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AN ANALYSIS OF KEY FINANCIAL ACCOUNTING TOPICS

By
Farris Abu-Saoud

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

Oxford
May 2019

Approved by

Advisor: Dr. Victoria Dickinson

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ABSTRACT

FARRIS ABU-SAOUD: An Analysis of Key Financial Accounting Topics
(Under the direction of Dr. Victoria Dickinson)

The purpose of this paper is to analyze twelve key financial reporting issues and principles using case studies. These issues and principals include revenue recognition, deferred income taxes, common stock, long-term debt, U.S. GAAP, statement of cash flows, profitability, and investment decisions. Working through these case studies and analyzing these key financial reporting topics has provided a greater understanding of financial accounting and U.S. GAAP; an understanding that goes well beyond what was learned through lectures and exams.

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Case 1

Introduction

This case focused on analyzing the transactions of Glenwood Heating, Inc. and Eads Heaters, Inc., which operate as sellers of home heating units. Both companies engage in business similarly, but they differ in the manner in which they implement generally accepted accounting principles. Additionally, they are located in different cities within the state of Colorado.

This case enabled me to practice and review many of the concepts I learned in Accountancy 303 and Accountancy 304. Additionally, it allowed me to further familiarize myself with Excel. I hope to work in auditing once I graduate from graduate school, so this case provided me with a much-needed introduction to audit related activities. Hopefully, this introduction will enable me to be successful in my future career.

Glenwood Heating, Inc.

Glenwood Heating, Inc. is a newly founded company that specializes in selling home heating units. During its first year, Glenwood Heating, Inc. managed to not only produce a nearly six figure net income but also was able to pay cash dividends to its common stock holders. The company also managed to retain approximately 75 percent of its earnings for the year.

| Trial Balance | | |
|--------------------------------------|----------------------------|----------------------------|
| | Debits | Credits |
| Cash | \$ 859,100 | \$ 858,674 |
| Accounts Receivable | 398,500 | 299,100 |
| Allowance for bad debts | | 994 |
| Inventory | 239,800 | 177,000 |
| Land | 70,000 | |
| Building | 350,000 | |
| Accumulated depreciation - building | | 10,000 |
| Equipment | 80,000 | |
| Accumulated depreciation - equipment | | 9,000 |
| Accounts payable | 213,360 | 239,800 |
| Interest payable | | 6,650 |
| Note payable | 20,000 | 400,000 |
| Common stock | | 160,000 |
| Dividend | 23,200 | |
| Sales | | 398,500 |
| Cost of goods sold | 177,000 | |
| Other operating expenses | 34,200 | |
| Bad debts expense | 994 | |
| Depreciation expense - building | 10,000 | |
| Depreciation expense - equipment | 9,000 | |
| Rent expense | 16,000 | |
| Interest expense | 27,650 | |
| Provision for income tax | 30,914 | |
| Total | <u>\$ 2,559,718</u> | <u>\$ 2,559,718</u> |

| Income Statement | | | |
|--------------------------|---------------|------------------|-------------------------|
| Sales | | | \$ 398,500 |
| Cost of goods sold | | | <u>177,000</u> |
| Gross profit | | | 221,500 |
| Operating expenses | | | |
| Bad debt expense | \$ 994 | | |
| Depreciation expense | | | |
| Building | 10,000 | | |
| Equipment | 9,000 | | |
| Rent expense | 16,000 | | |
| Other operating expenses | <u>34,200</u> | <u>\$ 70,194</u> | |
| Income from operations | | | <u>151,306</u> |
| Other expenses | | | |
| Interest expense | | | 27,650 |
| Income before income tax | | | 123,656 |
| Income tax | | | <u>30,914</u> |
| Net Income | | | <u>\$ 92,742</u> |

| Statement of Retained Earnings | |
|----------------------------------|-------------------------|
| Retained earnings, beginning | \$ - |
| Add: Net income | <u>92,742</u> |
| | |
| Less: Cash dividends | <u>23,200</u> |
| Retained earnings, ending | <u>\$ 69,542</u> |

| Balance Sheet | | | |
|---|---------------|---------------|--------------------------|
| Assets | | | |
| <u>Current assets</u> | | | |
| 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 |
| <u>Property, plant, and equipment</u> | | | |
| Land | | 70,000 | |
| Buildings | 350,000 | | |
| Less: Accumulated Depreciation | <u>10,000</u> | 340,000 | |
| Equipment | 80,000 | | |
| Less: Accumulated Depreciation | <u>9,000</u> | <u>71,000</u> | |
| Total property, plant, and equipment | | | <u>481,000</u> |
| Total assets | | | <u>\$ 642,632</u> |
| Liabilities and Stockholders' Equity | | | |
| <u>Current Liabilities</u> | | | |
| Note payable | | \$ 380,000 | |
| Accounts payable | | 26,440 | |
| Accrued interest on notes payable | | <u>6,650</u> | |
| Total current liabilities | | | <u>\$ 413,090</u> |
| Total liabilities | | | 413,090 |
| <u>Stockholders' equity</u> | | | |
| Paid in on capital stock | | | |
| 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> |

Eads Heater, Inc.

Eads Heater, Inc. is a newly founded company that specializes in selling home heating units. During its first year, Eads Heater, Inc. managed to both produce a net income and pay cash dividends to its common stock holders. The company also managed to retain approximately 67 percent of its earnings for the year.

| Trial Balance | | |
|---|----------------------------|----------------------------|
| | Debits | Credits |
| Cash | \$ 859,100 | \$ 851,265 |
| Accounts receivable | 398,500 | 299,100 |
| Allowance for bad debts | | 4,970 |
| Inventory | 239,800 | 188,800 |
| Land | 70,000 | |
| Building | 350,000 | |
| Accumulated depreciation - building | | 10,000 |
| Equipment | 80,000 | |
| Accumulated depreciation - equipment | | 20,000 |
| Lease equipment | 92,000 | |
| Accumulated depreciation - leased equipment | | 11,500 |
| Accounts payable | 213,360 | 239,800 |
| Interest payable | | 6,650 |
| Note payable | 20,000 | 400,000 |
| Lease payable | 8,640 | 92,000 |
| Common stock | | 160,000 |
| Dividend | 23,200 | |
| Sales | | 398,500 |
| Cost of goods sold | 188,800 | |
| Other operating expenses | 34,200 | |
| Bad debts expense | 4,970 | |
| Depreciation expense - building | 10,000 | |
| Depreciation expense - equipment | 20,000 | |
| Depreciation expense - leased equipment | 11,500 | |
| Interest expense | 35,010 | |
| Provision for income tax | 23,505 | |
| Total | <u>\$ 2,682,585</u> | <u>\$ 2,682,585</u> |

| Income Statement | | | |
|--------------------------|---------------|-----------|-------------------------|
| Sales | | | \$ 398,500 |
| Cost of goods sold | | | <u>188,800</u> |
| Gross profit | | | 209,700 |
| Operating expenses | | | |
| Bad debt expense | \$ 4,970 | | |
| Depreciation expense | | | |
| Building | 10,000 | | |
| Equipment | 20,000 | | |
| Lease equipment | 11,500 | | |
| Other operating expenses | <u>34,200</u> | \$ 80,670 | |
| Income from operations | | | <u>129,030</u> |
| Other expenses | | | |
| Interest expense | | | 35,010 |
| Income before income tax | | | 94,020 |
| Income tax | | | <u>23,505</u> |
| Net Income | | | <u>\$ 70,515</u> |

| Statement of Retained Earnings | |
|----------------------------------|-------------------------|
| Retained earnings, beginning | \$ - |
| Add: Net income | <u>70,515</u> |
| Less: Cash dividends | <u>23,200</u> |
| Retained earnings, ending | <u>\$ 47,315</u> |

| Balance Sheet | | | |
|---|---------------|---------------|-------------------------|
| Assets | | | |
| <u>Current assets</u> | | | |
| Cash | | \$7,835 | |
| Accounts receivable | \$99,400 | | |
| Less: Allowance for bad debts | <u>4,970</u> | 94,430 | |
| Inventory | | <u>51,000</u> | |
| Total current assets | | | \$153,265 |
| <u>Property, plant, and equipment</u> | | | |
| Land | | 70,000 | |
| Buildings | 350,000 | | |
| Less: Accumulated Depreciation | <u>10,000</u> | 340,000 | |
| Equipment | 80,000 | | |
| Less: Accumulated Depreciation | <u>20,000</u> | 60,000 | |
| Leased equipment | 92,000 | - | |
| Less: Accumulated Depreciation | <u>11,500</u> | <u>80,500</u> | |
| Total property, plant, and equipment | | - | <u>550,500</u> |
| Total assets | | | <u>\$703,765</u> |
| Liabilities and Stockholders' Equity | | | |
| <u>Current Liabilities</u> | | | |
| Note payable | | \$380,000 | |
| Accounts payable | | 26,440 | |
| Accrued interest on notes payable | | <u>6,650</u> | |
| Total current liabilities | | | \$413,090 |
| <u>Long-term debt</u> | | | |
| Lease payable | | | <u>83,360</u> |
| Total liabilities | | | 496,450 |
| <u>Stockholders' equity</u> | | | |
| Paid in on capital stock | | | |
| Common stock | | 160,000 | |
| Retained earnings | | <u>47,315</u> | |
| Total stockholders' equity | | | <u>207,315</u> |
| Total liabilities and stockholders' equity | | | <u>\$703,765</u> |

I would much rather lend money to Glenwood Heating Inc. because Glenwood produced a higher net income and higher retained earnings than Eads Heater, Inc. even though both companies had the same sales figures. Additionally, Glenwood had fewer liabilities than Eads.

Case 2

Introduction

This case focused on the study of the key concepts of the income statement and related information. Additionally, the case focused on analyzing the figures and processes of the income statement and related information. Molson Coors was the subject that allowed for this study and analysis. Molson Coors is a result of a 2005 merger between Molson, a Canadian company that was founded in 1786, and Coors, an American company that was founded in 1873. Molson Coors has operations in the United States, Canada, and Europe.

This case enabled me to review the details of the income statement that I learned in Accountancy 303. Beyond just reviewing the information, this case allowed me to think about the characteristics of the income statement in a more real-world application than Accountancy 303 permitted, which expanded my knowledge and understanding. This knowledge and understanding will undoubtedly be critical in my future in public accounting.

Concepts

- a. What are the major classifications on an income statement? The major classifications on an income statement include:
 - i. Operating section: consists of the revenues and expenses of the company's primary operations. It includes multiple subsections.

- i. Sales/revenues: consists of the sales, sales discounts, sales allowances, sales returns and other relevant information. This subsection should conclude with a net sales revenue figure.
 - ii. Cost of goods sold: shows the cost of the goods that were sold to create the sales revenues. Cost of goods sold is subtracted from the net sales revenue figure to find gross profit.
 - iii. Selling expenses: details the expenses that arise from the company's attempt to create sales.
 - iv. Administrative/General Expenses: details the general administrative expenses of a company.
- ii. Non-operating section: details both the revenues and the expenses resulting from secondary or ancillary enterprises of the company in addition to special gains and losses that are rare and/or uncommon.
 - i. Other revenues and gains: consists of the revenues or gains including related expenses that occur from non-operating activities.
 - ii. Other expenses and losses: consists of the expenses or losses including related incomes from non-operating activities.
- iii. Income tax: shows federal and state taxes applied on income from continuing operations.
- iv. Discontinued operations: shows relevant gains or losses caused by the disposal of a business division.

- v. Non-controlling interests: income is portioned to non-controlling shareholders.
 - vi. Earnings per share: metric for performance during a reporting period. Net income is divided over the number of common shares outstanding.
- b. Explain why, under U.S. GAAP, companies are required to provide “classified” income statements. Under GAAP, companies are required to provide classified income statements because a classified income statement, which is also known as a multistep income statement, provides more detail and enhances both transparency and consistency for financial statement users. These characteristics reduce the risk of fraud and improve the decision-making abilities of financial statement users.
- c. In general, why might financial statement users be interested in a measure of persistent income? Financial statement users would be interested in a measure of persistence income because these users would have a vested interest in knowing whether or not a company’s earnings are sustainable from year to year. The sustainability of income would be important to many groups. For instance, management would need this information to make the soundest operational and financial decisions, and investors and potential investors would need this information to do their due diligence to protect their investments.
- d. Define comprehensive income and discuss how it differs from net income. Comprehensive income includes all changes in equity, which includes of expenses; retained earnings; dividends; and paid-in capital, during a period

except those resulting from investments by owners and distributions to owners. Comprehensive income consists of all revenues and gains, expenses and losses that make up net income, but, unlike net income, comprehensive income also includes all gains and losses that affect stockholders' equity. These consist of available for sale securities, pension losses, foreign currency transactions and the sales of derivatives.

Process

- e. The income statement reports "Sales" and "Net sales." What is the difference? Why does Molson Coors report these two items separately? Sales, which are also known as gross sales, are the total of all sales transactions during a period. On the other hand, net sales are the total of all sales transactions during a period minus sales discounts, sales allowances, sales returns and other items, such as the excise tax in the case of Molson Coors. Molson Coors reports these two items separately because the excise tax is collected from customers and then transferred to the government, and it would be misleading to financial statement users to not disclose that a portion of the sales are generated via the excise tax and are not flowing directly into the company. An accurate net sales figure is critical to financial statement users.
- f. Consider the income statement item "Special items, net" and information in Notes 1 and 8.
 - i. In general, what types of items does Molson Coors include in this line item? In general, Molson Coors includes items in this line that occur only

seldom and are abnormal. These items are classified as such because they are not generated via the main operations of the company.

- ii. Explain why the company reports these on a separate line item rather than including them with another expense item. Molson Coors classifies these special items as operating expenses. Do you concur with this classification? Explain. Molson Coors reports these on a separate line item rather than including them with another expense item because Molson Coors wishes to show the users of its income statement that these expenses are atypical. By separating these expenses from other expense, Molson Coors shows that these expenses are not necessarily persistent expenses. I do agree with Molson Coors' classification of the special items, net as an operating expense. It is correctly classified in the operating section of the income statement because those expense, although not characteristic of the company's primary operations, occurred because of or during the normal operations of the company.
- g. Consider the income statement item "Other income (expense), net" and the information in Note 6. What is the distinction between "Other income (expense), net" which is classified as a non-operating expense, and "Special items, net" which Molson Coors classifies as operating expenses? The distinction, according to Molson Coors, between other income (expense), net and special items, net is that other income (expense), net would have occurred regardless of the normal

operations of the company, while special items, net occurred because of or during the normal operations of the company.

- h. Refer to the statement of comprehensive income.
 - i. What is the amount of comprehensive income in 2013? How does this amount compare to net income in 2013? In 2013, comprehensive income was \$760.2 million, while net income was \$567.3 million in 2013.
 - ii. What accounts for the difference between net income and comprehensive income in 2013? In your words, how are the items included in Molson Coors' comprehensive income related? The difference between net income and comprehensive income exists because comprehensive income includes all revenues and gains, expenses and losses that make up net income in addition to foreign currency transaction adjustments, derivative transaction losses; gains; and reclassifications, pension adjustments, sales of securities, and amortization of certain prior service costs or benefits. The items included in Molson Coors' comprehensive income all affect equity, but they are not related to investments by owners and distributions to owners.

Analysis

- i. N/a
- j. Consider the information on income taxes, in Note 7.

What is Molson Coors' effective tax rate in 2013? (Total income tax expense from continuing operations)/(pretax income from domestic continuing operations – pretax

income from foreign continuing operations) = $\$84,000,000/\$654,500,000 = 0.128 = 12.8$ percent. The corporate tax rate in the United States is 35 percent; however, companies can pay a lower tax rate, which is known as the effective tax rate, when they have operations in foreign countries that have lower corporate tax rates than the corporate tax rate in the United States. Additionally, foreign deferred tax assets can lower the effective tax rate a company pays. Deferred tax assets occur when a company overpays taxes and is repaid later.

Case 3

Introduction

This case focused on the study and analysis of receivables, the related accounts, and the affects these accounts have on the balance sheet and income statement. Pearson was the subject that allowed for this study and analysis. Pearson operates internationally in over 60 countries, and it conducts business in a variety of markets, which include education and consumer publishing. Pearson prepares its financial statements to conform with IFRS.

This case enabled me to review the principals of receivables that I learned in Accountancy 303. Beyond just reviewing the information, this case allowed me to think about the characteristics of various receivables and their related accounts in a more real-world application than Accountancy 303 permitted. This more real-world application allowed me to expand my knowledge and understanding. This knowledge and understanding will undoubtedly be critical in my future in public accounting.

Concepts

- a. What is an account receivable? What other names does this asset go by? An account receivable is an oral promise of the purchaser to pay for goods and services sold. An account receivable is representative of an unsettled account that occurs as a result of a short-term extension of credit. Another name for an account receivable is a trade receivable; technically an account receivable is a subset of trade receivables.

- b. How do accounts receivable differ from notes receivable? Accounts receivable are oral promises to pay for goods or services sold, while notes receivables are written promises to pay a specific amount of money on a listed future date. Additionally, accounts receivable result from short-term extensions of credit, while notes receivables can result from sales, financing, or other transactions and may be either 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 reduces either an asset, liability, or owners' equity account; essentially, a contra account has the opposite normal balance of its corresponding account. For example, accumulated depreciation—equipment, a contra asset, has a credit balance normally, and equipment, an asset, has a debit balance like assets normally have. Allowance for doubtful accounts and allowance for sales returns and allowances are the two contra accounts associated with Pearson's trade receivables. The allowance for doubtful accounts account is comprised of the estimated amount of accounts receivable that the company expects will not be collected in the future; it is a contra asset account to accounts receivable. In the case of Pearson, the allowance for doubtful accounts includes activities stemming from exchange differences, income statement movements,

utilization of the allowance account, and acquisitions of further allowance account amounts due to business combinations. The allowance for sales returns and allowances account is comprised of the estimated amount of sales returns and allowances that the company expects to pay in the future; it is a contra asset account to accounts receivable. When assessing how to estimate the balance of the allowance for doubtful accounts, managers would consider the collectability and net realizable value of accounts receivable, and they would do this by evaluating information about past events, present events, and future forecasts of collectability. When assessing how to estimate the balance of the allowance for sales returns and allowances, managers would evaluate possible issues that could arise in regard to unsatisfactory merchandise, order fulfillment inefficiencies, and delivery or shipment errors.

- d. Two commonly used approaches for estimating uncollectible accounts receivable are the percentage of-sales procedure and the aging-of-accounts procedure. Briefly describe these two approaches. What information do managers need to determine the activity and final account balance under each approach? Which of the two approaches do you think results in a more accurate estimate of net accounts receivable? The percentage of-sales procedure involves estimating the percentage of its outstanding receivables that will be uncollectable without specifying distinct accounts. This procedure presents a fairly accurate estimate of the receivables realizable

value and usually involves a composite rate. The aging-of-accounts procedure involves employing a different percentage to the various age categories based on prior experiences. Additionally, the aging-of-accounts procedure pinpoints which accounts need special care by showing the magnitude to which specific accounts are past due. Under the percentage of sales approach, managers primarily need to look at the overall historic percentages of uncollectable accounts receivable to estimate a reasonable composite rate. Under the aging-of-accounts approach, managers need to look at the historic percentages of uncollectable accounts receivable in specific age categories; additionally, under this approach, managers look at specific accounts to evaluate their relative positions to due dates. I believe that the aging-of-accounts procedure is the most accurate because it involves a finer level of evaluation. More precision is involved when looking at specific accounts and their relative positions to due date than is involved in looking at a broad group of accounts.

- 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. In spite of Pearson's anticipation that some accounts will be uncollectible, the company still extended credit to those customers because, based upon the company's procedure for estimating uncollectable accounts receivable, enough of the accounts receivable will be collectable to make the inevitable loss from

uncollectable accounts worth the risk. Credit sales account for such a large portion of sales in the modern market that extending credit to customers is a necessary evil. Companies must weigh the risk versus reward of extending credit to customers; without extending credit, companies would have drastically lower revenues. If a company does not extend credit to customers, then that company is likely to lose business to companies that will extend credit to customers. Most customers will choose to pay for something later rather than sooner. The risk of extending credit to customers is generally rewarded because most accounts do not go uncollected, and those accounts that do go uncollected are just a cost of doing business in the modern world. However, managers must still carefully consider when to extend credit to customers because extending too much credit to too many high-risk customers can result in an overabundance of uncollected accounts, which can result in low liquidity. If a company has low liquidity then, the company will not have enough cash on hand to satisfy its current and maturing financial obligations.

Process

- f. Note 22 reports the balance in Pearson's provision for bad and doubtful debts (for trade receivables) and reports the account activity ("movements") during the year ended December 31, 2009. Note that Pearson refers to the trade receivables contra account as a "provision." Under U.S. GAAP, the receivables contra account is typically referred to as an "allowance" while

the term provision is used to describe the current-period income statement charge for uncollectible accounts (also known as bad debt expense).

- i. Use the information in Note 22 to complete a T-account that shows the activity in the provision for bad and doubtful debts account during the year. Explain, in your own words, the line items that reconcile the change in account during 2009. The beginning balance for the allowance for doubtful accounts account was \$72 million, and the ending balance was \$76 million. \$5 million was debited to the account because of losses from accounts receivable that were caused by currency exchange differences. \$26 million was credited to the account because there was movement on the income statement, which was caused by an increase in bad debts expense. Bad debts expense would be debited to cause an increase, and the allowance for doubtful accounts would be credited to cause an increase. \$20 million was debited to the account because the uncollectible accounts were written-off by debiting the allowance for doubtful accounts account and crediting the accounts receivables account. \$3 million was credited to the account because Pearson was involved in a business combination with an entity that had a \$3 million credit balance in its allowance for doubtful accounts account. A business combination is a transaction that involves one entity taking control of another's business.

| Allowance for Doubtful Accounts | |
|---------------------------------|------------|
| | 72,000,000 |
| 5,000,000 | |
| | 26,000,000 |
| 20,000,000 | |
| | 3,000,000 |
| | |
| | |
| | 76,000,000 |

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

1) Bad debts expense is an income statement account; it is an expense account. Allowance for doubtful accounts is a balance sheet account, and it is a contra asset account.

| | | |
|-------------------|---------------------------------|------------|
| Bad Debts Expense | 26,000,000 | |
| | Allowance for Doubtful Accounts | 26,000,000 |

2) Both allowance for doubtful accounts and accounts receivable are balance sheet accounts. Allowance for doubtful accounts is a contra asset account, while accounts receivable is an asset account.

| | | |
|------------------------------------|------------------------|------------|
| Allowance for Doubtful Accounts | 20,000,000 | |
| | Accounts Receivable | 20,000,000 |

- iii. Where in the income statement is the provision for bad and doubtful debts expense included? The provision for bad and doubtful debts expense, which is also known as the bad debts expense, is found in the operating section of the income statement; specifically, it can be found in the selling expenses category of the operating section of the income statement.
- g. Note 22 reports that the balance in Pearson’s provision for sales returns was £372 at December 31, 2008 and £354 at December 31, 2009. Under U.S. GAAP, this contra account is typically referred to as an “allowance” and reflects the company’s anticipated sales returns.
- i. Complete a T-account that shows the activity in the provision for sales returns account during the year. Assume that Pearson estimated that returns relating to 2009 Sales to be £425 million. In reconciling the change in the account, two types of journal entries are required, one to record the estimated sales returns for the period and one to record the amount of actual book returns.

| Allowance for Sales Returns and Allowances | |
|--|-------------|
| | 372,000,000 |
| | |
| | 425,000,000 |
| 443,000,000 | |
| | |
| | 354,000,000 |

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

- 1) Sales returns and allowances is an income statement account; it is a contra revenue account to sales revenue. Allowance for sales returns and allowances is a balance sheet account; it is a contra asset account to accounts receivable.

| | | |
|------------------------------|--|-------------|
| Sales Returns and Allowances | 425,000,000 | |
| | Allowance for Sales Returns and Allowances | 425,000,000 |

- 2) Sales returns and allowances is an income statement account; it is a contra revenue account to sales revenue. Accounts receivable is a balance sheet account; it is an asset account.

| | | |
|------------------------------|---------------------|-------------|
| 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 and allowances appears in the sales returns and allowances line item on the income statement. This line item is found in the operating section and in the sales or revenue subsection. Sales returns and allowances and sales discounts are subtracted from sales revenue to find net 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, 2008 and 2009. (Hint: your solution to parts f and g will be useful here). Assume that all sales in 2009 were on account. That is, they are all “credit sales.” You may also assume that there were no changes to the account due to business combinations or foreign exchange rate changes. Prepare the journal entries to record the sales on account and accounts receivable collection activity in this account during the year.

| Gross Trade Receivables | |
|-------------------------|---------------|
| 1,474,000,000 | |
| | 5,216,000,000 |
| 5,624,000,000 | |
| | 443,000,000 |
| | |
| | 20,000,000 |
| | |
| <u>1,419,000,000</u> | |

| | | |
|---------------------------------|---------------------|---------------|
| Accounts Receivable | 5,624,000,000 | |
| | Sales | 5,624,000,000 |
| Cost of Goods Sold | 2,539,000,000 | |
| | Inventory | 2,539,000,000 |
| Cash | 5,216,000,000 | |
| | Accounts Receivable | 5,216,000,000 |
| Sales Returns and Allowances | 443,000,000 | |
| | Accounts Receivable | 443,000,000 |
| Allowance for Doubtful Accounts | 20,000,000 | |
| | Accounts Receivable | 20,000,000 |

Case 4

Introduction

I have decided to do a problem from Chapter 19: Accounting for Income Taxes. I have completed both Accountancy 303 and Accountancy 304, and I am performing a problem from this chapter as a review for the CPA exam.

Problem

I will be performing problem 19-2, which involves the concepts from LO1 and LO2. These concepts include one temporary difference, tracked for 4 years, one permanent difference, and change in rate. Problem 19-2:

The pretax financial income of Truman Company differs from its taxable income throughout each of 4 years as follows.

| <u>Year</u> | <u>Pretax Financial Income</u> | <u>Taxable Income</u> | <u>Tax Rate</u> |
|-------------|--------------------------------|-----------------------|-----------------|
| 2017 | \$ 290,000 | \$ 180,000 | 35% |
| 2018 | 320,000 | 225,000 | 40 |
| 2019 | 350,000 | 260,000 | 40 |
| 2020 | 420,000 | 560,000 | 40 |

Pretax financial income for each year includes a nondeductible expense of \$30,000 (never deductible for tax purposes). The remainder of the difference between pretax financial income and taxable income in each period is due to one depreciation temporary difference. No deferred income taxes existed at the beginning of 2017.

Instructions

- a) Prepare journal entries to record income taxes in all 4 years. Assume that the change in the tax rate to 40% was not enacted until the beginning of 2018.

Work/Explanation

- a) Deferred taxes need to be computed, but, before that can be done, the temporary differences for each period must be calculated. The problem provides the pretax financial income, the nondeductible expense; which is a permanent difference; and the taxable income. Typically, taxable income is calculated by adding pretax financial income, the permanent difference, and the temporary difference, so we rearrange some of the figures to find the temporary difference.

| | 2017 | 2018 | 2019 | 2020 |
|-------------------------|----------------|----------------|----------------|----------------|
| Pretax financial income | \$ 290,000 | \$ 320,000 | \$ 350,000 | \$ 420,000 |
| Permanent difference | | | | |
| Nondeductible expense | 30,000 | 30,000 | 30,000 | 30,000 |
| Taxable income | <u>180,000</u> | <u>225,000</u> | <u>260,000</u> | <u>560,000</u> |
| Temporary difference | \$ 140,000 | \$ 125,000 | \$ 120,000 | \$ (110,000) |

The temporary differences add to each other as the years progress.

| | Year End Cumulative Temporary Difference | |
|------|--|---------|
| 2017 | \$ | 140,000 |
| 2018 | \$ | 265,000 |
| 2019 | \$ | 385,000 |
| 2020 | \$ | 275,000 |

The temporary differences cause the pretax financial incomes to exceed the taxable incomes for the periods. Because of that, there are future taxable amounts. Next, we calculate the income taxes payable for 2017.

| | |
|----------------------|------------------|
| Taxable income | \$ 180,000 |
| Enacted tax rate | <u>35%</u> |
| Income taxes payable | <u>\$ 63,000</u> |

Now, it is time to consider the journal entry for 2017. Before journalizing, we must calculate the deferred tax liability. \$140,000 multiplied by 35% equals \$49,000.

| | | |
|--------------------|------------------------|--------|
| Income tax expense | 112,000 | |
| | Income tax payable | 63,000 |
| | Deferred tax liability | 49,000 |

Case 5

Introduction

This case focused on the study and analysis of property, plant and equipment. Palfinger AG was the subject of this study and analysis. Palfinger AG is an Austrian manufacturer of hydraulic equipment, which includes various types of cranes and other heavy machinery; it primarily provides equipment to the construction, transportation, agriculture and forestry, recycling, and haulage industries. Based out of Bergheim, Austria, Palfinger AG uses the International Financial Reporting Standards to prepare its financial statements.

This case enabled me to review the principals of revenue recognition, depreciation, and PP&E that I learned in Accountancy 303 and Accountancy 304. Beyond just reviewing the information, this case allowed me to apply the principals in a somewhat real-world application. This more real-world application allowed me to expand my knowledge and understanding. This knowledge and understanding will undoubtedly be critical in my future in public accounting.

Concepts

- a. Based on the description of Palfinger above, what sort of property and equipment do you think the company has? Based on the description of Palfinger above, the company will have manufacturing facilities, storage facilities, and transport machinery. Within the manufacturing facilities, there will be a plethora of manufacturing equipment that will include: assembly

line machinery, hydraulic cranes, forklifts, handheld power tools, paint equipment, and assembly bays.

- b. The 2007 balance sheet shows property, plant, and equipment of €149,990.

What does this number represent? This number represents the cost of the property, plant, and equipment adjusted for straight-line depreciation. This figure also includes capitalized costs for replacement investments and value-enhancing investments. Replacement investments are repairs and maintenance that modify assets and add future benefits, and value-enhancing investments are upgrades that modify assets and add future benefits. Capitalizing a cost or expense involves adding that expense or cost to the value of the asset and depreciating or amortizing it over time; in other words, the expense or cost is not expensed within the period it is incurred.

- c. What types of equipment does Palfinger report in notes to the financial statements? In the notes to the financial statements, Palfinger reports plant and machinery, other plant; fixtures; fittings; and equipment, and prepayments and assets under construction.

- 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. “Prepayments and assets under construction” represents unfinished self-constructed assets, which are assets the company is currently in the process of constructing or manufacturing. Another term for

this account would be construction in process. This means they own the asset, but it is not a useful asset yet. At the point of being classified as an unfinished self-constructed asset, the value of the asset is made up of the direct costs such as materials and labor. This account does not have accumulated depreciation because the assets that make up the account are not useful assets yet. An asset that is both not being used and unable to be used due to a lack of completion cannot be depreciated because it has not entered into its life as an operating asset. The reclassification of €14,958 in the “Prepayments and assets under construction” represents the movement of assets that were in the manufacturing process either to inventory or to finished, operational PP&E. This means that they are either ready to be sold as a part of Palfinger’s operations or ready to be used and depreciated by Palfinger’s operations.

- e. How does Palfinger depreciate its property and equipment? Does this policy seem reasonable? Explain the trade-offs management makes in choosing a depreciation policy. Palfinger depreciates its property and equipment over their prospective useful lives using straight-line depreciation, and depreciation starts as soon as the assets are put into operation. The prospective useful life is estimated using the expected economic or technical useful life. This policy seems reasonable for property, but it does not seem reasonable for equipment. Units of production should be used for equipment rather than straight-line because most of the equipment Palfinger

manufactures and uses is not restricted by time but rather by the amount of work it has to do. Time does not necessarily wear on most hydraulic equipment; the amount of work hours, tons moved and other equivalents is what wears down such equipment. When choosing a depreciation policy, management must balance the short-term income statement and balance sheet effects, which include earnings results and asset value, and the long-term operational performance of the company. The operational performance of the company can be affected by the depreciation policy because the depreciation policy, in many ways, dictates when an asset is obsolete and can be replaced.

- f. Palfinger routinely opts to perform major renovations and value-enhancing modifications to equipment and buildings rather than buy new assets. How does Palfinger treat these expenditures? What is the alternative accounting treatment? Palfinger capitalizes these expenditures. Capitalizing an expenditure entails adding that expense or cost to the value of the asset and depreciating or amortizing it over time; in other words, the expense or cost is not expensed within the period it is incurred. The alternative accounting method would be to expense the expenditures within the period it is incurred. Expensing expenditures within the period they occur would not be a good method for Palfinger because its renovations and value-enhancing modifications to equipment add value and life to the equipment. Under that method, the value of the asset on the balance sheet would be understated,

and the income during the year of the expenditure would be understated and overstated during the following years of the equipment's life.

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. €40,444 worth of new property, plant and equipment was purchased in fiscal 2007. Gross additions to property, plant and equipment during that year were €61,444, but €21,000 of that was not from purchases. That €21,000 in the "Prepayments and assets under construction" account was for the costs, which include labor and materials, to manufacture the equipment.
 - 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. A government grant is a financial donation given to a firm by the government with no expectation of repayment. Grants that are related to assets require that the grant be accounted for as a deferred income or deducting the grant from the carry value of the asset. Palfinger deducts the grants from the carrying value of the property,

plant, and equipment account to which they are associated. This is based on the International Accounting Standards.

- iii. Depreciation expense for fiscal 2007. Depreciation expense for fiscal 2007 was €12,557.
- iv. The net book value of property, plant, and equipment that Palfinger disposed of in fiscal 2007. The net book value of property, plant, and equipment that Palfinger disposed of in fiscal 2007 is found by adding up the disposal amounts from the various types of property, plant, and equipment and subtracting the total accumulated depreciation for those disposals (€13,799 - €12,298). The net book value of property, plant, and equipment that Palfinger disposed of in fiscal 2007 is €1,501.

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

Explain what this gain or loss represents in economic terms.

| | | |
|--------------------------|--------|--------|
| Cash | 1,655 | |
| Accumulated Depreciation | 12,298 | |
| | PP&E | 13,799 |
| | Gain | 154 |

The gain indicates that the property, plant, and equipment was sold at a higher value than its net book value. The net book value of the property, plant, and

equipment was €1,501, but it was sold for €1,655, which results in the gain of €154. This gain would be reported in the revenue section of the income statement and would increase net income.

- 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.

| Straight-line Depreciation | | |
|----------------------------|----------------------|----------------|
| Year End | Depreciation Expense | Net Book Value |
| 2007 | € 1,880 | € 8,793 |
| 2008 | € 1,880 | € 6,913 |
| 2009 | € 1,880 | € 5,033 |
| 2010 | € 1,880 | € 3,153 |
| 2011 | € 1,880 | € 1,273 |

- ii. Double-declining-balance depreciation.

| Double-declining-balance Depreciation | | |
|---------------------------------------|----------------------|----------------|
| Year End | Depreciation Expense | Net Book Value |
| 2007 | € 4,269 | € 6,404 |
| 2008 | € 2,562 | € 3,842 |
| 2009 | € 1,537 | € 2,305 |
| 2010 | € 922 | € 1,383 |
| 2011 | € 110 | € 1,273 |

j. Assume that the equipment from part i. was sold on the first day of fiscal 2008 for proceeds of €7,500. Assume that Palfinger's accounting policy is to take no depreciation in the year of sale.

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

| | | |
|-----------------------------|-------|-------|
| Cash | 7,500 | |
| Accumulated Depreciation | 1,880 | |
| | PP&E | 8,793 |
| | Gain | 587 |

For 2007, the equipment decreased income by €1,880 by way of depreciation expense, but, in 2008, it increased income by €587 by way of the gain on disposal. These two effects result in a net reduction in retained earnings of €1,293.

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

| | | |
|-----------------------------|-------|-------|
| Cash | 7,500 | |
| Accumulated Depreciation | 4,269 | |
| | PP&E | 6,404 |
| | Gain | 5,365 |

For 2007, the equipment decreased income by €4,269 by way of depreciation expense, but, in 2008, it increased income by €5365 by way of the gain on disposal. These two effects result in a net increase in retained earnings of €1,096.

- iii. Compare the total two-year income statement impact of the equipment under the two depreciation policies. Comment on the difference. Under the straight-line method, income events stemming from the equipment in question have a negative effect of €1,293 on income, while, under the double-declining- balance method, income events stemming from the equipment in question have a positive effect of €1,096 on income. This occurs because the double-declining- balance method reduces the net book value of the asset more quickly than the straight-line method. Because of this, selling the asset early in the asset's life, under the double-declining-balance method, leaves more room for a gain.

Case 6

Introduction

This case focused on the analysis of research and development costs. Volvo Group was the company that permitted this analysis. Volvo Group is a supplier of commercial vehicles and has approximately 90,000 employees, production facilities in 19 countries, and sales in 180 countries. Volvo group operates out of Torslanda, Sweden.

Concepts

- a. The 2009 income statement shows research and development expenses of SEK 13,193 (millions of Swedish Krona). What types of costs are likely included in these amounts? The research and development expenditures include costs that are associated with obtaining new knowledge, searching for and evaluating applications of knowledge, searching for alternative materials and applications, formulating and designing materials and applications, designing; constructing; and testing prototypes, designing tools and related production products, designing; constructing; and operating a pilot plant, and designing; constructing; and testing alternative processes and materials. The former four listed arise from research activities, while the latter four listed arise from development activities. Expenses that arise from research activities are not associated with the creation of intangible assets, and those expenses must be recorded when incurred. On the other hand, expenses that arise from development activities are associated with the creation of an intangible asset, and those expenses are only recorded

when they meet all of the following criteria: the completion of the intangible asset must be feasible to allow the use or sale of the asset, the intention to complete the intangible asset and either use it or sell it, the ability to use or sell the intangible asset, the potential of the intangible asset to create future economic benefits, the availability of required resources to develop and use or sell the intangible asset, and the ability to reliably measure the expenditure associated to the intangible asset's development. Because Volvo follows IFRS, only expenses that arise from research activities are expensed when incurred, which means the SEK 13,193 reported under research and development expenses come from research activities like those listed above.

- b. Volvo Group follows IAS 38—Intangible Assets, to account for its research and development expenditures (see IAS 38 excerpts at the end of this case). As such, the company capitalizes certain R&D costs and expenses others. What factors does Volvo Group consider as it decides which R&D costs to capitalize and which to expense? The decision of recognizing internally generated intangible assets is complicated by issues in: determining whether and when an identifiable asset exists that will create future economic benefits and assessing the cost of asset accurately. Companies must discern if an internally generated intangible asset is created in the research phase or the development phase to either expense the cost or capitalize the cost. Costs associated with internally generated intangible assets that arise during the research phase are recorded as an expense when they are incurred. Costs associated with internally generated intangible assets

that arise during the development phase are capitalized once both technical and commercial feasibility of the intangible asset for sale or use have been set. Costs that arise from research activities cannot be associated with the creation of intangible assets that will lead to future economic benefits. On the other hand, costs that arise from development activities are associated with the creation of an intangible asset, and those expenses are only recorded when they meet all of the following criteria: the completion of the intangible asset must be feasible to allow the use or sale of the asset, the intention to complete the intangible asset and either use it or sell it, the ability to use or sell the intangible asset, the potential of the intangible asset to create future economic benefits, the availability of required resources to develop and use or sell the intangible asset, and the ability to reliably measure the expenditure associated to the intangible asset's development. However, if the research phase and development phase cannot be differentiated, then the costs are recognized as if they were incurred during the research phase, which means they are expensed when incurred.

- c. The R&D costs that Volvo Group capitalizes each period (labeled Product and software development costs) are amortized in subsequent periods, similar to other capital assets such as property and equipment. Notes to Volvo's financial statements disclose that capitalized product and software development costs are amortized over three to eight years. What factors would the company consider in determining the amortization period for particular costs? Volvo Group looks at write-downs and estimated useful lives to determine the amortization period for

particular costs. Write-downs, which are used to recognize the reduction in value of an impaired asset, must be looked at to evaluate whether the useful life is correct. The functional uses and limits of the capital assets must be analyzed to determine the estimated useful life.

- d. Under U.S. GAAP, companies must expense all R&D costs. In your opinion, which accounting principle (IFRS or U.S. GAAP) provides financial statements that better reflect costs and benefits of periodic R&D spending? In my opinion, U.S. GAAP provides financial statements that better reflect the costs of periodic R&D spending because all R&D costs are expensed, while IFRS provides financial statements that better reflect the benefits because development costs are capitalized. However, I believe that IFRS is preferred because it results in higher operating income and higher cash flows than U.S. GAAP. That is a double-edged sword, though, because higher income results in higher taxes.

Process

- e. Refer to footnote 14 where Volvo reports an intangible asset for “Product and software development.” Assume that the product and software development costs reported in footnote 14 are the only R&D costs that Volvo capitalizes.
- i. What is the amount of the capitalized product and software development costs, net of accumulated amortization at the end of fiscal 2009? Which line item on Volvo Group’s balance sheet reports this intangible asset? The amount of the capitalized product and software development costs, net of accumulated

depreciation and amortization at the end of fiscal 2009 equals SEK 11,409. This intangible asset is reported in the intangible assets line. This line item includes other intangible assets and has a value of SEK 41,628.

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

| Product and Software Development | |
|-------------------------------------|-------|
| 12,381 | |
| 2,602 | 3,126 |
| | 744 |
| 296 | |
| 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.

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

ii. N/A

iii. What proportion of Total R&D costs incurred did Volvo Group capitalize (as product and software development intangible asset) in each of the three years? 2007: $2,057/10,759 = 19.12\%$; 2008: $2,150/13,634 = 15.77\%$; 2009: $2,602/12,669 = 20.54\%$

Analysis

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

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

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

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

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

Navistar:

- 2007: $375,000,000/11,910,000,000 = 3.15\%$
- 2008: $384,000,000/14,399,000,000 = 2.67\%$
- 2009: $433,000,000/11,300,000,000 = 3.83\%$

Volvo:

- 2007: $11,059,000,000/276,795,000,000 = 4.00\%$

- 2008: $14,348,000,000/294,932,000,000 = 4.86\%$

- 2009: $13,193,000,000/208,487,000,000 = 6.33\%$

Over the three-year period, Volvo has higher proportions of total research and development costs incurred to net sales from operations.

Case 7

- 1) Identify the history and purpose of SAS and describe, in general, how it is used to make business decisions. Be specific about what kind of technology platform it uses, etc. and other resources that need to be in place to fully utilize the functionality of SAS. SAS is a collection of computer programs, which is also known as either an application suite or a software suite, that was developed in the 1970s at North Carolina State University for the purpose of agricultural data analytics. In 1976, the SAS Institute was incorporated to enable a broader use and distribution of the technology. SAS uses a fourth-generation programming language, which has allowed it to easily evolve as computers have become more advanced. Although initially created to analyze agricultural data, SAS is now used to analyze big data for business decision purposes. SAS does this by allowing businesses to manage data, mine data, mine text, and perform predictive analytics. Additionally, it allows businesses to analyze data from the system memory rather than using the professional's hard drive, which enables more rapid analysis of data. Essentially, SAS allows businesses to more effectively and efficiently organize and use data that in many cases was unusable in its raw form. SAS aggregates, transforms, cleanses, and presents raw data in such a way that allows businesses to draw meaningful conclusions from it; in other words, it turns data into information. SAS does this in two series of steps. The first being called DATA steps, and the other is referred to as PROC steps. DATA steps aggregate, transform, and cleanse the data, while the PROC steps

analyze/present the data in meaningful ways. SAS is very versatile and can be used on a variety of operating systems, such as Windows, IBM mainframe, Unix, Linux, and OpenVMS Alpha. Also, SAS allows for data to be show via HTML, PDF, and Excel. SAS does not require extensive or overly sophisticated resources; in fact, it can be used on anything from a personal computer to a large data center.

2) What special skills are needed to use SAS to aid in business decision making.

How might a student like yourself gain those skills? On a very basic level, a professional must be technically adept in order to use SAS to aid in business decision making because SAS is a sophisticated analytics tool. Additionally, any professional that works in data analytics, regardless of the tool being used, must possess analytical skills, problem-solving skills, decision-making skills, and managerial skills. Analytical skills, problem-solving skills, and decision-making skills come into play heavily because the professional must use SAS, along with other analytics tools, to solve complex business problems. Managerial skills are also vital because in order to effectively use SAS to analyze data and solve business problems a professional must be able to complete projects within both time constraints and budgetary constraints. More specifically, SAS requires that professional have special skills, such as an in-depth knowledge of predictive modeling techniques, optimization techniques, and time series forecasting. Both Predictive modeling techniques and time series forecasting are used to predict outcomes via statistical analysis, while optimization techniques are used to discover the optimal solution. A student like myself can gain these special SAS

skills through SAS lectures, SAS workshops, SAS guide books, and SAS degree programs. Additionally, SAS offers an extensive training program that features in-person instruction, online/self-paced learning, and project based training. Once this program has been completed and certification exams have been passed, a student or professional can be certified as an SAS Certified Big Data Professional, SAS Certified Advanced Analytics Professional, or SAS Certified Data Scientist.

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

a. Auditing

- i. The SAS software suite can be used to mine data, which can be applicable to assurance services. Specifically, if a professional services firm is auditing a company that sales goods to department stores, then the auditors can use the data mining capabilities of the SAS software suite to comb through the cash receipts data to determine whether a sale was in fact made and should be recognized (determining if the recorded accounts receivable actually exist).
- ii. The SAS software suite can be used to perform predictive analytics. Specifically, if a professional services firm is auditing a

company that sales goods to department stores, then the auditors can use the SAS software suit to analyze historical data relating to types of sales that have been incorrectly recognized in statistically significant amounts in the past. This would allow auditors to focus on the most crucial areas of the audit, which could boost both the effectiveness and efficiency of an audit engagement.

- iii. The SAS software suite can be used to perform text mining.
Specifically, if a professional services firm is auditing a company that sales goods to department stores, then the auditors can use the text mining capabilities of the SAS software suite to more efficiently comb through accounts receivable confirmations to look for those that stated that the amount the customer owes the client differs for the amount the client has recorded.

b. Tax Planning

- i. The SAS software suite can be used to perform text mining.
Specifically, if a professional services firm is providing tax planning services to a very large partnership with hundreds of partners, then the tax planners can use the text mining capabilities of the SAS software suite to identify all of the Schedule K-1 forms.
- ii. The SAS software suite can be used to perform text mining.
Specifically, if a professional services firm is providing tax planning services to an entity that receives extensive dividends from

thousands of sources, then the text mining capabilities of the SAS software suite can be used to identify all of the 1099-DIV forms.

- iii. The SAS software suite can be used to perform data mining.

Specifically, if a professional services firm is providing tax planning services to a high wealth individual, then the tax planners can use the data mining capabilities of the SAS software suite to identify patterns that exist among other high wealth clients that may help more effectively shelter the client of the current engagement.

- c. Financial Statement Analysis/Valuation/Advisory

- i. The SAS software suite is able to perform in-memory analytics.

Specifically, if a professional services firm is providing valuation services to a company, then the in-memory analytics capabilities of the SAS software suite can be used to examine various scenarios and develop models that are applicable to the valuation of the company. The in-memory analytics would enable this to be done more efficiently than through traditional technologies.

- ii. The SAS software suite can be used to perform data management.

Specifically, if a professional services firm is providing booking keeping services for an equipment company, then the data management capabilities of the SAS software suite can be used to track data like warranty claims over sales.

iii. The SAS software suite can be used to perform data mining.

Specifically, if a professional services firm is providing financial statement analysis services to a company, then the data mining capabilities of the SAS software suite can be used to examine large amounts of complex data that influences and relates to the financial statements of the client in both an effective manner and an efficient manner.

4) Write a few paragraphs to your future public accounting partner explaining why your team should invest in the acquisition of and training in SAS. Explain how the SAS will impact the staffing and scope of your future engagements. My team should invest in the acquisition of and training in SAS because it will enable us to both more effectively and more efficiently perform assurance services to the firm's clients. Specifically, SAS will enable fewer staff members to accomplish the same amount and quality of work in less time. Data mining, text mining, and predictive analytics are just a few of the tools within the SAS software suite that would enable those changes. In other words, implementing SAS will cause engagement income to increase without increasing the price billed to the client, which is where the efficiency comes into play. Also, implementing SAS will reduce the audit risk of engagements because data mining and text mining will enable auditors to comb through more documents and data than was humanly possible before, which is where the effectiveness comes into play.

SAS would also be easy to implement because it is the most extensively used analytics software suite of its kind. There are two main advantages to SAS. Firstly, the available training programs and resources are very extensive and readily available, so implementing SAS would be relatively simple and cost effective. Lastly, because SAS is so widely used, the cost of the software suite is less than those of less widely used data analytics tools. Furthermore, SAS can be used on personal computers, which would allow auditors to utilize the tools in the SAS software suit from any location.

Case 8

Concepts

- a. Consider the various types of debt described in note 11, Indebtedness and Credit Agreement.
 - i. Explain the difference between Rite Aid's secured and unsecured debt. Why does Rite Aid distinguish between these two types of debt? Secured debt is debt that is protected by the guarantor, and this protection stems from the fact that the debt is backed by collateralized assets of some kind. On the other hand, unsecured debt is not protected by the guarantor, which means that the debt is not backed by any collateral. In the case of secured debt, if the guarantor defaults on his or her debt, then the guarantor must give up ownership of the collateralized assets as payment for the debt. Unsecured debt does not provide this security, and, because of that fact, it is a much riskier investment. Rite Aid distinguishes between these two types of debt because investors need to know which debt instruments are tied to the company's assets. In other words, the investors need to know because defaulting on secured debt has much more serious consequences. Defaulting on unsecured debt will lower the company's credit score, while defaulting on secured debt will result in the loss of company 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 is debt that a guarantor agrees to assume responsibility for repayment if the borrower defaults. In the case of Rite Aid, Rite Aid Corporation’s wholly-owned subsidiaries guarantee for some of the company’s unsecured debt. These guarantees are full and unconditional and joint and several; also, there are no limits on the ability of the parent company to take funds from its subsidiaries.
- iii. What is meant by the terms “senior,” “fixed-rate,” and “convertible”? The term “senior” refers to debt that take precedent over other debt, which is referred to as junior debt. In other words, senior debt is debt that a company must repay before more junior debts. The term “fixed-rate” refers to debt that has a set interest rate for the duration of the debt; in other words, the interest rate of fixed-rate debt instruments does not change. The term “convertible” refers to debt that can be converted into an already established quantity of the underlying company’s equity at specific times during the debt’s life.
- iv. Speculate as to why Rite Aid has many different types of debt with a range of interest rates. Rite Aid probably has many different types of debt with a range of interest rates because the various types of debt were borrowed during different times. Both the interest rates and the types debt that a company is able to obtain are based on the state of

the markets, the needs of the company, and the credit line of the company, which can differ from one moment to another.

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. At February 27, 2010, Rite Aid has total debt equal to \$6,370,899. Total debt = current maturities on of long-term debt and lease financing obligations + long-term debt, less current maturities + lease financing obligations, less current maturities = \$51,502 + \$6,185,633 + \$133,764 = \$6,370,899. Total liabilities = accounts payable + accrued salaries, wages and other current liabilities + other noncurrent liabilities + total debt = \$1,159,069 + \$965,121 + \$1,228,373 + \$6,370,899 = \$9,723,462. \$51,502 is due within the coming fiscal year.
- c. Consider the 7.5% senior secured notes due March 2017.
- i. What is the face value (i.e. the principal) of these notes? How do you know? The face value is \$500,000, and it was issued at par. This is obvious because there is neither a discount to amortize nor a premium to amortize. Also, the carrying value was \$500,000 for both dates.

- ii. Prepare the journal entry that Rite Aid must have made when these notes were issued. This entry represents an increase in both assets and liabilities, but no change in net income.

| | | |
|------|---------------|---------|
| Cash | 500,000 | |
| | Notes Payable | 500,000 |

- iii. Prepare the annual interest expense journal entry. Note that the interest paid on a note during the year equals the face value of the note times the stated rate (i.e., coupon rate) of the note. This entry represents a decrease in net income due to the interest expense and an increase in liabilities due to the interest payable. There is no change in assets. $\$37,500 = \$500,000 \times 0.075 \times 12/12$

| | | |
|------------------|------------------|--------|
| Interest Expense | 37,500 | |
| | Interest Payable | 37,500 |

- iv. Prepare the journal entry that Rite Aid will make when these notes mature in 2017. This entry represents a decrease in both assets and liabilities, but there is no change in net income.

| | | |
|---------------|---------|---------|
| 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 these notes is \$410,000. The carrying value of these notes at February 27, 2010 is \$405,951. The two values differ because the carrying value of a note is the face value minus any unamortized discount/premium; in the case of these notes, there is an unamortized discount of \$4,049.
- ii. How much interest did Rite Aid pay on these notes during the fiscal 2009? Rite Aid paid \$38,438 in cash interest in fiscal 2009 ($\$38,438 = \$410,000 \times 0.09375 \times 12/12$).
- iii. Determine the total amount of interest expense recorded by Rite Aid on these notes for the year ended February 27, 2010. Note that there is a cash and a noncash portion to interest expense on these notes because they were issued at a discount. The noncash portion of interest expense is the amortization of the discount during the year (that is, the amount by which the discount decreased during the year). The total amount of interest expense recorded by Rite Aid on these notes for the year ended February 27, 2010 is \$39,143 ($\$39,143 = \$405,246 \times 0.09659 \times 12/12$).
- 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. This entry

represents a decrease in net income due to the interest expense and a decrease in assets due to the cash payment. Because this note was sold at a discount, the amortized discount is transferred to the interest expense over the term of the note.

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

- v. Compute the total rate of interest recorded for fiscal 2009 on these notes. The effective interest rate for fiscal 2009 on these notes is 9.659% (carrying value at the beginning of period x effective interest rate - face value x stated interest rate = amortized amount = $\$405,246 \times \text{effective interest rate} - \$410,000 \times 0.09375 = \$705 = \$39,143 / \$405,246 = 0.09659$) ($\$705 = \$405,951 - \$405,246$).

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

- i. According to note 11, the proceeds of the notes at the time of issue were 98.2% of the face value of the notes. Prepare the journal entry that Rite Aid must have made when these notes were issued. This entry represents an increase in both assets and liabilities. Also,

because this note was sold at a discount, the amortized discount is transferred to the interest expense over the term of the note.

| | |
|---------------------------|---------|
| Cash | 402620 |
| Discount on Notes Payable | 7,380 |
| Notes Payable | 410,000 |

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

The effective interest rate is 10.1212%.

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

| Date | Interest Payment | Interest Expense | Bond Discount Amortization | Net Book Value of Debt | Effective Interest Rate |
|---------|------------------|------------------|----------------------------|------------------------|-------------------------|
| 6/30/09 | - | - | - | \$ 402,620 | 10.1212% |
| 6/30/10 | \$ 39,975 | \$ 40,750 | \$ 775 | \$ 403,395 | 10.1212% |
| 6/30/11 | \$ 39,975 | \$ 40,828 | \$ 853 | \$ 404,248 | 10.1212% |
| 6/30/12 | \$ 39,975 | \$ 40,915 | \$ 940 | \$ 405,188 | 10.1212% |
| 6/30/13 | \$ 39,975 | \$ 41,010 | \$ 1,035 | \$ 406,223 | 10.1212% |
| 6/30/14 | \$ 39,975 | \$ 41,115 | \$ 1,140 | \$ 407,363 | 10.1212% |
| 6/30/15 | \$ 39,975 | \$ 41,230 | \$ 1,255 | \$ 408,618 | 10.1212% |
| 6/30/16 | \$ 39,975 | \$ 41,357 | \$ 1,382 | \$ 410,000 | 10.1212% |

1) June 30, 2009 Net Book Value of Debt is the initial proceeds of the bond issuance, net of costs. The face value of this debt is \$410,000; the discount is \$7,380; the coupon rate is 9.75% and the effective rate (including fees) is 10.1212%.

- 2) Interest Payment is the face value of the bond times the coupon rate of the bond.
- 3) Interest Expense equals opening book value of the debt times the effective interest rate.
- The difference between the interest payment and interest expense is the amortization of the bond discount. This is equivalent to saying that interest expense equals the interest paid plus the amortization of the bond discount.
 - Amortizing the discount increases the net book value of the bond each year.

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. This entry represents a decrease in net income due to the debit to interest expense and an increase in liabilities due to the credit to interest payable. Also, because this note was sold at a discount, the amortized discount is transferred to the interest expense over the term of the note.

| | | | |
|------------------|---------------------------|--------|--------|
| Interest Expense | | 27,167 | |
| | Discount on Notes Payable | | 517 |
| | Interest Payable | | 13,583 |

- v. Based on your answer to part iv., what would be the net book value of the notes at February 27, 2010? The net book value of the notes at February 27, 2010 would be \$403,137 ($\$402,620 + \$517 = \$403,137$).

Case 9

Introduction

This case focused on the study and analysis of stockholders' equity. Merck & Co., Inc. was the subject that allowed for this study and analysis. Merck operates worldwide and is a pharmaceutical company that drives innovation and operations through research. This case enabled me to review the principals of receivables that I learned in Accountancy 304. Beyond just reviewing the information, this case allowed me to think about the characteristics of various equity accounts in a more real-world application than Accountancy 304 permitted. This more real-world application allowed me to expand my knowledge and understanding, which will undoubtedly be critical in my future in public accounting.

Concepts

- a. Consider Merck's common shares.
 - i. How many common shares is Merck authorized to issue? Merck is authorized to issue 5,400,000,000 shares according to the stockholders' equity section of Merck's consolidated balance sheet.
 - ii. How many common shares has Merck actually issued at December 31, 2007? At December 31, 2007, Merck has issued 2,983,508,675 shares according to the stockholders' equity section of Merck's consolidated balance sheet.
 - iii. Reconcile the number of shares issued at December 31, 2007, to the dollar value of common stock reported on the balance sheet.

2,983,508,675 shares issued x \$0.01 par value of common stock = \$29,835,086.75 (the balance sheet displays 29,800,000 because of rounding).

- iv. How many common shares are held in treasury at December 31, 2007? At December 31, 2007, 811,005,791 shares are held in treasury according to the stockholders' equity section of Merck's consolidated balance sheet.
- v. How many common shares are outstanding at December 31, 2007? At December 31, 2007, 2,172,502,884 shares are outstanding (outstanding = issued - treasury = 2,983,508,675 - 811,005,791).
- 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. Merck's total market capitalization is \$125,809,642,000 (market capitalization = outstanding x price per share = 2,172,502,884 x \$57.61).

b. N/A

- 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? Generally, companies pay dividends on their common or ordinary shares to incentivize investors to purchase common or ordinary stock. Dividends incentivize common stock or ordinary stock purchases because investors not only want the income for dividends but also perceive regular dividend

payments as an indicator of strong performance, which could indicate future stock price increases. Normally, a company's share price decreases by the amount of the dividend payment.

- d. In general, why do companies repurchase their own shares? There are three primary reasons companies repurchase their own shares. One, companies may repurchase their own shares to reduce their obligations to pay dividends, which investors demand as payment for their capital investments. In other words, repurchasing shares compensates investors and reduces the cost of capital because the investors are paid for their shares and will not receive any further dividends. Two, companies may repurchase shares during a time of undervaluation in order to sell those shares later when the market for those shares is higher and more appropriately priced. Three, repurchasing shares can boost the perceived performance of the company because earnings per share will increase when shares are repurchased. This boost in perceived performance can attract more investors that will pay a higher premium for the shares.

Process

- e. Consider Merck's statement of cash flow and statement of retained earnings. Prepare a single journal entry that summarizes Merck's common dividend activity for 2007. This journal entry shows that Merck declared \$3,310,700,000 in dividends and paid only \$3,307,300,000 in dividends, which left \$3,400,000 in the liability account dividends payable.

| | | |
|-------------------|---------------|---------------|
| Retained Earnings | 3,310,700,000 | |
| Dividends Payable | | 3,400,000 |
| Cash | | 3,307,300,000 |

- f. N/A
- 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. Treasury stock transactions are accounted for at the cost of repurchase, which is a negative number in the financing activities section of the consolidated statement of cash flows. It is a negative number because treasury stock is a contra equity account. Additionally, in note 11, both the number of shares repurchased and the cost of shares repurchased is disclosed. Share repurchases for the year are found on statement of cash flows rather than the balance sheet.
 - ii. Refer to note 11 to Merck's financial statements. How many shares did Merck repurchase on the open market during 2007? Merck repurchased 26,500,000 shares on the open market during 2007.
 - iii. How much did Merck pay, in total and per share, on average, to buy back its stock during 2007? What type of cash flow does this represent? Merck paid \$1,429,700,000 in total and \$53.95 per share to buy back its stock during 2007. This represents a cash outflow for financing activities.

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 is not an asset because it is actual pieces of ownership of a company. Merck does not disclose its treasury stock as an asset because it is a contra equity account and not an asset account. It is a contra equity account because it reduces stockholders' equity. The treasury stock can be sold at a later date by Merck to raise capital for the company, and this capital will be a means of financing the company and not a gain from the sale of an asset.

h. N/A

Analysis

i. Determine the missing amounts and calculate the ratios in the tables below. For comparability, use dividends paid for both companies rather than dividends declared. Use the number of shares outstanding at year end for per-share calculations. What differences do you observe in Merck's dividend-related ratios across the two years? Dividends per share decreased by 0.01 from 2006 to 2007. Dividends yield decreased from 2006 to 2007, while dividends payout increased, which shows that Merck is paying similar levels of dividends even though net income decreased. Dividends to total assets and dividends to operating cash flows were not significantly different, but both decreased from 2006 to 2007.

| <i>(\$ in millions)</i> | 2007 | 2006 |
|-------------------------|---------------|---------------|
| Dividends paid | \$3,307.3 | \$3,322.6 |
| Shares outstanding | 2,172,502,884 | 2,167,785,445 |
| Net income | \$3,275.4 | \$4,433.8 |
| Totals assets | \$48,350.7 | \$44,569.8 |
| Operating cash flows | \$6,999.2 | \$6,765.2 |
| Year-end stock price | \$57.61 | \$41.94 |

| | 2007 | 2006 |
|-----------------------------------|-------|-------|
| Dividends per share | 1.52 | 1.53 |
| Dividends yield | 0.026 | 0.036 |
| Dividends payout | 1.01 | 0.749 |
| Dividends to total assets | 0.068 | 0.749 |
| Dividends to operating cash flows | 0.473 | 0.491 |

Case 10

Introduction

This case focused on the study and analysis of marketable securities, which include both equity investments and debt investments. Marketable securities are unrestricted, short-term financial instruments; a key characteristic of marketable securities is that they cannot be used to exert significant influence. State Street Corporation, which is a financial services company, was the subject of this case study. Most of State Street's operations occur through its subsidiary, State Street Bank and Trust, and it services mostly institutional investors.

Unfortunately, I had forgotten most of the material related to accounting for investments, but this case enabled me not only to refresh my knowledge but also to expand it. I recall not fully understanding the investments portion of accountancy 304 because I did not have as much time as I wanted to study it. Specifically, this case cemented my knowledge of accounting for equity investments versus debt investments. Although I don't necessarily want to audit financial institutions, I could find myself in such a position in my future career, and the knowledge and understanding I gained from this case would undoubtedly be of great help.

Concepts

- a. Consider trading securities. Note that financial institutions such as State Street typically call these securities "Trading account assets."
 - i. In general, what are trading securities? In general, trading securities are debt securities that are purchased and retained principally for sale in the

near future in order to generate income from the price differences that occur during the short-term. They are referred to as trading securities because they are traded, bought and sold, frequently. Trading securities are usually held for less than three months and are reported at fair value. The associated unrealized holding gains and losses, which are the net changes in the fair value of a security from one period to the next without regard to dividend or interest revenue recognized but not received, are reported as a portion of net income. Additionally, any premium or discount on a trading security must be amortized. Trading securities can be either equity investments or debt investments. Equity investments are investments that provide ownership interests like common stock, preferred stock, or other capital stock. Debt investments create a creditor relationship with another entity. Debt investments include government bonds, corporate bonds, and commercial paper. Both forms of investments provide capital to the company in which the investment is made. Equity investments provide the investor with ownership for its capital contribution, while debt investments provide the investor with interest for what is essentially a loan of capital.

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

Dividends are paid only on equity investments, and interest is paid only on debt investments.

Dividends:

Equity Investments:

Holdings less than 20%:

| | | | |
|------|----------|---|---|
| Cash | | 1 | |
| | Dividend | | |
| | Revenue | | 1 |

The fair value method is used to account for the investment. This is a marketable investment because significant influence cannot be exerted.

Holdings between 20% and 50%:

| | | | |
|------|-------------|---|---|
| Cash | | 1 | |
| | Equity | | |
| | Investments | | 1 |

The equity method is used to account for the investment. This is not a marketable security because significant influence can be exerted.

Holdings Over 50%

| | | | |
|------|-------------|---|---|
| Cash | | 1 | |
| | Equity | | |
| | Investments | | 1 |

When a company owns more than 50% interest in another, the investing company has a controlling interest and is referred to as the parent company, while the other company, which the parent company owns interest in, is

referred to as the subsidiary. Parent companies create consolidated financial statements with their subsidiaries. The equity method is used to account for the investment in the subsidiary. This is not a marketable security because significant influence can be exerted.

Interest:

Debt Investments:

| | | |
|------------------|---|---|
| Cash | 1 | |
| Interest Revenue | | 1 |

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

| | | | |
|-----------------------|--|---|---|
| Fair Value Adjustment | | 1 | |
| | Unrealized Holding Gain or Loss - Income | | 1 |

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

“Investment securities available for sale.”

- i. In general, what are securities available-for-sale? In general, available-for-sale securities are securities that are classified as neither trading securities nor held-to-maturity securities. Available-for-sale securities can be either debt investments or equity investments, and they are reported at fair value on the balance sheet. However, changes in the value of

available-for-sale securities are not reported as a portion of net income until the securities are sold.

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

Dividends:

Equity Investments:

Holdings less than 20%:

| | | |
|------|------------------|---|
| Cash | | 1 |
| | Dividend Revenue | |
| | | 1 |

The fair value method is used to account for the investment. This is a marketable investment because significant influence cannot be exerted.

Holdings between 20% and 50%:

| | | |
|------|--------------------|---|
| Cash | | 1 |
| | Equity Investments | |
| | | 1 |

The equity method is used to account for the investment. This is not a marketable security because significant influence can be exerted.

Holdings Over 50%

| | | |
|------|--|---|
| Cash | | 1 |
|------|--|---|

| | | |
|--|-----------------------|---|
| | Equity Investments | 1 |
|--|-----------------------|---|

This is not a marketable security because significant influence can be exerted.

Interest:

Debt Investments:

| | | | | |
|--|------------------|---|---|--|
| | Cash | 1 | | |
| | Interest Revenue | | 1 | |

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

| | | | | |
|--|--------------------------------------|---|---|--|
| | Fair Value Adjustment | 1 | | |
| | Unrealized Holding Gain or Loss -OCI | | 1 | |

This entry allows a record of the amortized cost to be maintained for debt investments. For equity investments, this entry increases stockholders' equity.

- 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? In general, held-to-maturity securities are securities that are bought with the full expectation and ability to hold to maturity. Additionally, they are accounted for at amortized cost rather than fair value. Accounting for them at amortized cost rather than fair value means that held-to-maturity securities do not increase the volatility

of either reported earning or reported capital. Held-to-maturity investments are debt investments and cannot be equity investments, and this is the case because equity investments have no maturity date.

- ii. If the market value of securities held-to-maturity increased by \$1 during the reporting period, what journal entry would the company record? The company does not make a journal entry because held-to-maturity securities are not adjusted to fair value.

Process

- d. Consider the “Trading account assets” on State Street’s balance sheet.
 - i. What is the balance in this account on December 31, 2012? What is the market value of these securities on that date? The 2012 year-end balance is \$637,000,000. This figure represents the fair market value of the securities.
 - ii. Assume that the 2012 unadjusted trial balance for trading account assets was \$552 million. What adjusting journal entry would State Street make to adjust this account to market value? Ignore any income tax effects for this part.

| | | | |
|------------|-----------------------------------|------------|------------|
| Fair Value | | | |
| Adjustment | | 85,000,000 | |
| | Unrealized Holding Gain or Loss - | | |
| | Income | | 85,000,000 |

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

- i. What is the 2012 year-end balance in this account? The 2012 year-end balance is \$11,379,000,000. This figure represents the amortized cost of the securities.
- ii. What is the market value of State Street's investment securities held to maturity? According to footnote four, the market value, which is also referred to as the fair value, is \$11,661,000. Although this figure is reported in the footnote, held-to-maturity securities are not accounted for at market value. Instead, they are accounted for using amortized cost because held-to-maturity securities are not bought with the intent to be sold, which means the market value of the securities isn't pertinent to measuring and evaluating the cash flows that are associated with held-to-maturity securities.
- iii. What is the amortized cost of these securities? What does "amortized cost" represent? How does amortized cost compare to the original cost of the securities? The amortized cost of these securities is \$11,379,000,000, which is also equal to the year-end balance of the account because held-to-maturity securities are accounted for at amortized cost rather than fair value. Amortized cost represents the carrying value of the held-to-maturity securities. The carry value is determined by the purchase price of the security, which could include a premium or discount, and both the state interest rate of the security and the effective interest rate of the security. The carry value shows the cash flows that are associated with

the held-to-maturity securities. If the securities were bought at a premium, then the amortized cost of the securities is less than the original cost of the securities. If the securities were purchased at a discount, then the amortized cost of the securities is more than the original cost of the securities. A statement of cash flows would be needed to compare with the balance sheet to determine the exact difference between the original cost and the amortized cost of the held-to-maturity 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 unrealized gains or losses. Held-to-maturity securities are supposed to be accounted for using the amortized cost method. This difference suggests that the average market rate of interest on held-to-maturity securities has increased from the time the securities were purchased, which means that the held-to-maturity securities market price is higher than its maturity value.
- f. Consider the balance sheet account "Investment securities available for sale" and the related disclosures in Note 4.

- i. What is the 2012 year-end balance in this account? What does this balance represent? The 2012 year-end balance is \$109,682,000,000. This balance represents the fair market value of the securities.
- 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 net unrealized gains on the available-for-sale securities are \$1,119,000,000. This gain represents an “on paper” profit that exists because the fair market value of the securities is higher than the purchase price of the securities. It is unrealized because the securities haven’t yet been sold for the gain to be realized. Unrealized gains and losses on available-for-sale securities are accounted for in other comprehensive income, and the accumulated other comprehensive income is found on the balance sheet.
- 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 net realized gains from sales of available-for-sale securities are \$55,000,000. This gain is an actual increase in cash flows and net income, as opposed to unrealized gains, because it occurs due to the sale of the securities at a price above their amortized costs. Realized holdings gains and losses are accounted for in the gains/losses section of the income statement;

additionally, they are accounted for on the statement of cash flows under the investing activities section.

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

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

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

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

| | | |
|---|----------------|----------------|
| Investment in Available-For-Sale Securities | 60,812,000,000 | |
| | Cash | 60,812,000,000 |

This is the original purchase price of the available-for-sale securities, which will be adjusted to reflect any fair market value changes that occur.

- 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.

This entry shows that State Street sold these available-for-sale securities for \$55,000,000 more than their amortized cost, which is shown as a realized gain. In the case of these securities, the securities sold for less

than their actual fair market values but still sold for more than the amortized cost because the realized gains were less than the unrealized gains.

| | | |
|---------------------------------------|--|---------------|
| Cash | 5,399,000,000 | |
| Unrealized Holding Gain or Loss - OCI | 67,000,000 | |
| | Investment in Available-For-Sale Securities | 5,411,000,000 |
| | Realized Gain on Available-For-Sale Securities | 55,000,000 |

- iii. Use the information in part g. ii to determine the original cost of the available-for-sale securities sold during 2012. Original cost = investment – unrealized gain = \$5,411,000,000 - \$67,000,000 = \$5,344,000,000 or original cost = proceeds - realized gain = \$5,399,000,000 - \$55,000,000 = \$5,344,000,000

The original cost of the securities can be found in two ways. The first method is the investment in available-for-sale securities minus unrealized holding gain or loss because the value of the securities at the date of sale is equal to the original cost plus the net unrealized holding gains or losses. The second method is the proceeds from the sale minus the realized gain because original cost plus realized gains equals purchase price.

Case 11

Introduction

This case focused on the study and analysis of deferred income taxes. ZAGG, “Zealous About Great Gadgets,” was the subject that enabled the study and analysis of deferred income taxes. ZAGG began in 2005 and focused on the designing of protective enclosures for watches, and, today, it is the leading mobile device accessory producer. ZAGG is currently traded on the NASDAQ, and it produces everything from phone cases to headphones.

Unfortunately, before starting this case, I was a little out of practice with regard to accounting for deferred income taxes, but this case enabled me not only to refresh my knowledge but also to expand it. I recall enjoying the deferred income taxes chapter in accountancy 304, and it was enjoyable to refresh my memory on the topic. I remembered the general ideas from the chapter, but the finer details had escaped me. Specifically, this case enabled me to reevaluate my knowledge of the reporting standards on both the financial side, which conforms to GAAP, and the tax side, which conforms to the IRS.

Concepts

- a. Describe what is meant by the term book income? Which number in ZAGG’s statement of operation captures this notion for fiscal 2012? Describe how a company’s book income differs from its taxable income. Book income is a term for all income that is recorded in a company’s financial records minus expenses; this income includes both earned revenue and unearned revenue.

For fiscal 2012, ZAGG's book income equals \$23,898,000, which is generally calculated by subtracting expenses from revenue. In this specific case, it is calculated by subtracting cost of goods sold, operating expenses, and other expenses from net sales. Book income is calculated according to GAAP, while taxable income does not conform to GAAP. Taxable income is used to calculate income taxes payable. For financial purposes, revenue is calculated using the full accrual method, while, for tax purposes, revenue is calculated using a modified cash basis. Book income can also be referred to as pretax financial income, income before taxes, income for financial reporting purposes, or income for book purposes.

- b. In your own words, define the following terms:
 - i. Permanent tax differences (also provide an example): Permanent tax differences are differences between taxable income and pretax financial income that occur either because of figures that are included in pretax financial income but are never included in taxable income or because of figures that are included in taxable income but are never included in pretax financial income. Permanent tax differences do not result in deferred tax consequences. Interest received on state and municipal bonds is a perfect example of a permanent tax difference that is recognized for financial reporting purposes but not for tax purposes.

- ii. Temporary tax difference (also provide an example): Temporary tax differences are differences that create taxable amounts in future periods once the related assets have been recovered. These future taxable amounts are called deferred tax liabilities. Sales, which are recorded on the accrual basis for financial purposes and on the cash basis for tax purposes, are a perfect example of an instance that creates temporary tax differences.
 - iii. Statutory tax rate: The statutory tax rate is the tax rate that is mandated by law.
 - iv. Effective tax rate: The effective tax rate is the average tax rate that is applied to a corporation's pre-tax income. The effective tax rate is calculated by dividing the total income tax expense by the pretax financial 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? In general terms, companies report deferred income taxes as part of their total income tax expense because, when reporting for financial purposes, GAAP must be followed, and, according to GAAP, the matching principle must be followed. The matching principle states that a company must report an expense on its income statement during the same accounting period in which the related revenues are reported. Companies don't simply report their current tax bill

as their income tax expense because the income tax expense is made up of both the current tax expense, or current tax bill, and the deferred tax expense. Companies have a vested interest in only paying the current portion and deferring the remainder of the tax expense in an effort to look better for shareholders and to hold out for better tax treatments in future accounting periods. For instance, the use of varying asset depreciation schedules reduces the current portion of the tax bill and creates a deferred tax liability. For financial reporting purposes, the depreciation expense will be one number, while the depreciation expense for tax purposes will be lower, which reduces the current tax bill.

- 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 represent the deferred tax consequence that arise due to deductible temporary differences. In other words, deferred income tax assets represent the increase in refundable taxes in future accounting periods that arise due to the occurrence of temporary differences that exist at the end of the current period. Deferred income tax assets are reported on the balance sheet at realizable value. A temporary difference is the difference between the tax basis of an asset or liability and its reported amount in a company's financial statements. Deferred income tax assets give rise to deferred tax benefits. A deferred tax benefit occurs when deferred tax assets increases from the

beginning of the current accounting period to the end of the current accounting period. An example of a situation that would give rise to a deferred income tax asset on the balance sheet is when a company records a liability in a current period, such as one for pending litigation, that will not be realized until a later accounting period. The amount of the liability is reported for financial purposes, but it cannot be reported for tax purposes until it is paid. This creates a future deductible amount, which is a deferred income tax asset. Deferred income tax liabilities represent the deferred tax consequences that arise due to taxable temporary differences. In other words, deferred income tax liabilities represent the increase in taxes payable in future accounting periods that arise due to taxable temporary differences that exist at the end of the current accounting period. Deferred income taxes payable is reported on the balance sheet. An example of a situation that would give rise to a deferred income tax liability on the balance sheet is the sale of goods using installment sales. Pretax financial income will include the gross profit from the installment sale, while taxable income will not include the gross profit from the portions of the installment sale that will be realized in future accounting periods. This difference between pretax financial income and taxable income creates a temporary difference, which creates future taxable amounts. This future taxable amount is recorded on the balance sheet as a deferred income tax liability.

- e. Explain what a deferred income tax valuation allowance is and when it should be recorded. A deferred income tax valuation is a balance sheet account that is used to reduce all or a part of a company's deferred tax asset when the company expects that it is more likely than not that it will not realize some part or all of the deferred tax asset. If the chance of not realizing a portion or all of the deferred tax asset is any more than 50 percent, which is where the phrase "more likely than not" comes from, then a deferred income tax valuation allowance should be recorded. A deferred income tax valuation allowance provides the ability for deferred tax assets to be presented on the balance sheet at their net realizable values, which is the proper balance sheet presentation of an asset.

Process

- f. Consider the information disclosed in Note 8 – Income Taxes to answer the following questions:
- i. Using information in the first table in Note 8, show the journal entry that ZAGG recorded for the income tax provision in fiscal 2012?

| | | |
|--|----------------------|------------|
| Income Tax Expense | 9,393,000 | |
| Deferred Tax Assets, net of Deferred Tax Liability | 8,293,000 | |
| | Income Taxes Payable | 17,686,000 |

The income tax expense is the current tax provision and is what ZAGG must pay to the IRS this year. The difference between what is actually paid and the income taxes payable account is due to the deferred tax

assets account, which is essentially represents taxes that are refundable. Because they are refundable, the deferred tax assets are netted against the income taxes payable to find the actual amount owed to the IRS, which is the income tax expense.

- 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.

| | | |
|---|----------------------|------------|
| Income Tax Expense | 9,393,000 | |
| Deferred Tax Assets, net of Valuation Allowance | 8,002,000 | |
| Deferred Tax Liability | 291,000 | |
| | Income Taxes Payable | 17,686,000 |

The deferred tax assets account is generally netted against the valuation allowance account and the deferred tax liabilities account.

Deferred tax assets increased by \$8,002,000, from \$6,300,000 to \$14,302,000, and deferred tax liability decreased by \$291,000, from \$1,086,000 to \$794,000. When those two figures are netted together, a deferred tax asset of \$8,293,000 is found, which is from f.i.

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

rate and ZAGG's effective tax rate? The effective tax rate is the average tax rate that is applied to a corporation's pre-tax income. The effective tax rate is calculated by dividing the total income tax expense by the pretax financial income. ZAGG's 2012 effective tax rate is 39.16%. The differences between the statutory tax rate and ZAGG's effective tax rate can be explained by permanent differences.

$$\text{Effective tax rate} = \frac{\text{total income tax expense}}{\text{pretax financial income}} = \frac{\$9,393,000}{\$23,898,000} = 0.39155446$$

- 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.

| | |
|--|---------------------|
| Deferred tax assets, net - current | \$6,912,000 |
| Deferred tax assets, net - noncurrent | <u>6,596,000</u> |
| Net deferred tax assets | <u>\$13,508,000</u> |

The current portion of the deferred tax assets is found under the current assets section of the balance sheet, while the noncurrent portion of the deferred tax assets is its own line/section on the balance sheet. The noncurrent portion is carried forward from previous periods, while the current portion arises in the current period and will

be carried forward into future periods. These figures are all net of valuation allowance and net of deferred tax liabilities.

Case 12

Introduction

This case focused on the study of revenue recognition, and Apple was the subject that enabled this study. Apple designs, manufactures, and markets a wide range of products, which includes personal computers, phones, and digital music and video players. Additionally, Apple sells a wide range of software, services, and accessory products that are related to its core products. The use of online stores, retail stores, a direct sales force, and third-party vendors allows Apple to sell its products globally.

This case provided the opportunity for me to delve into the most current revenue recognition standards, which I will undoubtedly use in future accountancy courses and my internship next spring. This case forced me to compare past revenue recognition standards to current rules, which is an invaluable skill because my future career in public accounting will definitely involve multiple instances of dealing with changing standards. Understanding how changes in standards affect financial reporting is far more valuable of a skill than simply memorizing the current standards. Furthermore, this case involved combing through the 10-K of an immense, publicly traded company, which is a good experience to have. I will certainly be assigned to audit engagements of publicly traded companies during my career in public accounting, so it is great to have as much experience as possible reviewing annual reports.

Concepts

- a. In your own words, define “revenues.” Explain how revenues are different from “gains.” Revenues are inflows of assets of an entity or resolutions of an

entity' liabilities during an accounting period. These inflows and resolutions can result from providing services, producing goods, supplying goods or other activities that are associated with an entity's continuing, main operations. At a glance, revenues and gains seem to be essentially the same. However, they differ in that revenues are increases in assets that result from the continuing, central operations of an entity, while gains are increases in assets that result from peripheral, non-ongoing activities of an entity.

- 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? Under the new ACS 606, companies are required to recognize revenue at the time that goods and/or services are transferred to the customer; additionally, the amount of revenue recognized must be in proportion to the amount of goods and/or services that have been delivered within the current accounting period. A company recognizes revenues by recording the revenue. Revenue recognition affects the income statement, via sales; the balance sheet, via accounts receivable or cash; the statement of cash flows; and the statement of retained earnings.
- 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, Apple will not adopt the new revenue recognition standards, ASC 606, in full until its

first quarter of 2019, and it will use the full retrospective transition method.

Apple does not believe that the new revenue recognition standards will have a material impact on the timing and amount of revenue recognized as compared to the old standards, and I agree because it seems that they are already applying the basic principles outlined in the ASC 606. In general, Apple recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred, the sales price is fixed and determinable, and collection is probable. In other words, Apple recognizes revenue when it is obvious that an agreement between Apple and a customer exists, the customer has taken possession of the good or the service has been performed, the sales price of the good or service is set, and it is likely that the customer will pay for the good or service.

- d. What are multiple-element contracts, and why do they pose revenue recognition problems for companies? A multiple-element contract, which is also known as multiple-element arrangement, is an agreement between a company and one of its customers to deliver multiple products or services as a part of a singular contract. Multiple-element contracts pose a revenue recognition issue because, under the accrual method of accounting, it is difficult to assess revenue and assign it to specific accounting periods and individual performance obligations.
- e. In general, what incentives do managers have to make self-serving revenue recognition choices? Managers can have multiple incentives for making self-

serving revenue recognition choices. The two most significant incentives are compensation and job retention. Many managers' job performance is judged by revenue or sales figures during specific periods. Depending on their employment agreements managers can lose their jobs or miss out on promotions and bonuses if certain revenue targets aren't reached. In specific cases, certain managers may own equity in their employer, so they have an additional incentive to make self-serving revenue recognition choices. In that case, the more revenue they report the more valuable their equity in the employer becomes.

Process

- f. Refer to Apple's revenue recognition footnote. In particular, when does the company recognize revenue for the following types of sales?
 - i. iTunes songs sold online. Apple should recognize revenue for the sales of iTunes songs sold online when the customer takes possession of the songs, which in this case means downloading the songs.
 - ii. Mac-branded accessories such as headphones, power adaptors, and backpacks sold in the Apple stores. What if the accessories are sold online? For Mac-branded accessories that are sold in stores, Apple should recognize revenue when the customer both pays for the goods and receives the goods, which should occur at the same point during an in-store purchase. For online sales of Mac-branded accessories, Apple should recognize the revenue once the customer receives the

goods; Apple cannot recognize the revenue before or during the shipping process because it is still responsible for the goods and has not fulfilled its performance obligation.

- iii. iPods sold to a third-party reseller in India. Apple should recognize the revenue from the sales to a third-party reseller in India once the reseller receives the goods; Apple cannot recognize the revenue before or during the shipping process because it is still responsible for the goods and has not fulfilled its performance obligation. The reseller is buying the iPods for resell to customers, so Apple is unaffected by the sales the reseller makes.

Revenue from gift cards. Apple should recognize the revenue from the gift cards once they are redeemed. The unused amount on a gift card represents a performance obligation that Apple must fulfill.

However, a significant amount of money on gift cards is never redeemed, so Apple can estimate the amount of breakage income, income on gift cards that is never expected to be redeemed, based on past redemption patterns and recognize that income in addition to the redeemed amounts.

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