142.50
	Cash	38,438.50
	Discount on Notes Payable	705

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

The total rate of interest recorded for fiscal 2009 is 9.659%. This is calculated by dividing the prior year's end-of-year book value by the interest expense.

- e. **Consider the 9.75% notes due June 2016. Assume that Rite Aid issues these notes on June 30, 2009 and that the company pays interest on June 30th of each year.**
- i. **According to note 11, the proceeds of the notes at the time of issue were 98.2% of the face value of the notes. Prepare the journal entry that Rite Aid must have made when these notes were issued.**

The 9.75% notes due June 2016 were issued at a 1.8% discount. The journal entry Rite Aid must have made when these notes were issued is as follows:

Table 8-7: Journal Entry to Record Issuance of Notes at a Discount

<i>Debit</i>	<i>Credit</i>	<i>Amount</i>
Cash		402,620
Discount on Notes Payable		7,380
	Notes Payable	410,000

The debit to cash is calculated by multiplying the notes' face amount, \$410,000 by the market rate of 98.2%. The difference between the face amount and the cash proceeds of the note is the amount of the unamortized discount.

- ii. At what effective annual rate of interest were these notes issued? The notes were issued at an effective annual rate of 10.1212%. Supporting calculations are as follows:**

Table 8-8: Calculation of Effective Interest Rate

<i>Beginning of Year Book Value</i>	<i>Cash Payment</i>	<i>Interest Expense</i>	<i>Discount Amortization</i>	<i>End of Year Book Value</i>
				\$402,620.00
\$402,620.00	\$39,975.00	\$40,749.98	\$774.98	\$403,394.98
\$403,394.98	\$39,975.00	\$40,828.41	\$853.41	\$404,248.39

The effective rate of interest is calculated by adding the discount amortization of \$770 to the annual cash payment of \$39,975, and dividing the prior year's end-of-year book value of \$402,620 by the interest expense of \$40,749.98.

- iii. Assume that Rite Aid uses the effective interest rate method to account for this debt. Use the table that follows to prepare an amortization schedule for these notes. Use the last column to verify that each year's interest expense reflects the same interest rate even though the expense changes.

Table 8-9: Comparative Schedule of Effective Interest Rate

<i>Date</i>	<i>Interest Payment</i>	<i>Interest Expense</i>	<i>Bond Discount Amortization</i>	<i>Net Book Value of Debt</i>	<i>Effective Interest Rate</i>
June 30, 2009	--	--	--	\$402,620.00	10.1212%
June 30, 2010	\$39,975.00	\$40,749.98	\$774.98	403,394.98	10.1212%
June 30, 2011	39,975.00	40,828.41	853.41	404,248.39	10.1212%
June 30, 2012	39,975.00	40,914.79	939.79	405,188.18	10.1212%
June 30, 2013	39,975.00	41,009.91	1,034.91	406,223.08	10.1212%
June 30, 2014	39,975.00	41,114.65	1,139.65	407,362.73	10.1212%
June 30, 2015	39,975.00	41,230.00	1,255.00	408,617.73	10.1212%
June 30, 2016	39,975.00	41,357.27	1,382.27	410,000	10.1212%

- iv. **Based on the above information, prepare the journal entry that Rite Aid would have recorded February 27, 2010, to accrue interest expense on these notes.**

Using the table above, the journal entry that Rite Aid would have recorded February 27, 2010 to accrue interest expense on these notes is as follows:

Table 8-10: Journal Entry for Interest Accrual on Notes

<i>Debit</i>	<i>Credit</i>	<i>Amount</i>
Interest Expense		27,167
	Discount on Notes Payable	517
	Interest Payable	26,650

Interest payable is calculated by multiplying the face amount, \$410,000, by the stated rate, and then allocating that amount to a partial period of 8 months. The discount is calculated likewise, and interest expense is found by adding the partial period discount amortization to the accrued interest.

- 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 is \$403,137. This is calculated by adding the end-of-year book value from February 27, 2010, \$402,260, and the discount amortization of \$517.

Case 9: Shareholders' Equity

Executive Summary

Merck & Co., Inc. is an internationally known pharmaceutical company, and GlaxoSmithKline plc is a global healthcare group. Merck operates under GAAP while GlaxoSmith operates under IFRS. Upon completing this case, I learned about the various measures used to analyze shareholders' equity, and the discrepancies between GAAP and IFRS in performing these calculations. The following case study will explain items including dividends, treasury stock, and related financial performance ratios.

Concepts

a. Consider Merck's common shares.

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

From its consolidated balance sheet, Merck & Co. is authorized to issue 5,400,000,000 shares of common stock.

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

From its consolidated balance sheet, Merck & Co. actually issues 2,983,508,675 shares of common stock as of 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.

With a par value of one cent per share and 2,983,508,675 shares outstanding, the value of common stock listed on the consolidated balance sheet, \$29.8 million, is justified.

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

From its consolidated balance sheet, Merck & Co. holds 811,005,791 shares of treasury stock as of December 31, 2007.

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

The number of common shares outstanding is calculated by deducting the number of treasury shares held by Merck & Co. from the number of shares issued. Supporting calculations are as follows:

2,983,508,675 Shares issued
-811,005,791 Treasury shares held
2,172,502,884 Shares outstanding

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.

Market capitalization is calculated by multiplying the market price per share by the number of shares outstanding. Supporting calculations are as follows:

2,172,502,884 Shares outstanding
\$57.61 per share
\$125,157,891,100 Market capitalization

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

Companies pay dividends on common shares not only to make their stock look more attractive to potential investors, but also to maintain their relationship with current stockholders. The distribution of a dividend proves, in a way, that the company is successful enough to give out a portion of its earned capital to investors rather than reinvesting it. The payment of dividends generally reduces a company's share price.

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

Companies often repurchase their own shares to make their stock look more attractive to current and potential investors. The purchase of treasury stock makes the stock look more valuable because there are less shares outstanding, and it decreases the number of weighted-average shares outstanding, thus increasing earnings per share.

- 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.**

The journal entry to summarize Merck & Co.'s common dividend activity for 2007 is as follows (in millions):

Dividends	3,310.70	
Cash		3.40
Dividends Payable	3,307.30	

- 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.**

Merck and Co. uses the cost method to account for its treasury stock. This means that treasury shares are kept on the books at their cost at the date of purchase. On Merck's consolidated balance sheet, the dollar value of treasury stock is deducted from stockholders' equity to arrive at total stockholders' equity.

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

From note 11 to Merck's financial statements, Merck repurchased 26.5 million shares on the open market in 2007.

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

From note 11 to Merck's financial statements, the cost to buy back its stock during 2007 was \$1,429.7 million dollars. The purchase of treasury stock is considered an investing cash flow.

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

An asset is defined as a resource with economic value that an entity owns or controls with the expectation that it will provide future benefit. Treasury stock, common stock repurchased by a firm, is not an asset, but rather a contra-equity account

- i. **Determine the missing amounts and calculate the ratios in the tables below. For comparability, use dividends paid or 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?**

Table 9-1: Comparative Schedule of Shareholders' Equity

	Merck (\$)		Glaxo (£)
	2007	2006	2007
Dividends paid	\$3,307,300,000	\$3,322,600,000	£2,793,000,000
Shares outstanding	2,172,502,884	2,167,785,445	5,743,587,026
Net income	\$3,275,400,000	\$4,433,800,000	£6,134,000,000
Total assets	\$48,350,700,000	\$44,569,800,000	£31,003,000,000
Operating cash flows	\$6,999,200,000	\$6,765,200,000	£6,161,000,000
Year-end stock price	\$57.61	\$41.94	£97.39
Dividends per share	\$1.52	\$1.53	£0.49
Dividend yield	2.638%	3.648%	0.503%
Dividend payout	100.974%	74.945%	45.533%
Dividends to total assets	0.0684	0.0745	0.0901
Dividends to operating cash flows	0.4725	0.4911	0.4533

Case 10: Marketable Securities

Executive Summary

State Street Corporation, founded in 1792, is a major financial holding company headquartered in Boston, Massachusetts. This company focuses primarily on serving investors, so it is important that they are well-equipped with the skills to account for different classifications of debt and equity investments. Within the class of Marketable Securities, there are three types. These are trading, available-for-sale, and held-to-maturity. These will be discussed in the following case study.

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?

Marketable securities can be in the form of either equity, as in shares of stock, or debt. Trading Securities, a type of marketable security, are short-term securities that typically sell within 3 months of their issue date. They cannot exert significant influence, but rather are intended to be purchased and resold in a rapid fashion.

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

A company would record \$1 of dividends or interest received for trading securities by making the following journal entry:

Cash	\$1
Dividend Revenue/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?

If the market value of the trading securities increased by \$1 during the accounting period, the company would make the following journal entry:

Security Fair Value Adjustment – Trading	\$1
URHGL	\$1

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

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

Available-for-sale securities are debt or equity securities not classified as held-to-maturity or trading securities. When there is an unrealized gain or loss derived from an available-for-sale security, the amount is reflected in other comprehensive income rather than raw income.

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

To record \$1 of dividends or interest received from securities available-for-sale, a company would make the following journal entry:

Cash	\$1
Dividend Revenue/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?

If the market value of securities available-for-sale increased by \$1 during the reporting period, the company would make the following journal entry:

Security Fair Value Adjustment – AFS	\$1
URHGL	\$1

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

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

Held-to-maturity securities are those purchased with the intention of holding the investment to maturity. These securities are reported at amortized cost, and can only be in the form of debt. Interest derived from a held-to-maturity security goes through the income statement, and changes in fair value are not shown for held-to-maturity securities.

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

If the market value of securities held-to-maturity increased by \$1 during the reporting period, the company would make no journal entry to record.

- d. **Consider the “Trading account assets” on State Street’s balance sheet.**

- i. **What is the balance in this account on December 31, 2012? What is the market value of these securities on that date?**

The balance in the “Trading account assets” account as of December 31, 2012 is \$637 million. The fair market value of these securities on that date is the same, because trading securities are always reported 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.**

To adjust the balance of its “Trading account assets” account to fair value, State Street would record the following journal entry:

Security Fair Value Adjustment-Trading	\$85
URHGL	\$85

- 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 account “Investment securities held to maturity” is \$11,379 million.

- 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 million.

- 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 million. Amortized cost represents the book or carrying value of the securities, and is lower than the original cost of the securities.

- 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 a change in interest rates. Because the market value of the securities is higher than their amortized cost, the market rate of interest is lower than the rate of the securities.

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

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

The year-end balance in the account “Investment securities available for sale” is \$109,682 million. This balance represents the fair value of the securities at the balance sheet date.

- 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 in 2012 on the available-for-sale securities is \$1,119 million.

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

The amount of net *realized* gains from sales of available-for-sale securities for 2012 is \$55 million. This amount will increase both State Street’s income and cash flows from investing activities 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.**

The journal entry State Street made to record the purchase of available-for-sale-securities for 2012 is as follows:

Investment – 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.**

The journal entry State Street made to record the sale of available-for-sale securities in 2012 is as follows:

Cash	\$5,399
Unrealized Holding Gain	\$67
Realized Gain on AFS	\$55
Investment-AFS	\$5,471

- 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 is \$5,344 million.

Case 11: Deferred Income Taxes

Executive Summary

In the case, “ZAGG Inc.: Deferred Income Taxes,” students were introduced to the topic of income taxes, particularly in regard to deferred tax assets and deferred tax liabilities. Students were challenged to analyze ZAGG’s income statement, balance sheet, and financial statement notes to trace the amounts reported for income tax provision back to deferred taxes. In this case, I learned how to read financial statements in order to derive deferred tax assets.

- a. Describe what is meant by the term book income? Which number in ZAGG’s statement of operation captures this notion for fiscal 2012? Describe how a company’s book income differs from its taxable income.**

Book income is the pretax income reported on the income statement. This is reported on an accrual basis in accordance with US GAAP. This usually differs from taxable income due to permanent and temporary differences. In ZAGG’s statement of operation for fiscal 2012, book income is reported at \$23,898,000.

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

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

A permanent tax difference is a transaction reported differently for financial reporting and tax reporting purposes, for which the difference will never be eliminated. Permanent tax differences are recognized for financial reporting purposes, but never for tax purposes. For example, if an individual receives a penalty or fine from a speeding ticket or other unlawful activity, he or she may not deduct the amount from taxable income.

ii. Temporary tax difference (also provide an example)

A temporary tax difference is a difference between book and taxable income that is recognized for one period for taxes, but a different period for book purposes. An example of a temporary tax difference can be either a future taxable amount or a future deductible amount. For example, a company may need to report rent revenue for taxable reasons before it is earned, thus creating a future deductible amount.

iii. Statutory tax rate

The statutory tax rate is the legally imposed tax rate.

iv. Effective tax rate

The effective tax rate is the average rate at which income is taxed. This is calculated by dividing income tax expense by pre-tax 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?

A company reports deferred income taxes as part of their total income tax expense so that they can abide by the financial reporting standards of US GAAP. Because taxable income is reported on a cash basis, it is often not equal to book income, which is reported on an accrual basis. This is generally a result of permanent and temporary differences and differing tax rates. Deferred tax assets and liabilities allow companies to match revenues and expenses for book purposes, because a company's current tax bill is usually not wholly representational of its actual tax obligation.

According to ASC 740, a tax position is “a position in a previously filed tax return or a position expected to be taken in a future tax return, reflected in measuring current or deferred income tax assets and liabilities for interim or annual periods.” A tax position might result in a deferral of income taxes payable to future years, a permanent reduction of income taxes payable, or a change in the realizability of deferred tax assets. Deferred tax assets must be reported separately from total income tax expense because they are subject to change, and could thereby affect the decisions of financial statement users.

- 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 and liabilities must be provided in the financial statements in order for financial statement users to make the most useful decisions. A deferred tax asset is derived from a future deductible amount – a temporary difference between book and taxable income that will be added to taxable income and deducted in future periods. An example of a deferred tax asset is revenue that is received before it is earned (unearned revenue). Because taxable income is reported on a cash basis, this unearned revenue, although not reported as income for book purposes, must be added to taxable income, and deducted in future years as it is earned.

A deferred tax liability, on the other hand, is derived from a future taxable amount. An example would be an accrued expense, like prepaid rent, that may have been paid in a certain period, but will be recognized as an expense for book purposes over the length of the asset. Because taxable income follows the flow of cash, this amount will be subtracted from taxable income initially, and added to taxable income as the expense is recognized on the books.

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

A deferred income tax valuation allowance is a balance sheet item that offsets deferred tax assets. This allowance is recorded when a company or individual does not expect to realize the full value of a deferred tax asset.

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

i. Using the information in the first table in Note 8, show the journal entry that ZAGG recorded for the income tax provision in fiscal 2012?

In fiscal 2012, ZAGG recorded the following journal entry for income tax provision:

Table 11-1: Journal Entry for Income Tax Provision

Income Tax Expense	9,393	
Deferred Tax Asset, Net	8,293	
	Income Taxes 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.

The amount of “net deferred income taxes” recorded in the latter income tax entry is decomposed as follows:

Table 11-2: Journal Entry for Deferred Income Tax

Income Tax Expense	9,393	
Deferred Tax Asset	8,002	
Deferred Tax Liability	291	
	Income Taxes 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?

Using the information provided in their income statement, ZAGG’s effective tax rate is calculated as 39.3%. The difference between the statutory and effective tax rates is attributed to permanent and temporary differences, as well as the fact that ZAGG may have earned income in states with alternate tax rates.

- 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.**

On ZAGG’s balance sheet, there is a listing for “Net Deferred Tax Assets” of \$13,508,000. This amount is composed of the “Total Deferred Tax Assets” of \$14,302,000 less “Total Deferred Tax Liabilities” of \$794,000.

Case 12: Revenue Recognition

Executive Summary

In this case, “Apple, Inc: Revenue Recognition,” students were asked to explain the concepts of revenue, revenue recognition, and related FASB standards. Effective in 2018, the FASB issued new revenue recognition standards related to revenues from contracts. Upon completion of this case, students gained better understanding of these accounting changes and how they affect the financial statements of public companies.

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

Revenues are the gross sales a company receives in a given fiscal period. This is the top line income figure from which a company subtracts costs to determine income. Revenues are different from gains because revenues constitute income from a firm’s primary goods and services, while gains are a result of non-primary operations. An example of a revenue item for Apple would be iPhone sales, while a gain might be a result of fair value increases from the company’s assets.

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?

A business recognizes revenues on the books only after they have been both earned and realized. For revenue to be realized, goods or services must have been exchanged for cash or a cash equivalent. For goods to be earned, the business must have substantially satisfied the performance obligation. The FASB issued new revenue recognition standards in ASC 606, which applies to revenue from contracts and agreements. Instead of operating under a percentage-of-completion method of revenue recognition, revenue on contracts is now recognized as performance obligations are satisfied. The principles in the revised revenue standard are applied using a five-step model:

- Identify the contract(s) with the customer.
- Identify the performance obligations in the contract.
- Determine the transaction price.
- Allocate the transaction price to the performance obligations in the contract.
- Recognize revenue when (or as) each performance obligation is satisfied.

Revenue recognition affects the balance sheet, income statement, statement of retained earnings, and statement of cash flows alike. Major accounts to consider are “Net Sales,” “Other Income and Expense,” and “Accounts Receivable.” The new revenue recognition standards from ASC 606 specifically affect revenue from contracts with customers, affecting all entities, like Apple, that enter into contracts to provide goods or services to their customers.

- 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?**

According to Apple’s most recent 10-K filing, Apple plans to adopt the new revenue standards issued by the FASB in its first quarter of 2009, using the full retrospective transition method. Apple states that “the new revenue standards are not expected to have a material impact on the amount and timing of revenue recognized in the company’s consolidated financial statements.” From the case, Apple’s four revenue recognition criteria are as follows:

- Persuasive evidence of an arrangement exists.
- Delivery has occurred.
- The sales price is fixed or determinable.
- Collection is probable.

These criteria are in alignment with the revenue recognition criteria described in the latter portion of the case, but may be modified slightly in regard to revenue related to contracts with customers.

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

Multiple-element contracts are contracts or arrangements which involve more than one product in a single event. A company with multiple-element contracts allocates revenue to the separate parts of the whole based on relative sales price. These types of contracts pose revenue recognition problems for companies because the allocation of revenue to the parts of the whole involve a substantial amount of estimation, and are difficult to form future predictions about.

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

In general, managers are incentivized to make self-serving revenue recognition choices because they typically receive compensation for meeting certain targets, and because the primary basis for performance measures is revenue. This is why it is important that public companies exercise diligent internal controls and segregation of duties in regard to revenue. Upper-level management should never have power over any combination of custody, recording, and authorization of revenue transactions.

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.

Because Apple is not the primary obligor to users of iTunes software and third-party developers determine the selling price of their software, Apple accounts for sales of iTunes songs by recognizing only the commission retained from each sale. The commission revenue is included on a net basis in the Consolidated Statement of Operations, and the portion of revenue remitted by Apple is not reflected on Apple's books. The company recognizes revenue for these sales when the song is purchased by the consumer, as all four revenue recognition criteria would then be met.

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

Apple recognizes revenue from the sale of hardware products when sales are made in store. These products are made by Apple, so no third-party is involved. If the products are sold online, revenue is recognized once delivery has occurred, according to the company's revenue recognition criteria which are in accordance with GAAP.

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

Apple recognizes revenue on iPods sold to third-party resellers in India when goods have been shipped and title and risk of loss have been transferred.

iv. Revenue from gift cards

Apple records deferred revenue when it receives the initial payment related to the sale of a gift-card, as no performance obligation has been satisfied. When the card is redeemed by the customer, this deferred revenue is relieved.

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Honor Code

On my honor, I pledge that I have neither given, received, nor witnessed any unauthorized help on the case studies comprising this thesis.

Signed,

Ellen Duncan