

CENTRAL CONNECTICUT STATE UNIVERSITY

“An Analysis of the Implementation of XBRL by Merchandisers and Manufacturers”

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By Constantine “Dean” Proestakes

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ABSTRACT: This research paper is an analysis of the implementation of XBRL in its beginning phases. It focuses on comparing the XBRL elements chosen by three merchandising companies and three manufacturing companies for the same line items on their respective balance sheets. The XBRL elements and financial statements were analyzed according to their 2008 2nd quarter filings on Edgar Dashboard (www.xbrl.cloud.com). The analysis was conducted in five prescribed steps that involve analyzing the interactive data to compare and contrast the XBRL element selections by each company. The analysis is presented in spreadsheet format organized in accordance with each step prescribed for this research.

Introduction:

XBRL is a reporting language used to “tag” each line item of a financial statement with a financial “barcode” that identifies the substance of the line item within the context of the financial statements. In this paper, five specific balance sheet line items were compared across three merchandising companies and three manufacturing companies with a focus on analyzing the implementation of XBRL. This paper demonstrates that companies have often chosen different XBRL elements for the same line item and that each different XBRL element’s definition may substantiate that line item differently. Indeed, some companies go as far as to create their own XBRL “extensions” because they cannot find a suitable element within the existing XBRL taxonomy that captures the complete substance of a particular line item being reported. This paper discusses the potential reasons why the six companies selected for analysis chose the XBRL elements specified in their 2008 2nd Quarter financial statements. The main point of this paper is that a company’s implementation of an XBRL element sends a signal to the user of the financial statements as to what a line item represents in the context of the financial statements. Because XBRL is still in its beginning phases of implementation, analysis is fundamental to the improvement of its accounting functions in the future.

The comparative analysis of XBRL’s implementation for the six companies selected from two different industries indicates that some of the deviations in selection are not due to a company’s particular business model. For example, the different XBRL elements selected for the line item Short-Term-Investments were mostly attributable to the particular nature of the investment portfolio of a company than to its business model. Other differences in element selection are exemplified by the computer manufacturers’ selection of an element for the line item Property, Plant, and Equipment. In this case, the different element selections are attributable to the different perceptions of each company as to what XBRL element is most appropriate for identifying the substance of a line item within their specific industry. In other cases, companies chose a different element and it is not entirely clear why they did so, i.e. KOHLs Cash element selection. In every case, this paper examines all of the different choices and attempts to assess their merit as they have implemented in the eyes of the user.

Because the substance of an account is not simply captured by the balance of an account, the selection of an XBRL element is important to a user’s complete understanding of a line item. XBRL will soon be the primary “identifier” of accounts, just as barcodes have become for retail products. Therefore, this paper examines how each account is identified by an XBRL element and what that identification indicates about the accounting for that item. Sometimes the differences in the selection of an XBRL element appear justifiable, and sometimes the differences appear questionable. Therefore, this paper is an evaluation of the selections made as well as a discussion of possible alternatives. Although not all of the questions about a company’s implementation of an XBRL element can be answered, a discussion of how well an element identifies the

substance of a line item is important because it assesses how well XBRL has served its fundamental purpose thus far. By using references to FASB’s codification and www.xbrl.us for the analysis of the definitions of XBRL elements, the different choices of an element for a particular line item can be examined and interpreted so that meaningful observations can be made and thoughtful suggestions can be formulated.

Step 1: Choose your six companies and line items.

The spreadsheet that accompanies this paper indicates the three manufacturing companies selected (Dell, Apple and Hewlett-Packard). It also shows the three merchandising companies selected (Macys, KOHLS, and JCPenny). The criteria specified for the selection of a company requires that the company have less than 2 errors and minimal XBRL extensions as specified on Edgar Dashboard. It is perhaps important to note that one of the companies, Hewlett-Packard, has less than two errors but has 9% in XBRL extensions which does exceed the limit prescribed for analysis. However, this is acceptable so long as Hewlett-Packard’s extensions do not impede my analysis. Indeed, not one of the XBRL elements selected by Hewlett-Packard for the line items in this paper deviates from the standard U.S. GAAP elements. The line items selected for analysis were primarily chosen from the current assets section of the balance sheet. The balance sheet line items selected for analysis are: 1. Cash and Cash Equivalents; 2. Short Term Investments; 3. Accounts Receivable; 4. Inventory; and 5. Property, Plant and Equipment.

Step 2: Identify and document (include in spreadsheet) the XBRL element for each line item within the balance sheet of each company chosen.

The column on the spreadsheet labeled “Step 2” identifies the particular XBRL element used for each line item in its XML coding format. Most of these elements refer to U.S. GAAP whereas some are created XBRL “extensions” for which a company provides its own definition in the interactive data.

Step 3: Locate and identify Codification references for the line items and elements chosen.

Since this step merely requires the location of the definitions for the line items and the XBRL elements implemented, not much can be discussed here. The spreadsheet provides FASB’s codification reference for each line item and a definition for each XBRL element. Some XBRL elements are not expressly defined in FASB’s codification, therefore, some XBRL definitions are provided from www.xbrl.us.

Step 4: Provide an element definition and insert it into the spreadsheet.

Inserting the definition of each XBRL element into the spreadsheet would distort its appearance. Therefore, in column labeled “Step 4” references are provided to the definitions. The actual definitions are compiled in an *Appendix of Definitions* included with this project. However, all of the definitions are also cited and referenced throughout the analysis portion of this paper.

Step 5: Analysis.

Most of the definitions of the XBRL elements were locatable within FASB’s codification website. For the most part, the definitions in the codification were harmonious with the definitions provided on www.xbrl.us. However, there was no specific codification reference for the XBRL element “<us-gaap:ShortTermInvestments>” used by the companies of Hewlett-Packard and Dell. The definition of this element according to www.xbrl.us is:

“Investments which are intended to be sold in the short term (usually less than one year or the normal operating cycle, whichever is longer) including trading securities, *available-for-sale securities*, held-to-maturity securities, and other short-term investments not otherwise listed in the existing taxonomy.”

The element used by Apple and KOHL’s for the same line item is entitled “<us-gaap:AvailableForSaleSecuritiesAtCarryingValue>”. The definition of “<us-gaap:AvailableForSaleSecuritiesAtCarryingValue>” according to FASB’s codification’s master glossary is, “Investments not classified as either trading securities or as held-to-maturity securities.” (FASB ASC Section 320-10-20) This element it is merely one type of security listed under the definition of “<us-gaap:ShortTermInvestments>” as is italicized in the definition cited above. Indeed, Held-To-Maturity and Trading securities are expressly included in the definition of the XBRL element “<us-gaap:ShortTermInvestments>” as well as “other short-term investments not otherwise listed in the existing taxonomy.”

It is more accurate for a company to choose the element that best corresponds to their specific portfolio of short-term investments. If the line item is comprised only of Available-For-Sale-Securities, the company should use “<us-gaap:AvailableForSaleSecuritiesAtCarryingValue>”. If their short-term investments also consist of Trading and/or Held-To-Maturity securities, then the company should choose the broad element of “<us-gaap:ShortTermInvestments>”. However, the broader choice available in this case could distort what is reported because the exact composition and amount of each different security contained within a line item may remain unknown if not specified in the notes. More transparent reporting could be achieved by disaggregating a company’s Short-Term Investments and using specific XBRL elements for each type of security, e.g. “<us-gaap:TradingSecuritiesAtCarryingValue>” for Trading Securities line item. This would necessitate adding three or more line items to the balance sheet for each type of security. Short-Term Investments, as a line item, would be the total of the disaggregated line items. For example, when Apple uses the element “<us-gaap:AvailableForSaleSecuritiesAtCarryingValue>” for their short-term investments line item, it is reasonable for the user to infer that the line item is comprised only of Available-for-Sale Securities. However, when Dell uses “<us-gaap:ShortTermInvestments>”, the exact composition of that line item is not inferable without a specific disclosure. Unless the specific types of securities and their amounts have been disclosed by note, using the element of “<us-gaap:ShortTermInvestments>” only informs the user that

multiple securities are involved. It does not indicate which specific securities are involved and how much of each comprise the line item.

The other important difference on the spreadsheet pertains to the reporting of Property, Plant, and Equipment. Specifically, the computer manufacturing companies of Dell and Apple chose to report this line item using an extension, whereas the other four companies used the standard XBRL element “<us-gaap:PropertyPlantAndEquipmentNet>”. Hewlett-Packard was the only computer manufacturer of the three not to create an extension for this line item. One would think that Hewlett-Packard’s manufacturing operations are similar to that of Dell and Apple. Indeed, there was no separate line item for software on Hewlett-Packard’s balance sheet so there must be a reason why Apple and Dell chose to depart from the existing XBRL Taxonomy and Hewlett-Packard did not. The definition of <us-gaap:PropertyPlantAndEquipmentNet> according to www.xbrl.us is:

“*Tangible* assets that are held by an entity for use in the production or supply of goods and services, for rental to others, or for administrative purposes and that are expected to provide economic benefit for more than one year; net of accumulated depreciation. Examples include land, buildings, and production equipment.”

Apple and Dell’s XBRL extensions were entitled “<aapl:PropertyPlantAndEquipmentAndCapitalizedSoftwareNet>” and “<dell:PropertyPlantAndEquipmentAndCapitalizedSoftwareNet>”. Apple does not provide a definition for their extension in their interactive data, however, Dell does. Although both company’s extensions are virtually identical, i.e. “<PropertyPlantAndEquipmentAndCapitalizedSoftwareNet>”, Dell’s definition is the only one that can be analyzed for this XBRL extension. The definition in the interactive data for Dell’s Property, Plant, and Equipment extension is:

“Tangible assets *and capitalized software* that are held by an entity for use in the production or supply of goods and services, for rental to others, or for administrative purposes and that are expected to provide economic benefit for more than one year; net of accumulated depreciation. Examples include land, buildings, *software* and production equipment.”

The italicized portion of the definition above illustrates the only changes that Dell made to the definition of the XBRL element “<us-gaap:PropertyPlantAndEquipmentNet>” on www.xbrl.us. It would appear that Dell and Apple wanted to draw specific attention to the fact that this line item includes capitalized software. The FASB codification reference for Property, Plant, and Equipment states:

“Property, plant, and equipment typically consist of long-lived *tangible* assets used to create and distribute an entity's products and services and include: a. Land and land improvements, b. Buildings, c. Machinery and equipment, d. Furniture and fixtures.” (FASB ASC Sec. 360-10-05-3)

Perhaps Dell and Apple did not select “<us-gaap:PropertyPlantAndEquipmentNet>” because they did not want to rely on a user’s inference that the software used in the production process is covered by the definition of the element “<us-gaap:PropertyPlantAndEquipmentNet>”. Hewlett-Packard, on the other

hand, appears to be confident that the above element is sufficient for the accounting of all the resources used in their production process. Perhaps Dell and Apple use a more material amount of software in their production and/or spend materially more on internal software than Hewlett-Packard. The capitalization of software is addressed in the codification under FASB ASC 350-40 under the main topic of “Intangibles” (FASB ASC 350). The above reference indicates that the software can be capitalized if it meets certain criteria of being a component of the production process. However, this reference also specifies that software is “intangible” by nature, whereas the definition of “<us-gaap:PropertyPlantAndEquipmentNet>” only covers “tangible” assets as is italicized in the element’s definition above. If the U.S. GAAP definition of Property, Plant, and Equipment in FASB ASC 360-10-05-3 were modified to include language that would expressly include software as a component of Property, Plant, and Equipment as is indicated in FASB ASC 350-40, the standard U.S. GAAP XBRL element might be embraced by Dell and Apple because their extension would only be justifiable for its emphasis of one of the many includable components for the line item. If Dell and Apple feel that the software capitalized should receive special emphasis, they should disclose that emphasis by note rather than depart from the existing XBRL taxonomy. However, given the definition “<us-gaap:PropertyPlantAndEquipmentNet>”, I can understand why Dell and Apple chose to use extensions to substantiate their line item because software is intangible.

So far, the differences in the XBRL elements chosen by each company for a specific line item have been discussed. However, one remarkable similarity is that whether the company is a merchandising or manufacturing concern, both generally use the same XBRL element for their Inventory line item. The XBRL element that five of the six companies chose for their Inventory line-item was “<us-gaap:InventoryNet>”. FASB’s codification provides a definition of Inventory:

“The aggregate of those items of tangible personal property that have any of the following characteristics:
a. Held for sale in the ordinary course of business, b. In process of production for such sale, c. To be currently consumed in the production of goods or services to be available for sale. *The term inventory embraces goods awaiting sale (the merchandise of a trading concern and the finished goods of a manufacturer), goods in the course of production (work in process), and goods to be consumed directly or indirectly in production (raw materials and supplies).* This definition of inventories excludes long-term assets subject to depreciation accounting, or goods which, when put into use, will be so classified. The fact that a depreciable asset is retired from regular use and held for sale does not indicate that the item should be classified as part of the inventory. Raw materials and supplies purchased for production may be used or consumed for the construction of long-term assets or other purposes not related to production, but the fact that inventory items representing a small portion of the total may not be absorbed ultimately in the production process does not require separate classification. By trade practice, operating materials and supplies of certain types of entities such as oil producers are usually treated as inventory.” (FASB ASC Sec. 330-10-20)

Thus, whether the inventory consists of raw materials, work-in-process, or finished goods, this XBRL element is considered appropriate for identifying all of them. This is probably due to the fact that the

definition of Inventory according to the codification reference italicized above is exhaustive. The only other XBRL element used for Inventory is located on Macy’s balance sheet, entitled “<us-gaap:InventoryFinishedGoods>”. The definition for this element on www.xbrl.us is:

“Carrying amount as of the balance sheet date of merchandise or goods held by the company that are readily available for sale.”

This definition specifies that all of the inventory must be “available for sale” which seems to be a more specific characteristic of merchandising inventory. Some would view this distinction as unnecessary seeing as how the codification’s definition of Inventory is embraced by the other merchandising companies. However, some might view this element as a more specific choice for the substance of a merchandising company’s inventory. Much like the analysis of Short-Term Investments, if an element can capture the substance of a line item more specifically, the better that element serves the user. For example, if Macy’s line item consists only of finished goods, then the substance of the line item is more narrowly defined by “<us-gaap:InventoryFinishedGoods>” than using “<us-gaap:InventoryNet>”.

A subtle difference among the merchandising companies is that KOHL’s is the only company that chose the element “<us-gaap:Cash>” for their “Cash” line item. The five other companies chose the element entitled “<us-gaap:CashAndCashEquivalentsAtCarryingValue>” for their line item entitled “Cash and Cash Equivalents”. “Cash” is defined by FASB’s codification as:

“Consistent with common usage, cash includes not only currency on hand but demand deposits with banks or other financial institutions. Cash also includes other kinds of accounts that have the general characteristics of demand deposits in that the customer may deposit additional funds at any time and also effectively may withdraw funds at any time without prior notice or penalty. All charges and credits to those accounts are cash receipts or payments to both the entity owning the account and the bank holding it. For example, a bank's granting of a loan by crediting the proceeds to a customer's demand deposit account is a cash payment by the bank and a cash receipt of the customer when the entry is made.” (FASB ASC 305-10-20 “Assets Glossary”)

Cash and Cash Equivalents are defined as:

“Cash equivalents are short-term, highly liquid investments that have both of the following characteristics: a. Readily convertible to known amounts of cash, b. So near their maturity that they present insignificant risk of changes in value because of changes in interest rates. Generally, only investments with original maturities of three months or less qualify under that definition. Original maturity means original maturity to the entity holding the investment. For example, both a three-month U.S. Treasury bill and a three-year U.S. Treasury note purchased three months from maturity qualify as cash equivalents. However, a Treasury note purchased three years ago does not become a cash equivalent when its remaining maturity is three months. Examples of items commonly considered to be cash equivalents are Treasury bills, commercial paper, money market funds, and federal funds sold (for an entity with banking operations).” (FASB ASC 305-10-20 “Assets Glossary”)

Based on the selection of this element, one might wonder if KOHL’s simply has chosen not to diversify their cash into other “highly liquid investments” such as money market funds so that they might receive an additional return on their cash. However, the important distinction is KOHL’s line item title “Cash” is different than the other companies title of “Cash and Cash Equivalents”. The difference in the title may be the reason KOHL’s selected “<us-gaap:Cash>”. Nevertheless, by doing so, KOHL’s is sending a signal to the user of the financial statements that the substance of the line item consists only of bank accounts, liquid cash, and other items specified by FASB ASC 305-10-20’s Glossary. However, another reason such as error might be attributable to KOHL’s selection of “<us-gaap:Cash>”. It is not discernable exactly why they deviate with respect to their selection of an element for this line item .

It is also interesting that only one of the merchandising companies (Macy’s) has an Accounts Receivable line item. It would appear that KOHLs and JCPenny have other credit card companies handling their receivables, whereas Macys appears to handle its own receivables. Indeed, Macy’s has its own credit card company that manages these receivables. As far as element selection is concerned, all of the companies used “<us-gaap:AccountsReceivableNetCurrent>” except for Macy’s who chose the virtually identical element of “<us-gaap:ReceivablesNetCurrent>”. Perhaps Macy’s choice would lead a user to wonder if Macy is reporting other types of receivables such as notes receivable in this line item. However, this is dubious. Macy’s should have probably chosen “<us-gaap:AccountsReceivableNetCurrent>” because this element has the most potential for universal application since this paper indicates that this element is applicable to both merchandising and manufacturing line item for Accounts Receivable and because its definition is virtually indistinguishable from “<us-gaap:ReceivablesNetCurrent>”.