International Review of Business Research Papers
Vol. 5 No. 6 November 2009, Pp.72-78

XBRL Versioning: Imminent Challenges and Potential Solutions

Ernest A. Capozzoli and Radwan Ali

This paper presents a discussion of the Extensible Business Reporting Language (XBRL) and the implications of different versions of an XBRL Taxonomy. The creation of a taxonomy is an evolutionary process resulting in taxonomies that will not be static structures. Taxonomies will continue to evolve and change. With this evolvement come many challenges. These challenges can be described in different scenarios where the process of versioning if not properly managed can result in confusion and errors. This document presents a number of these challenges and will discuss steps to minimize risks associated with versioning.

Field of Research: XBRL, Financial Reporting

1. What is XBRL?

XBRL continues to gain momentum and importance globally. The adoption of this reporting process throughout the global business community will change the manner in which businesses, governmental bodies and individuals interact. XBRL is changing internal business requirements and processes as well as external mandates from governing bodies. These changes coupled with global business process convergence will introduce new challenges related to XBRL adoption and use. Versioning will be one of those challenges. If not properly managed Versioning could hinder adoption and implementation of XBRL. Through mandates such as the US Securities Exchange Commission (SEC, 2009), Australian Prudential Regulation Authority (APRA) (Pyman, 2007), and the UK's Financial Services Authority (Hucklesby and Macdonald, 2004) as well as others requirement that all financial filings be done in XBRL, XBRL will continue to evolve into a robust reporting system on a global scale. To understand how XBRL will impact the business world, we must comprehend what XBRL is and how it works. XBRL has become a standard for companies throughout the world to report financial data. The primary purpose of XBRL is "to improve the business report product" (Manning, 2004) therefore allowing "for greater transparency and ease of use of information contained within financial reports" (Roberts, 2004). The attainment of these goals are based upon two primary attributes of XBRL, they are "(i) XBRL is an open source standard of communication" and"(ii) the preparation of an XBRL file does not require information to be presented or aggregated in a particular way" (Smith, 2007).

Dr. Ernest A. Capozzoli, School of Accountancy Kennesaw State University, USA
email: ecapozzo@kennesaw.edu
Dr. Radwan Ali, School of Accountancy Kennesaw State University, USA
email: rali@kennesaw.edu

XBRL is a specific form of XML, using "the best of XML – structural focus, separation of format from content – to provide financial information to a wide audience in a format capable of satisfying many different business needs" (Manning, 2004). As with XML, XBRL tags each piece of a company's financial information, similar to a Universal Product Code (UPC). XBRL consists of a taxonomy containing financial concepts, referred to as elements, and linkbases. The linkbases are: calculation, presentation, label, and definition. The taxonomy and associated linkbases are used to create an instance document. The instance document is created by tagging a financial statement item with an element from the taxonomy. The XBRL schema defines how to create XBRL documents and XBRL taxonomies, providing users with a set of business information tags that allows users to identify business information in a consistent way. XBRL is also extensible in that users are able to create company specific extension taxonomies that define and describe tags unique to a given environment." (XBRL? n.d.). The tagged data is searchable in an XBRL document and is easily extracted for users of financial reports.

Tagging is the process of associating a taxonomy element with an item on the financial statement. For example tagging an item from the financial statements such as *cash and cash equivalents* requires an element describing *cash and cash equivalents* in the taxonomy. The tagging process then allows software that reads XBRL to extract or present that information. Tagging all financial elements of a financial report, allows for the creation of software programs "to analyze and manipulate financial data in new ways – without requiring it to be keyed in as it moves from program to program", thus saving time and the chance of input errors (Stone, 2005). "The electronic tags that are applied are standardized and are contained in taxonomies" (Stantial, 2007). A taxonomy, which is used in the tagging process, "defines a set of data elements in a given business reporting context, such as U.S. GAAP or international accounting standards. It's a controlled set of tags and relationships that provides standard descriptions for the data elements used in business reporting" (Hannon and Gold, 2005).

Increased visibility in the investment community and possibly the company's success in markets throughout the world is a benefit for a company using XBRL. XBRL is also advantageous to analysts and investors. The primary reason is that "tagging data in XBRL improves transparency without additional disclosures and makes more information available to everyone" (Cunningham, 2005).

2. Taxonomy Versioning

The taxonomy and associated linkbases are the components that are updated on a frequent basis. The updating of a taxonomy and linkbases creates a new version. It is the transition from version to version that creates challenges. These challenges

increase the risk that financial statements from one period to another may not be comparable. An explanation of these risks will be presented in the following scenarios:

Risks:

- **Scenario A: The base taxonomy is missing elements**: Taxonomy (Version 1) is missing elements/concepts that are required to tag a financial item on the financial statements. This scenario will require that the company extend the taxonomy and associated linkbases to properly tag the item and create the instance document.
  - **Impact:**
    - Comparability between companies is diminished by the number of extensions. As the use of extensions increases comparability is decreased for a company between periods and between companies.

- **Scenario B: Taxonomy contains new elements**: Taxonomy (Version 2) has incorporated some but not all missing elements/concepts into the taxonomy. The instance document for Year 2- contains items tagged with the new elements plus extensions for items not contained in the taxonomy.
  - **Impact:**
    - **Comparability between periods for a company:**
      - Printed output- Year 1 and Year 2 instance documents may be comparable in printed form.
      - Data extraction- Year 1 and Year 2 instance documents are not comparable due to inconsistent associations for elements that have been extended then incorporated in the newer taxonomy version.
    - **Comparability between companies:**
      - Comparability between companies is increased by the number of previously extended elements incorporated into the version 2 taxonomy.

- **Scenario C: Taxonomy deletes elements**: Taxonomy (Version 3) deletes elements/concepts. The Instance document using taxonomy Version 1 or 2 contains elements that have been deleted in Version 3
  - **Impact:**
    - **Comparability between periods for a company:**
      - Printed output- Year 1 and Year 2 instance documents may be comparable in printed form.
      - Data extraction- Year 1 and Year 2 instance documents are not comparable due to inconsistent associations for elements that have been extended then incorporated or deleted in the newer taxonomy version.
    - **Comparability between companies:**

- Comparability between companies is decreased by the number of elements deleted from the Version 1 or 2 taxonomy.

- **Scenario D: Taxonomy changes element definitions**: Year 1 Instance document uses Taxonomy (Version 1) which contains elements/concepts with definitions that provide guidance in creating instance documents. Year 2 Instance document uses Taxonomy Version 2 that contains elements/concepts that have changed element definitions that will impact the use of the concept.
  - **Impact:**
    - **Comparability between periods for a company:**
      - Printed output- Year 1 and Year 2 instance documents may be comparable in printed form.
      - Data extraction- Year 1 and Year 2 instance documents are not comparable due to inconsistent associations for elements that have changed element definitions that have been incorporated in the newer taxonomy version.
    - **Comparability between companies:**
      - Comparability between companies is decreased by the number of element definitions changed from the Version 1 taxonomy that change data associations.

- **Scenario E: Calculation linkbase changes either through extensions or modifications to taxonomy.**
  - **Impact:**
    - **Comparability between periods for a company:**
      - Printed output- Year 1 and Year 2 instance documents may be comparable in printed form.
      - Data extraction- Year 1 and Year 2 instance documents are not comparable due to inconsistent calculations for elements that have changed in the calculation linkbase in the newer taxonomy version or through a company specific extension.
    - **Comparability between companies:**
      - Comparability between companies is decreased by the number of calculation linkbase changes from the Version 1 taxonomy or from a company specific extension.

- **Scenario F: Label changes through extensions or modifications to taxonomy.**
  - **Impact:**
    - **Comparability between periods for a company:**
      - Printed output- Year 1 and Year 2 instance documents may be comparable in printed form.
      - Data extraction- Year 1 and Year 2 instance documents are not comparable due to inconsistent calculations for elements

that have changed in the calculation linkbase in the newer taxonomy version or through a company specific extension.

- **Comparability between companies:**
  - Comparability between companies is decreased by the number of calculation linkbase changes from the Version 1 taxonomy or from a company specific extension.

3. Steps to Minimize Risk

To effectively mitigate the risks associated with versioning a company must be proactive, plan for the instance document creation process and anticipate the inevitable taxonomy and linkbase changes. The creation of an instance document in XBRL has the potential to introduce risks into the financial reporting process, and the evidence to date suggests that such risks are, and will be, present in XBRL documents. Instance document preparers must adjust their processes to address XBRL risks. Generally, the process should address the risks at each stage, as described below:

1. Download the Appropriate Taxonomy(s): The preparer must provide assurance that the proper, approved taxonomy was used and actively document any changes in taxonomy versions that impact the instance document from period to period.
2. Tag Financial Statement According to Taxonomy: This stage of the process presents the greatest number of risks, such as incorrect tagging, year-to-year inconsistencies, etc. Additionally, it may be worthwhile to review the detail of the most financially material items and actively document any changes in tagging that impact the instance document from period to period. Also, it would be advisable to use an approved XBRL reader to highlight any areas of inconsistencies.
3. Extend Taxonomy if Necessary: All extensions should be reviewed for necessity and conformity to required standards. Also, a review of extensions used in prior years would be a useful check for inconsistencies.
4. Create Instance Document: The creation of the instance document could present technical errors and must be reviewed accordingly.
5. Review Instance Document: The preparer should be aware of the nature of this review, any software used to perform validation checks and perform a comparison to prior period documents.
6. File Instance Document and Taxonomy: This is another stage where technical errors could be introduced. The preparer therefore should review the filed document and perform a comparison to prior period documents (Capozzoli and Harmon 2009).

The instance document preparer must adjust the process to address the described risks. XBRL has other effects on the preparer, as well. For example, the preparer must have significant training. The translation of financial statement information into an XBRL instance document is the end point in a complicated process. Successfully creating an XBRL document involves training and proficiency in XBRL. Therefore,

personnel must be familiar with (1) the current taxonomy as well older versions, (2) the general XBRL reporting and (3) any XBRL tools used to create an instance document (Merrill 2007).

4. Summary / Conclusion

XBRL is a global financial reporting process. It is used in the United States, United Kingdom, Australia, China and Singapore with initiatives planned in other countries. Components of XBRL are taxonomies and linkbases. The taxonomies are used to create instance documents, which are XBRL representations of a company's financial statements. The X in XBRL stands for eXtensible which allows a company to extend the taxonomy or associated linkbases. While this feature provides maximum flexibility, it can lead to challenges over the long term for financial statement comparability.

Another challenge that increases the risk associated with financial statement comparability is that taxonomy is not static and over time will change. Financial concepts will be added to and deleted from the taxonomy. Similarly, changes to the various linkbases pose a challenge and increase the risk to financial statement comparability.

Risks associated with versioning can be mitigated through planning, training and due diligence. Planning requires recognizing that XBRL taxonomies, company specific extensions and linkbases will change over time. These changes must be documented and reviewed each time an instance document is created. Training in XBRL will require accountants and instance document preparers to master XBRL terminology, taxonomies, and tools. Due diligence is required to provide a level of quality assurance over the instance document creation process. Preparers who gain an early and in-depth understanding of the implications of XBRL will greatly mitigate the risks associated with XBRL versioning.

References

Capozzoli, Ernest A. and Harmon, W. K. 2009. "The Impact of XBRL on the Audit Process. *Working Paper Kennesaw State University*."

Cunningham, Colleen. April 2005. "XBRL: A Multitalented Tool. *Journal of Accountancy,"* Volume 199, Number 4, Page 70.

Hannon, Neal J.; Gold, Robert J. February 2005. "XBRL Revisited. *Journal of Accountancy",* Volume 199, Number 2, Page 64.

Hucklesby, Mark; Macdonald, Josef. 2004. "The three tenents of XBRL - adoption, adoption, adoption!, *Chartered Accountants Journal of New Zealand*." Vol. 83, no. 2. P.46.

Manning, Steve. September 2004. "XBRL (eXtensible Business Reporting Language), *The Rockley Report",* Volume 1, Issue, Page 12.

Merrill Corporation. 2007. "Financial Reporting The XBRL Way: Top Ten Action Steps." Available at: http://www.merrillcorp.com/cps/rde/xbcr/SID-53E1EF62-A29F5BA9/merrillcorp/TCS_XBRLTopTen.pdf

Pyman, Trevor. 2007. " X marks the spot. *Intheblack."* Vol. 77, no. 6, p. 62.

Roberts, Daniel. May 2004. "What's in it for me? XBRL revolutionizing business reporting, *California CPA".*

SEC. 2009. Interactive Data to Improve Financial Reporting, Rule 33-9002, RIN 3235-AJ71, with an effective date of April 13, 2009. Federal Register, Vol. 74, No. 26, February 10, 2009. Available at: http://www.sec.gov/rules/final/2009/33-9002.pdf

Smith, Barry. March 2007. "Understanding Extensible Business Reporting Language (XBRL). *Accountancy Plus"*

Stantial, John. June 2007. "ROI on XBRL. *Journal of Accountancy",* Volume 203, Number 6.

Stone, Amey. February 8, 2005. "After Sarbanes-Oxley, XBRL? *Business Week."*

XBRL "What are the differences between HTML, XML, and XBRL?", website, www.xbrl.org