# FINANCIAL ACCOUNTING FUNDAMENTALS: A SERIES OF CASE STUDIES

by

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# ABSTRACT

## SIDNEY ALBRITTON: Financial Accounting Fundamentals: A Series of Case Studies

(Under the direction of Dr. Victoria Dickinson)

Financial accounting is an area of study that encompasses a variety of topics and concepts. Understanding these concepts, both in theory and in practice, allow professionals and future professionals to have a firm foundation in the work they are expected to do. In order to develop this firm foundation of financial accounting, a series of case studies was completed. These cases covered concepts such as revenue recognition, shareholders' equity, debt financing, and the like. Each case consisted of qualitative/quantitative information from a real company and a series of questions that allowed the student to explore the concepts and the intricacies of a real firm's application of said concepts. This exploration not only served as an opportunity to explore real company financial documents, but it also augmented the process of learning financial accounting.

# CASE 1: HOME HEATERS, INC.

September 6, 2017

## Executive Summary

This case explores how different accounting practices, including certain choices and estimates made, can affect a company's financial statements. We evaluated two similar heating supply companies with identical operations during their first year. After recording the transactions resulting from these operations, we drafted financial statements for each company. These financial statements provided insight into the effects these accounting practices had.

This case provided me with a better understanding of the effects certain accounting practices have on our financial statements. It was particularly helpful because it allowed me to witness the effects of decisions throughout the accounting cycle, from recording entries to financial statements. Having this information will assist not only me but any client I may be working for when deciding which methods to use.

## Analysis & Recommendation

Based on the financial information above, there are two primary recommendations we would make to investors and/or creditors. In terms of investment, Glenwood Heating presents the best opportunity. Its earnings per share for this fiscal year ($29.98) were significantly higher than that of Eads Heaters ($22.14). Glenwood also has a lower amount of liabilities than Eads. In terms of lending money, Glenwood is also the more attractive option. A significant amount of Eads Heaters' financing already comes

from debt as opposed to Glenwood Heating. With a comfortable net income and lower amount of debt, Glenwood is the best option for creditors or investors.

| Glenwood Heating, Inc.<br>Income Statement<br>December 31, 20X1 | | |
|---|---|---|
| **Sales** | | |
| **Sales Revenue** | $ 398,500 | |
| **Net Sales** | | $398,500 |
| **Cost of Goods Sold** | | (177,000) |
| **Gross Profit** | | 221,500 |
| **Operating Expenses** | | |
| **Bad Debt Expense** | 994 | |
| **Interest Expense** | 27,650 | |
| **Depreciation Expense** | 19,000 | |
| **Other Operating Expenses** | 34,200 | |
| **Rent Expense** | 16,000 | (97,844) |
| **Income Before Tax** | | 123,656 |
| **Income Tax Provision** | | (30,914) |
| **Net Income** | | $ 92,742 |
| **Earnings per Share** | | $ 28.98 |

| Glenwood Heating, Inc.<br>Statement of Retained Earnings<br>For Period Ending December 31, 20X1 | |
|---|---|
| **Beginning Balance, Retained Earnings, 1-Jan-20X1** | $ - |
| **Add Net Income For 20X1** | 92,742 |
| **Total** | 92,742 |
| **Less Dividends Declared & Paid FY 20X1** | (23,200) |
| **Ending Balance, Retained Earnings, 31-Dec-20X1** | $ 69,542 |

| Glenwood Heating Inc.<br>Balance Sheet<br>December 31, 20X1 | | | | |
|---|---|---|---|---|
| **Assets** | | | | |
| **Current Assets** | | | | |
| **Cash** | $ | 426 | | |
| **Accounts Receivable** | | 99,400 | | |
| **Less: Allowance for Doubtful Accounts** | | (994) | | |
| **Inventory** | | 62,800 | $ 61,632 | |
| **Property, Plant, & Equipment** | | | | |
| **Land** | | 70,000 | | |
| **Building** | | 350,000 | | |
| **Less: Accumulated Depreciation-Building** | | (10,000) | | |
| **Equipment** | | 80,000 | | |
| **Less: Accumulated Depreciation-Equipment** | | (9,000) | 481,000 | |
| **Total Assets** | | | | $ 642,632 |
| **Liabilities & Equity** | | | | |
| **Current Liabilities** | | | | |
| **Accounts Payable** | $ | 26,440 | | |
| **Interest Payable** | | 6,650 | 33,090 | |
| **Long-Term Liabilities** | | | | |
| **Note Payable** | | 380,000 | 380,000 | |
| **Total Liabilities** | | | | $ 13,090 |
| **Stockholders' Equity** | | | | |
| **Common Stock** | | | 160,000 | |
| **Retained Earnings** | | | 69,542 | |
| **Total Equity** | | | | 229,542 |
| **Total Liabilities & Equity** | | | | $ 642,632 |

| Glenwood Heating, Inc.<br>Statement of Cash Flows<br>For Period Ending on December 31, 20X1 | | |
|---|---|---|
| **Cash Flows from Operating Activities** | | |
| **Net Income** | | $ 92,742 |
| **Adjustments to reconcile net income to net cash provided by operating activities:** | | |
| **Depreciation Expense** | $ 19,000 | |
| **Bad Debt Expense** | 994 | |
| **Accounts Receivable** | (99,400) | |
| **Inventory** | (62,800) | |
| **Accounts Payable** | 26,440 | |
| **Interest Payable** | 6,650 | (109,116) |
| **Net Cash Flows from Operating Activities** | | (16,374) |
| | | |
| **Cash Flows from Investing Activities** | | |
| **Purchase of Land** | (70,000) | |
| **Purchase of Building** | (350,000) | |
| **Purchase of Equipment** | (80,000) | |
| **Net Cash from Investing Activities** | | (500,000) |
| | | |
| **Cash Flows from Financing Activities** | | |
| **Issuance of Common Stock** | 160,000 | |
| **Payment of Cash Dividends** | (23,200) | |
| **Long-Term Notes Payable** | 380,000 | |
| **Net Cash from Financing Activities** | | 516,800 |
| **Total Net Cash Flows** | | $ 426 |

# CASE 2: MOLSON COORS BREWING COMPANY

September 20, 2017

## Executive Summary

Molson Coors Brewing Company--Profitability and Earnings Persistence explores the financial statements of Molson Coors Brewing Company, paying specific attention to the Income Statement. In this case, we explored the role of classification on income statements and specific items on the income statement, including Special Items and Other Income. The goal of analyzing these particular items was to facilitate a better understanding of persistence and its role in the decision-making of users, while also providing a context for the inclusion of items that are not persistent.

This case provided me with a greater understanding of the role of certain items on the income statement, specifically the role of items that are outside the regular operations (revenues and expenses) of the business. By exploring these items, I was able to see the role they have in transmitting information to the users of financial statements. The goal of financial statements is to provide the user with relevant and reliable information regarding the financial state of a company. By understanding the role of irregular items, such as those included in Special Items, I will be better able to facilitate the transmission of information to investors, creditors, and other users.

## Concepts

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

The major classifications on an income statement are the operating section, nonoperating section, income tax, discontinued operations, noncontrolling interests, and earnings per share.

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

According to the conceptual framework, the objective of financial reporting is to provide users with an accurate understanding of the quantity and likelihood of future cash flows. This information, in turn, allows users, specifically investors and creditors, to make educated decisions. Classified income statements differentiate between regular items, like sales revenues and operating expenses, and non-regular items, such as gains and losses, in the nonoperating section.

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

By understanding persistent income, financial statement users will be better able to project future income. This is especially useful to investors and creditors in determining whether investing in the company or loaning money to the company is reasonable. An understanding of future cash flows, resulting in income, allows an understanding of the company's financial stability.

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

SFAS #130 defines comprehensive income as "the changes in equity during a period except those resulting from investments by owners and distribution to owners." Comprehensive income includes all of the nonowner changes in a company, usually resulting from revenues and expenses. However, it also includes income or expenses that have yet to be realized. These unrealized items, including such things as unrealized holding gains/losses and gains/losses resulting from foreign currency exchanges, are what differentiates comprehensive income from net income.

## Process

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

"Sales" is the total amount of money a company receives from the sale of its goods. On the other hand, "Net Sales" is the total amount of income from sales after items such as Sales Returns & Allowances and Sales Discounts have been accounted for. Molson Coors reports these items separately because excise taxes must be considered when determining actual sales. Excise taxes are taxes that are included in the sales price of a good, as opposed to as a separate line item, like sales tax. Because excise taxes are part of the sales price, they must be taken out to calculate the actual amount of money earned by the company from the sale of a good.

***B. 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?***

Items that are unusual or nonrecurring during the period, including asset abandonment, restructuring charges, and gains (losses) on disposal of investments, are included in the "Special items, net" line-item. These items are irregular, but Molson Coors believes that they are related to the core operations of the business.

***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.***

These items are included in a separate section because they do not constitute regular items. Because they are unusual, they do not speak to the normal occurrences of the business. Since they are not descriptive to the normal operations of the business, I do not think they should be included in operating expenses. Operating expenses provide financial statement users with an approximate understanding of the year-to-year operations of a business. Special items are often non-recurring. By classifying this information as

operating expenses, it goes against the principle of providing users with information that allows them to understand the quantity and certainty of future cash flows.

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

The items under "Other Income (expense)" include items such as Interest Expense and Interest Income, along with other smaller items that do not deal specifically with the core operations of the business. These items can be regularly occurring. On the contrary, "Special items, net" includes activities that are unique and do not occur regularly, but Molson Coors believes these items to be related to their core operations.

***D. Refer to the statement of comprehensive income.***

***i. What is the amount of comprehensive income in 2013? How does this amount compare to net income in 2013?***

Comprehensive income in 2013 was $760.2 million for Molson Coors, while net income was $572.5 million during the same year. Comprehensive income was $187.7 million greater than net income.

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

The items in the consolidated statement of comprehensive income included such items as foreign currency translation adjustments, pension and other postretirement benefits adjustments, and unrealized gain on derivative instruments. These items are important in terms of determining income, but they are not realized.

## Analysis

A. ***Identify items on Molson Coors' income statement that you consider non-persistent. For each item indicate whether you do not expect the item itself to recur or whether the item might recur on future income statements but at potentially very different amounts.***

Special Items is one item that is non-persistent. The items included in Special Items are not likely to recur, or they will recur at significantly different amounts. Other Income (expense) is also an item that could or could not be persistent. Some of the items within this classification may or may not recur, and the amounts that they recur at may be similar or different. Income (loss) from Discontinued Operations will also not be persistent. Specific items in this area will not recur since they are discontinuations of operations.

***B. Consider the information on income taxes, in Note 7.***

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

Molson Coors' effective tax rate is 12.83% for the FY 2013.

# CASE 3: PEARSON PLC.

October 4, 2017

## Executive Summary

Pearson plc—Accounts Receivable explores the accounts receivable process. It takes a detailed look at the role of contra accounts that decrease accounts receivable, including "Sales Returns and Allowances" and "Allowance for Doubtful Accounts." The case also looks at the various journal entries related to accounts receivable, changes in the balances of accounts because of these entries, and the processes by which companies determine their estimated amount of bad debts.

Accounts receivable is a pertinent part of the operations of a company. Having a firm understanding of the accounts receivable terminology, and the processes involved with it, are imperative for an accounting professional. Accounts receivable and its contra accounts are also an important part of a firm's assets and value. By understanding accounts receivable, its contra accounts, and how various accounting procedures affect these accounts, it allows an individual to evaluate the value of a company.

## Concepts

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

An account receivable is the result of a sale to a customer on credit. It is the existing amount the customer owes to the company. It can also be called a trade receivable.

***B. How do accounts receivable differ from notes receivable?***

Accounts receivable are expected to be paid within the operating period or one year (whichever is longest). Notes receivable, on the other hand, may fall outside of the operating period, leaving them to be considered "long-term." While Accounts Receivable are not interest bearing, Notes Receivable often are. Notes receivable are also created in more clearly defined terms than accounts receivable.

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.***

Contra is the Latin word for "against." As such, a contra account is one that goes against another account, causing the true value of the main account to decrease. The two contra accounts associated with trade receivables are "provision for bad and doubtful debts" and "provision for sales returns," which are equivalent to "allowance for doubtful accounts" and "sales returns and allowances," respectively. These two accounts capture two types of situations where trade receivables will experience a decrease that is not the result of a payment. Historical amounts of bad debts or sales returns are good metrics by which to estimate these accounts. The macroeconomic environment is also one factor that must be considered, as bad debts are likely to be higher during periods of economic distress.

***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?***

Under the percentage-of-sales procedure, the company determines a percentage that they feel accurately describes the amount of accounts that will not be paid. They then multiply this percentage with the overall sales, thus determining a dollar amount for sales they believe will be uncollectable. Under the aging-of-receivables procedure, the company views time as the primary factor in determining the amount of accounts receivable that are uncollectable. It is assumed that the longer an account goes unpaid, the more likely it is that this account will not be able to be collected at all. As such, the percentage of accounts receivable under each time frame (i.e. six months, one year, two years) is multiplied by a different percentage, and this percentage increases with the amount of time. For each of these methods, managers need historical information to develop percentages that they feel accurately reflect the collectability of accounts. For the percentage-of-sales procedure, they will evaluate the historical amount of accounts receivable that go uncollected. The same process is used for the aging-of-receivables method, but historical data is evaluated based on the different amounts of time the accounts go unpaid and the subsequent default of

those accounts. In my opinion, the aging-of-receivables method is more effective at determining the true amount of uncollectable accounts, as it conducts a deeper evaluation than the percentage-of-sales method. However, this procedure entails more work and calculation for the company.

***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 some situations, the financial state of a company could not be known at the time of purchase, or its financial state could take a drastic change once the credit has been granted. It is difficult and unreasonable to expect a company to be able to conduct a thorough evaluation of a buyer before every sale on account. Likewise, many companies operate off a historical evaluation of a company's reliability. A company that, at one point, was reliable in paying off its accounts could now be struggling to pay off its debts. Managers face the risk of bad accounts every time a sale on credit is made. For a company to thoroughly evaluate its buyers before every sale, it would require them to divert resources from other areas.

## Process

***A. 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.***

**Provision for Bad & Doubtful Debts**

| | |
|---|---|
| (exchange differences) 5<br><br>(utilized) 20 | Beginning: £72*<br><br>26 (income statement movements)<br><br>3 (acquisition from business comb.) |
| | Ending: £76 |

The exchange differences are a result of different currencies being utilized in the company's sales. The income statement movements are changes in expenses resulting from the estimation (and recording) of bad debts expense. The "utilized" line item represents the company's writing-off of doubtful accounts. The final line item is the result of the company

acquiring another company, resulting in the primary company taking on that company's allowance for doubtful accounts.

***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 & Doubtful Debts Expense | Provision for Doubtful Accounts | 26 | 26 | *(Income Statement)* *(Balance Sheet)* |
| 2. | Provision for Doubtful Accounts | Trade Receivables | 20 | 20 | *(Balance Sheet)* *(Balance Sheet)* |

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

The provision for bad and doubtful debts expense is included in the operating expenses section of the income statement.

***B. 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.***

**Provision for Sales Returns**

| | |
|---|---|
| (actual) 443 | Beginning: £372<br>425 (estimate) |
| | Ending: £354 |

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

| | | | | | |
|---|---|---|---|---|---|
| 1. | Sales Returns & Allowances | | 425 | | *(Income Statement)* |
| | | Provision for Sales Returns | | 425 | *(Balance Sheet)* |
| 2. | Provision for Sales Returns | | 443 | | *(Balance Sheet)* |
| | | Trade Receivables | | 443 | *(Balance Sheet)* |

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

Estimated sales returns would appear as a line item deduction under "sales," in order to calculate net sales.

***C. 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.***

**Trade Receivables**

| | |
|---|---|
| Beginning: £1,342<br>(sales on credit) 5,624 | 5,219 (cash collections)<br>20 (utilized bad debts estimates)<br>443 (sales returns) |
| Ending: £1,284 | |

| | | | |
|---|---|---|---|
| Trade Receivables | | 5,624 | |
| | Sales | | 5,624 |
| Cash | | 5,219 | |
| | Trade Receivables | | 5,219 |

# CASE 4: PALFINGER AG

NOVEMBER 8, 2017

## Executive Summary

Palfinger AG explores the Property, Plant, & Equipment category and what types of assets fall under this classification. The case also evaluates the process and different methods by which these assets are depreciated. There is also an analysis of how a company can record an expenditure associated with an asset under this category, either by capitalizing it or recording it as an expense.

Property, Plant, and Equipment is a major part of a company's assets, and, subsequently, a major part of a company's value. PPE is an important indicator in determining the long-term ability of a company to generate revenue, as the assets recorded here are usually essential to the operations of the business. Likewise, recording depreciation of these assets is an important accounting process, as it allows a company to report a faithfully representational value for said assets. As an accountant, understanding these processes is instrumental in fulfilling one's obligations, especially in reporting information to financial statement users.

## Concepts

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

Based on the goods that Palfinger supplies, they are likely to have large assembly and storage facilities, which will require a sizeable portion of land. As such, the goods being manufactured by Palfinger will require large pieces of machinery, including their own pieces of large-scale lifting equipment. Depending on who is

responsible for delivery of the goods, Palfinger may also have transportation equipment capable of moving large goods.

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

The €149,990 value represents the combined value of all property, plant, and equipment assets held by the company. These assets are long-term and are used in the operations of the business. Items such as land, buildings, manufacturing equipment, and other machinery fall under this classification. This value is after factors such as depreciation are taken into account.

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

According to the financial statement notes, equipment includes such items as machinery, plant equipment, fixtures, and fittings.

**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 represent payments on PPE assets that have yet to be completed and/or put into operation. These items may be assembled or under construction, which is where the classification "assets under construction" comes into play. Once these items become available for use, they will be transferred to another account under PPE. The €14,958 reclassification represents an asset that became

available for use during the 2007 fiscal year. Depreciation represents the value lost with time and use once an asset is put into operation. Because these assets have yet to be put into operation, they do not depreciate.

***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 their property and equipment on a straight-line basis. The asset depreciates a set amount each year of its useful life. The useful life for buildings, as per Palfinger, can range from 8 to 50 years. Likewise, "plant and machinery" are assumed to have a useful life of 3 to 15 years, and "fixtures, fittings, and equipment" are assumed to have a useful life of 3 to 10 years. Any investment or value-adding costs are added to the value of the asset and depreciated. Two important factors management must take into consideration when choosing a depreciation policy is the timing of expenses and the value of assets on the balance sheet each year. As with many accounting practices, there is often a major trade-off between the accuracy of practices and the amount of resources these practices use. A method such as straight-line is a simple process, and will utilize less company resources to calculate. However, this method may be less accurate than others. On the other hand, a declining balance depreciation method allows a company to depreciate assets significantly during its first few years of use. This helps the company in terms of taxes owed during this period. However, it is more complicated, and takes more resources, to calculate.

***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?***

These expenditures are capitalized, or added to the value of the equipment. They are then depreciated along with the equipment according to straight-line depreciation. The alternative treatment for these types of expenditures is to record them as expenses, placing the entire expenditure on a single income statement.

## Process

***A. Use the information in the financial statement notes to analyze the activity in the "Property, plant and equipment" and "Accumulated depreciation and impairment" accounts for 2007. Determine the following amounts:***

***i. The purchase of new property, plant and equipment in fiscal 2007.***

The purchase of new PPE assets totaled €61,444.

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

The total amount of government grants used to purchase new PPE was €733. The government may offer grants to facilitate manufacturing and

other types of business ventures. Companies apply for and are awarded these grants. As per IAS 20, these grants can be accounted for in two ways. One such way is to deduct the amount of the grant from the carrying value of the asset, which is the method utilized by Palfinger.

*iii. Depreciation expense for fiscal 2007.*

The total amount of depreciation expense for FY2007 was €12,577.

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

The net book value of PPE assets disposed of during FY2007 was €1,501.

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

Palfinger incurred a gain of €1,501 as a result of the sale of PPE during FY2007. The value, as it was recorded in Palfinger's financial statement, of disposals during this year was €154, after accounting for depreciation. Because the equipment was sold for €1,655, the company received €1,501 above the recorded value of the equipment, hence the gain.

***C. 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***

| Year | Depreciation Exp. | Net Book Value |
|---|---|---|
| FY2007 | €1,880 | €8,793 |
| FY2008 | €1,880 | €6,913 |
| FY2009 | €1,880 | €5,033 |
| FY2010 | €1,880 | €3,153 |
| FY2011 | €1,880 | €1,273 |

***ii. Double-declining-balance depreciation.***

| Year | Net Book Value (Beg. Yr) | Depreciation Expense | Net Book Value (End Yr.) |
|---|---|---|---|
| FY2007 | 10,673 | 4,269 | 6,404 |
| FY2008 | 6,404 | 2,562 | 3,842 |
| FY2009 | 3,842 | 1,537 | 2,305 |
| FY2010 | 2,305 | 922 | 1,383 |
| FY2011 | 1,383 | 110 | 1,273 |

***D. 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.).***

If this equipment were sold at the beginning of FY2008 for €7,500, Palfinger would suffer a loss of €1,293 on the sale. As per Palfinger's policy of not recording depreciation for the year of sale, depreciation expense would only affect the FY2007 income statement, at a value of €1,880. The loss because of the sale also affected the FY2008 income statement, at an effect of €1,293. The total income statement effect across both years totaled €3,173.

# CASE 5: VOLVO GROUP

NOVEMBER 22, 2017

## Executive Summary

Volvo Group explores the research and development processes of a company, along with the costs that arise from such activities. The case first explores what types of activities are classified as "research and development," before moving on to the reporting of these costs. It explains the difference between "research phase" costs and "development phase" costs and how these costs are represented in the financial statements. The case also analyzes the effects varying international practices for R&D costs (IFRS vs. U.S. GAAP) have on a company's reporting.

For many companies, research and development is integral to their operations and continued success. As a result, it is important for us to understand how to account for these activities in the financial information of a company. How a company records its R&D expenditures is important to its value and, as such, it is important to accurately report this information to investors, creditors, and other users of financial statements.

## 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?***

As the global market moves towards more environmentally-friendly vehicles and machinery, companies must strive to keep up with and accommodate these trends. Based on the description and clientele of Volvo, a large portion of their research and development activities are conducted with

environmental and emissions goals in mind. As such, their research and development costs are likely related to the labor and materials required for these types of activities. Costs associated with pioneering or improving these technologies, including administrative and legal fees associated with innovation, are included in these expenditures.

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?***

When evaluating whether to capitalize or expense R&D expenditures, Volvo looks at whether the activities fall under the research phase or the development phase. Activities associated with obtaining new knowledge or determining the applications of knowledge or alternatives are associated with the research phase. As a result, expenditures associated with these types of activities are expensed. Activities associated with the development phase, however, are capitalized. These activities include actions taken by the company to complete an asset for use or sale. Such actions as designing, constructing, and testing, fall under the development phase. An important factor when making the distinction between research phase and development phase activities is the probability of future economic benefits resulting from

the activities. If future economic benefits exist, then the expenditures can likely be capitalized.

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?***

The length of time over which an asset could be used is the primary consideration when determining the period for amortization. Factors affecting the useful life of an asset include the general wear an asset undergoes as it is used and how viable it is to use the asset as technology advances. Using the Product & Software Development category as an example, Volvo believes that these assets will be useful for a period ranging from three to eight years. When dealing with assets of this nature, a company must consider the progress of technology and how long it will be before an asset such as this will become outdated and not of use.

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?***

Expending all R&D costs, as practiced under U.S. GAAP, is the better accounting practice. Although R&D activities are important to the creation of assets, they are often not fruitful. If a company capitalizes costs associated with R&D, and the project does not lead to a useful asset, then the value of the company is overstated. To provide the most accurate value of a company to investors and creditors, all R&D activities should be expensed. If these activities do lead to the creation of a useful asset, then the possession of this asset will be reflected in the value of the company.

## Process

***A. 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?***

SEK 11,409 is the net amount of the asset at the end of FY 2009. This value can be found in the "Net carrying value in balance sheet 2009" line-item in the Footnote.

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 & Software Development, net**

| | |
|---|---|
| Beginning: 12,381 | |
| (amounts capitalized) 2,602 | |
| | 3,126 (amortization) |
| | 448 (other) |
| Ending: 11,409 | |

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

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

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

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

FY2007: 19.12%; FY2008: 15.77%; FY2009: 20.54%

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

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

| (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?***

| R&D Costs to Net Sales | 2007 | 2008 | 2009 |
|---|---|---|---|
| Volvo Group | 3.89% | 4.62% | 6.08% |
| Navistar International Co. | 3.15% | 2.67% | 3.83% |

The proportion for Volvo Group is slightly higher than that of Navistar. For 2007, Volvo's proportion is less than a percent higher than Navistar's. However, in 2008 and 2009, Volvo's proportion is roughly two percent higher than Navistar's.

# CASE 6: DATA ANALYTICS

JANUARY 31, 2018

## Executive Summary

Technology has had a tremendous impact on the accounting profession, and the metamorphosis will continue at the same rate that technology progresses. As an accounting professional, a working knowledge of technology is a requirement. A firm understanding of how to operate computer programs and other technology-driven business solutions opens many doors for a professional in terms of the tasks they can complete.

For this case, I was asked to look at Python, a programming language. Before this case, I had little to no knowledge of programming, let alone the existence of varying languages like Python. Understanding a program like Python, and how it can be used in the accounting and business profession, allows me to be more effective as a professional. After completing this case, I now have a drive to become proficient in these types of programs.

## Concepts

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

Python is a computer programming language known for its readability and its ease of use.[1] First put into operation in 1991, Python was the creation of Guido van Rossum. Rossum, originally from Norway, was a fan of Monty Python's Flying Circus, hence the name "Python." Because Python is a relatively simple programming language, its application becomes less reliable as the programs become more complex. However, for simple programs, Python is regarded as one of the best. The syntax used by Python is simpler than that of other programming languages, so it is easy for users to read and write. The foundation of Python can be found in programs like C, Java, and Lisp. Python was written in C, although there are some syntactical differences between the two.[2] There are a variety of existing programs written in Python that can be used in business practices. Some of the more common uses of this program, in terms of business operations, is the development of programs that gather data from varying sources. Because it is a programming language, as opposed to an actual program, the possibilities this program has are limitless.

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

One of Python's greatest strengths as a programming language is the ease with which one can learn to use it. The programming language itself is easy to understand, making it popular among beginner programmers. There are a variety of resources available for someone who wishes to utilize Python, including

beginner's courses. The Python Software Foundation, the entity responsible for the language, has some literature available for those wishing to get started with it.[3] Python also serves as a good transition into other, more difficult, programming languages.

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

***i. Auditing***

When relaying information from other document forms, such as pdfs, it would be beneficial to write a program using Python that withdrew the information from said documents. It would increase efficiency tenfold when compared to manually pursuing and withdrawing the information. The data involved here could range from financial statement numbers to asset values to journal entry numbers.

Keeping track of inventory values is an important part of financial accounting and auditing. Using Python, one could develop a program that compiled inventory information and kept track of inventory values. Some Python-based programs have also been written to calculate FIFO and LIFO inventory values.

Applications such as these make compiling information and making calculation simple and easy, allowing auditors to spend this time on other activities.

Using Python, one could create a program that calculated the balance of accounts as transactions are made and entries recorded. There are several Python-written programs that maintain the system of double-entry accounting. For this information, it would primarily be looking at the values in journal entries.

### *ii. Tax Planning*

When preparing tax documents, one could develop a program, utilizing Python, that drew this information from Excel spreadsheets or other forms of data storage. This automation of the process would eliminate the menial task of moving numbers back and forth manually. The data here would most likely include different payroll values, including income, tax-related payables, and similar information.

Using a program developed under Python, one could develop models to determine how different situations affect tax responsibilities. Because of the limited applications of Python, it would need to be a relatively simple program, utilizing data such as income to predict situations.

Calculating and documenting payroll taxes is a process integral to most businesses. To make this process more efficient and accurate, a tax professional could develop a program to both calculate and document these

values. The program, written in Python, could pull tax information from other documents and record them for payroll activities. A program such as this would rely mostly on tax data found in various documents.

### *iii. Financial Statement Analysis/Valuation/Advisory*

When viewing financial statements over time, there are a variety of applicable ways to use Python in this operation. If someone needed to pull information from financial statements over several years, they could develop a Python-written program that pulled this information out.

Stock information, especially to-the-minute information, is important when trying to value a company. Programs have been written, using Python, that allow the user to gather and analyze stock data over long periods of time. A Python-written program can also be used to pull data from sources, such as Yahoo Finance, for company and stock valuation.

Simple, Python-based programs could be used to model business decisions. Especially in an advisory capacity, this would be instrumental in evaluating different business alternatives. Because Python programs are relatively simple, the model may only be able to accommodate a few variables. The variables, and data, involved in this have an infinite range of possibilities.

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

Technology has dramatically affected the accounting profession over the past few decades. Proficiency in the use and implementation of technology has gone from a desired skill to a required skill in the field of accountancy. One of the most dramatic changes the industry has seen is in how we process data and make calculations. Technology has automated many of the processes in the profession, allowing employees to spend their time on more beneficial activities.

A knowledge of programming languages allows a professional to not only analyze the programs currently being used but also write their own programs. These programs serve to streamline the accounting and valuation process, reserving the time of professionals for more important tasks and cutting back on human-based errors. One of the best ways to gain a foothold in programming knowledge is to utilize Python for simple programs.

Python is known for its readability and the ease with which one is able to become proficient in it. Its simple syntax allows one to easily read through lines of code and find any errors in a program. Especially for employees who have little to no experience with programming, Python is an excellent program to learn. Once they become proficient in Python, it will be easier for them to transition into other, more advanced programming languages, allowing them to develop more complex programs. Having a team trained in this programming language allows