XBRL Implementation in U.S. Firms.

Are we Keeping Pace with Other Countries?

Introduction

For years, people have been looking to the Internet and technology to provide better, faster, cheaper exchange of data and information in order to improve financial decision-making. A relatively new technology standard, eXtensible Business Reporting Language (XBRL), promises to web-enable financial reporting for preparers and consumers (Ernst & Young, 2011). Its implementation will greatly benefit the business world, as it will make using financial information more interactive which results in high efficiency. For example, after switching to XBRL reporting, errors in financial reports received from banks went from 68% to 5%, processing time of quarterly reports went from
45-60 days to two days, and the number of personnel involved in the process went from 1,000 to 200 (Garbellotto, 2009).

XBRL is an electronic communication language for business and financial data which has begun to revolutionize financial reporting around the world (An Introduction to XBRL, 2011). The idea behind it is simple. Instead of presenting financial statements in a static text format such as print, XBRL gives an identifying tag to each individual piece of data. These tags are unique for each piece of data and are computer readable which allows the information to be used interactively. This means that information can be exchanged and analyzed more easily than in the past (Ernst & Young, 2010).

An international non-profit consortium of about 450 major companies, organizations, and government agencies is developing XBRL, and it is quickly becoming the standard means of communicating business information over the Internet (An Introduction to XBRL, 2011). This could be because of the numerous benefits it provides.

Some of the major benefits are in preparation, analysis, and communication of information and include costs savings, greater efficiency, and improved accuracy and reliability to all those providing or using the data. Because computers can treat XBRL data “intelligently,” they can easily take that data analyze it, store it, and exchange it with others in a variety of ways. Investors, analysts, financial institutions, and regulators can then find, compare, and analyze
Because of all of the potential benefits, XBRL is experiencing rapid expansion as an enabling technology around the world. However, XBRL is a “network innovation,” which means it requires combined action from several stakeholders, including government and regulatory agencies, in order to be widely adopted (Ernst & Young, 2011). This has caused the development of XBRL to be facilitated mostly through voluntary efforts of stakeholders, namely local large companies and government and regulatory agencies including the U.S. Securities and Exchange Commission (SEC), which has begun to require filings be reported in XBRL (Ernst & Young, 2011).

As the adoption and implementation of XBRL reporting becomes more prominent among U.S. firms, it is important to continue to monitor the progress and state of this implementation. As of June 15, 2011, all SEC filers using U.S. Generally Accepted Accounting Principles (GAAP) and foreign private issuers using International Financial Reporting Standards (IFRS) are required to begin the XBRL implementation process. Smaller reporting companies were among this final group to be phased-in, and their implementation will be complete in two to three years (Ernst & Young, 2011). Larger companies who began implementation in phases one or two have had success with the use of XBRL in the form of cost savings, higher efficiency, and reduction in errors. Because smaller companies
have had a longer period of time to prepare for implementation and because of the 
abundance new support software, small businesses should experience the same 
success and benefits that larger companies have (Maureen Francis Mascha, 2009).

**History of XBRL Implementation**

Since the beginning of its existence, The Securities and Exchange Commission (SEC) administered a paper-supported disclosure system in which filers mailed or hand delivered paper documents. By 1996, the Commission began using an electronic disclosure system known as EDGAR which accepts, stores, and disseminates filings as electronic files based in HTML and ASCII formats. In 2003, the Commission decided to investigate data tagging to improve its disclosure system, and by 2004 a formal assessment was initiated to see how data tagging could benefit both investors and the Commission. This assessment led to a rule adopted in 2005 that established a voluntary filing program (VFP) which allowed companies to voluntarily provide XBRL-tagged financial statements. The main purpose for the VFP was to help the SEC work out any problems related to filing XBRL reports. It also helped the companies who participated to learn from the process and to get a head start on converting their reports to XBRL format. (No, 2008). The SEC asked the volunteers for feedback on some of the rules and regulations to weed out any unnecessary data. One of the results was to not
include a full set of notes along with the financial statements (Securities and Exchange Commission, 2005).

The Commission’s Office of Interactive Disclosure (OID) was established during the voluntary filing period, and it helped develop rules formalizing XBRL reporting requirements and finalize a comprehensive XBRL taxonomy for U.S. GAAP (Securities and Exchange Commission, 2011). Finally, on January 30, 2009 the SEC published their final rule for the mandatory use of XBRL in reporting financial information. XBRL-tagged financial information would not replace plain text statements, but would be submitted in addition (Ernst & Young, 2011). Additionally, the XBRL documents had to be submitted at the same time as traditional filing with the exception of the first time that a company submits in XBRL format. In this case a company would be allowed a 30 day grace period after the traditional filing date (XBRL International, 2008).

The final rule regarding XBRL stated that beginning mid June 2009, financial statements and supporting data filed with the SEC by certain companies would have to be submitted in the XBRL format. The SEC also requires that all companies who file XBRL documents post their financial statements on their corporate website for at least twelve fiscal months (Fang, 2010). The SEC suggests that XBRL implementation take part in phases so that filers will have enough time to get familiar with the new XBRL rules before it is mandated that all disclosers of financial statements be reported solely in XBRL format.
The implementation of XBRL would consist of three phases over three years with full implementation by mid June 2011 (Ernst & Young, 2011). These phases are discussed in detail in the following sections.
XBRL Implementation Phases

The final rule regarding XBRL, which was issued January 30, 2009, applies to domestic and foreign companies using U.S. GAAP and will eventually apply to foreign private issuers using IFRS. The rule was meant to make financial and other business information easier for investors to analyze and to assist in automating regulatory filings and processing. The rule coincides with the SEC’s new Interactive Data Electronic Applications (IDEA), which replaced the EDGAR database as the SEC’s electronic analyzer (Grant Thornton, 2009).

The mandatory implementation rule was phased in through three phases over three years. In June 2011, the third and final group began their implementation process. Because XBRL implementation is a three-year process for each company, it is important to understand each phase so that transition to and implementation of XBRL can be as smooth as possible.

In phase one, which was effective for fiscal periods ending on or after June 15, 2009, domestic and foreign large accelerated filers that use U.S. GAAP and have a worldwide float above $5 billion would have to file Form 10-Q (or for FPIs, their first Form 20-F or 40-F) in XBRL tagged format (Grant Thornton, 2009).

In year two, effective for fiscal periods ending on or after June 15, 2010 all other domestic and foreign large accelerated filers that used U.S. GAAP will be required to beginning filing their 10-Q using XBRL. In addition, those
companies phased in during year one will be required to tag footnotes using blocks of text. It is also required that in a company’s second year of compliance, financial schedules be tagged as blocks of text with monetary values separately tagged (Ernst & Young, 2011).

In summary, in the initial year of implementation, companies would be required to provide single block tags for each footnote and financial schedule, but starting in the second year of filing in XBRL, the company would be required to provide more detailed tags for elements within the footnotes and financial schedules (XBRL International, 2008).

Finally, in the third phase, which was effective for fiscal periods ending on or after June 15, 2011, all remaining filers, including smaller reporting companies that use U.S. GAAP and foreign private issuers that use IFRS must begin submitting quarterly and annual reports in XBRL format. Additionally, those phased in during year two must begin their second year of filing, and those phased in during year one, must have XBRL fully implemented (Grant Thornton, 2009). A table summarizing the phases of implementation can be found in the appendix of this report.

**Firm Characteristics and XBRL Adoption**

When the SEC began their voluntary filing program in 2005, few companies made the leap to XBRL right away. Much of the reason for the slow
voluntary transition was the cost of change. However, some companies did begin the transition quickly, and these seem to be the ones that still reap the biggest benefits from XBRL reporting. Since this time, much research has been conducted in an attempt to find a connection between firm characteristics and the use of XBRL. The most frequently researched correlations deal with size, industry, and auditor type.

There have been several studies that have found a positive and significant relationship between firm size and extent of disclosure of annual reports. This could be explained through several reasons. First, large firms have the resources for collecting, analyzing, and presenting financial data in new formats like XBRL. Second, compared to smaller firms, larger firms are in the public spotlight so they are more likely to disclose more information. Third, they are able to attract skilled professionals that are imperative for sophisticated management reporting systems. Finally, revealing more information could positively impact the future cost of obtaining new funds. This is because investors are more likely to invest in a company with a transparent set of financials (Kaya, 2011).

Further research explores how asymmetry in large firms can be reduced and corporate governance can be improved through XBRL reporting. Asymmetry refers to a situation in which one party, in this case investors, is not receiving all the necessary information from another party, the company. Based on a the study of Joseph Callaghan and Robert Nehmer, early XBRL adopters were less
financially leveraged, larger, and have lower corporate governance ratings than non-adopters. This study found that larger, intrinsically riskier companies may have chosen early adoption as a cost-effective way to improve their outward corporate governance appearance (Callaghan & Nehmer, 2009). This goal would be achieved because XBRL would facilitate an increased level of disclosure and therefore a decrease asymmetry between large firms and investors. It would also ensure that reports of a high quality, standard format are being submitted, and this transparency makes the company appear less risky to investors, therefore improving corporate governance (Yoon, Zo, & Ciganek, 2010).

In addition to large firms, highly innovative firms, such as 3M, were some of the first voluntary adopters of XBRL. Innovative companies are those in science- and knowledge-based industries that are considered to be R&D intensive. These companies generally have a great interest in innovative business trend, like XBRL. Based on their experience of research projects, these innovative firms are willing to disclose more information, and are generally early and heavy users of XBRL (Kaya, 2011). Therefore, innovativeness can be an indicator of companies utilizing XBRL.

Auditor type, which is classified by Big 4 or non-Big 4, is another factor that can affect the implementation of XBRL among firms. Audit firms are generally divided into the Big 4 and non-Big 4. Big 4 firms are the four largest international accounting and professional service firms which handle the majority
of audits for publically traded companies. These firms include Deloitte Touche Tohmatsu, Pricewaterhouse Coopers, Ernst & Young, and KPMG. Because all Big 4 audit firms are members of XBRL International, their clients began reporting in XBRL soon after its creation in order to ensure compliance with international regulations about financial reporting (Ragothaman, 2011). Additionally, audit type can play a big part in influencing individual company policies and disclosure practices (Kaya, 2011).

While size, industry, and auditor type play a big role in the use of XBRL among companies, there are several other factors that have been explored. For example, higher profitability, larger debt ratio (leverage), lower PE ratio (growth), and higher liquidity were all characteristics of early U.S. adopters, and these characteristics continue to influence how companies use XBRL. Companies possessing these characteristics are likely ones that will be quicker to implement XBRL at a more in-depth level (Ragothaman, 2011).

**Preparation and Implementation**

The SEC expects over 10,000 companies worldwide to be preparing their financial statements using XBRL. They also estimate that the overall cost to a company for changing documentation to XBRL format will average between $21,075 and $30,700 (Sledgianowski, 2010).
One of the more difficult parts of converting financial statements to XBRL format is mapping, a process of matching the accounting concept and associated amount to the actual component in the XBRL U.S. GAAP Taxonomy (Jon Bartley, 2010). The U.S. GAAP Taxonomy is an electronic dictionary of tags, or elements, that define financial data and other information and the relationships between them related to the GAAP framework (Ernst & Young, 2011). Mapping using the XBRL U.S. GAAP Taxonomy will require the expertise of experienced accountants to make sure everything is mapped correctly and the financial statements are not projecting false data. Companies need to start preparing early in order to meet the requirements of the SEC and to account for the costs and hard work that will be incurred throughout the implementation process which began in 2008.

In 2008, when it was inevitable that the future of SEC financial filing was going to be based on XBRL, the Institute of Management Accountants and Ajilon Finance conducted a survey to judge the preparedness of companies for the transition to XBRL. The survey found that only 10% of organizations were prepared to implement XBRL, and that only 8% of companies surveyed were offering any training in the subject of XBRL integration. However, 94% companies reported to believe that XBRL would improve financial reporting and transparency as long as the right people could be found to make the implementation successful (Ajilon Finance, 2008).
The survey made it clear that companies needed to learn how to prepare for the inevitable implementation of XBRL. In order to prepare, CFOs and other leaders must spread the word about XBRL and begin to train their employees early. They should also talk to auditors and consultants who may need to assist with the transition process so that the organization is fully prepared (Ajilon Finance, 2008).

By the end of 2009, another survey was conducted by AICPA and XBRL US to see if companies were more prepared for the new SEC mandate than they had previously been. The survey had 215 respondents of which 90% were from U.S. publically owned companies. This survey found that, by the end of 2009, the majority of companies (89%) had at least basic knowledge of XBRL with 23% reporting advanced knowledge. Most of this knowledge seemed to stem from the fact that 45% of companies were already actively preparing XBRL documents with another 28% in their preliminary discussion phase.

For companies reporting for the first time, the survey asked about perceived challenges of the implementation process. While a variety of answers were reported, the most common were getting educated about XBRL and mapping/tag selection. However, these challenges were overcome through the use of numerous XBRL resources including the XBRL US Preparers Guide, XBRL US GAAP Taxonomies, and service provider support (AICPA and XBRL US, 2009).
The 2009 survey went on to ask respondents about their experience the second time they used XBRL to prepare financials. The majority said it was significantly easier that the first and that it took less than half the time it took the first time. Additionally, respondents reported that they were considering using XBRL to provide data for investors on their websites (AICPA and XBRL US, 2009).

**Implementation Around the World**

The United States seems to be falling behind on fully converting companies’ financial statements to XBRL format compared to other countries. Part of the reason for this lag it that the U.S. is struggling with the costs associated with XBRL implementation. It is difficult to find people who are experienced and well educated in converting documents to XBRL, because schools and businesses are not willing to absorb the costs and time spent training people and producing the qualified IT and accounting staff needed for XBRL conversion. This is believed to be true because they are still feeling the impact of current economic conditions, and they are not willing to allocate financial and human resources for XBRL projects (Fang, 2011).

Even though the idea of XBRL originated in the United States, other world leaders such as China, Canada, the United Kingdom, and India have taken the idea of making financial statements globally accessible and have established
economic success (Fang, 2011). For example, even though China was one of the last countries to begin utilizing XBRL, it is currently one of the leading countries in XBRL implementation. China has an advantage over countries who adopted XBRL early on because they can learn from other countries’ mistakes and see which strategies work best (Davis, 2010). China also recently developed a website called “XBRL Online,” which displays financial statements on the internet in XBRL format. This has helped Chinese companies compare their statements with competitors and gain a competitive advantage (O'Kelly, 2010).

Many other countries are also quickly developing XBRL standards. Canada was successful in quickly developing a system of XBRL implementation, and they now have web-based software, the Convergence Assistant, that aids in the XBRL conversion process. In India two of the most competitive Indian stock exchanges, Bombay and National, have fully adopted the XBRL filing standards. The United Kingdom also utilized XBRL implementation at a rapid rate. Since the date of implementation, the U.K. has progressed its use of XBRL, and today around one million companies’ financial statements are published using XBRL (O'Kelly, 2010).

Countries around the world are trying to keep up with the new market trends. Now that XBRL allows companies a competitive advantage and globally accessible documentation is growing rapidly worldwide, XBRL will eventually be the only acceptable way to present financial statements. The U.S. has realized
XBRL’s importance, and is currently taking steps to keep up with the rest of the world.

**U.S. Implementation Today**

Some of the first companies in the U.S. to implement XBRL tagging were Coca Cola, GE, and 3M. These companies participated in the volunteer filing program and have slowly changed the way they present their financial statements by using XBRL format (Debreceny, Farewell, & Kido, 2009).

As of mid-June 2011, all U.S. companies using U.S. GAAP are required to submit financial statements to the SEC using XBRL. A timeline in the appendix of this paper discusses how XBRL implementation has progressed into what it is today.

The extent to which companies merge XBRL reporting into their existing operating system differs by company depending on factors such as size. Some companies, especially smaller ones or those in the early stages of implementation, will adopt a bolt-on approach. The bolt-on approach requires companies to generate the standard reports in Microsoft Word or Excel, then add XBRL tagging at the end of the process using an XBRL mapping tool. The mapping tool is inexpensive and allows companies to gain a common knowledge about the tagging process. It also achieves the final objective of meeting the SEC’s
standards in a short amount of time while giving the company time to get familiar with the newly mandated XBRL rules (Garbellotto, May 2009).

Larger, more sophisticated companies may opt for an integrated or built-in approach. The built-in approach requires the company to combine the XBRL conversion step with the reporting process. Since the conversion will be merged with the creation of the trial balance, it will allow companies to change the data quickly when the SEC mandates new rules and regulations. This will be more difficult to implement than the bolt-on approach, but it can eventually reduce costs related to XBRL formatting by saving time and energy put into transforming documents to meet the continuously changing standards of the SEC (Garbellotto, August 2009).

In summary, the bolt-on approach is quick and cost effective, but it could be disadvantageous in the long run if companies fail to tap in to the true potential of XBRL. With the built-in approach information can be tagged at the transactional level, which is valuable for companies running multiple operating systems. Additionally, internal reporting capabilities are improved by the enhanced flow of information and reduction of time spent compiling data (Chartered Accountants of Canada, 2009).

When choosing how to merge and implement XBRL reporting, it is also important for companies to determine whether they will purchase in-house tagging software or whether they will outsource the task. This decision will be
different for each company based on individual priorities and resources (budget, staff, and expertise), and desire for control (Peterson, 2011).

With in-house tagging, or “insourcing,” companies must consider what software tools to use, how to overcome the learning curve, what tags to use, and what internal control procedures to use to ensure validity (Henson, 2011). There are generally two kinds of companies that likely to use the insourcing approach: small or cost-conscious companies with straightforward financials and companies that seek control. Small companies are looking to meet the SEC mandate quickly and cheaply, while companies seeking greater control do not want to outsource such a critical task. For either type of company, insourcing is a difficult option that requires an experienced new hire or extensive training of current employees both of which can create significant expenses; however, long-term outsourcing costs will be minimized (Peterson, 2011).

With an outsourcing approach, companies choose a third party to do the majority of the work including selecting and mapping XBRL tags to financial reporting facts, creating custom extensions, building the extension taxonomy, and populating the instance document. However, companies are still responsible for reviewing the tags and making desired changes so they are involved all along the way (Henson, 2011). Although there will be long-term outsourcing costs, many larger companies will choose this method in order to minimize the hassle of filing
by transferring the task to those with an expertise in the technology and regulatory requirements (Chartered Accountants of Canada, 2009).

In order to find a balance between in-house cost savings and external expertise, many companies of all sizes use a blended approach which is neither purely outsource nor purely insource. With a balanced approach in-house teams are supported by filing experts. This reduces risk and cost while also lowering the strain on internal staff (Peterson, 2011)

For small companies, implementation was always an issue in the past. Many small company CEOs and CFOs including Gregory Hanson, CFO of Adverntrx Pharmaceuticals, a small pharmaceutical company, didn’t believe XBRL implementation was feasible for small companies. He, and many others didn’t think that the SEC was taking smaller businesses’ limited resources into account (Johnson, 2008). However, the phase-in approach to XBRL has helped many smaller companies prepare for the required integration. Smaller businesses were given more time to prepare, and today many small businesses have successfully implemented or begun to implement XBRL reporting. This is, in part, thanks to software that has made it easier for small- to medium-sized companies to use XBRL. Many medium- to large-sized firms are able to include an instance-document (XBRL document) creation function within their current ERP systems, but smaller firms with PC-based systems have to rely on stand-alone software for financial statement generation and therefore may need specific
software to create reports coded in XBRL. Since implementation of XBRL began in mid-2009, vendors have introduced several products for small- and medium-sized firms to assist XBRL reporting (Maureen Francis Mascha, 2009). These products have helped smaller companies begin their implementation process and keep up with current XBRL regulations.

In summary, XBRL is becoming the standard way of recording, storing, and transmitting financial and other business information. It can be used throughout the world for a variety of business purposes, and it will deliver major cost savings and gains in efficiency. This will greatly improve the financial reporting process of companies, governments, and other organizations (Frequently Asked Questions, 2011).

**Recommendations**

Now that the SEC has required all of its filers (other than investment companies) to submit an XBRL based set of financial statements, a multitude of problems with those filings are beginning to arise. These problems include incompleteness, unnecessary tagging, tags being too broad, and the creation of unnecessary extensions.

Incompleteness occurs when a company does not tag all of the amounts required by the SEC. For example, the SEC requires that all amounts on the face of the financial statements be tagged individually; however, some companies have
not tagged amounts that they believe to be insignificant. Unnecessary tagging occurs when filers tag an amount separately for multiple purposes when a single tag should have been used. For instance, if an amount appears on the face of a financial statement and in the footnotes or in a supporting schedule, some companies will use two different tags because of the different locations of the data. The correct way to tag this information is to use the same tag in each location that the amount appears. Additionally, many filers have been selecting the broadest tag for a piece of data when a more narrowly defined tag exists and would help create a more transparent statement. For example, a company may tag an amount as revenue when it should be tagged as interest revenue. On the other hand, some filers have been too selective in determining whether a tag is too broad or narrow and have been creating unnecessary extensions (an extension of the standard XBRL taxonomy), some of which have not even included a definition or balance attributes (debit or credit balance) (AICPA, 2010). Most of these problems can be traced back to the preparer’s lack of knowledge about the XBRL format or a third party preparer’s lack of understanding of the financial concept applied to the amount.

For medium and large companies that are using the third parties to prepare XBRL documents, a group of managers knowledgeable in XBRL assist in the preparation and review the final product.
The final recommendation for the SEC to hold these filers to a higher standard when it comes to XBRL filings by creating a review process that would not accept incomplete or improperly documented filings. These recommendations are explained in detail in the following sub-sections.

*Recommendation for Small Companies*

Small companies do not have the resources to spend time or a significant amount of money on the preparation of financial statements. When it comes time to file using XBRL, they have done their best with the resources available to them and filed what they thought was an acceptable XBRL document. Because of the possible errors discussed above, small companies use the bolt-on approach designate a team of employees to be trained in XBRL. Lack of knowledge in XBRL seems to be the key component behind the most filing errors. The team should spend a reasonable amount of time gaining knowledge on how XBRL works and the reasons behind its implementation.

There are several organizations that provide training seminars on XBRL for little to no cost. Such organizations include the SEC, the Institute of Internal Auditors, Thomson Reuters, and XBRL International. In addition to these organizations, companies that have experience with XBRL have online training guides such as KPMG.com and XBRL.org. Sources like this provide businesses with knowledge to improve XBRL reporting within their organization and make
the process run smoother. Small companies should take advantage of these low cost opportunities that will make their company’s adoption of XBRL smoother.

Due to the extensive amount of errors in XBRL documents filed with the SEC, SEC should establish a process that will reject submissions that do not meet the mandated standards. The SEC should also include a brief description of the error. With the processes the SEC has in place today, a filing may be accepted and still have an error rate of 28% (Chou, 2006). This recommendation should help minimize the submissions which are not up to SEC standards.

The Internal Revenue Service (IRS) has a process much like this when it comes to electronically filing (e-filing) tax returns. When a return is e-filed, the IRS checks certain criteria, and if the return has incorrect information or is not complete, the system sends it back to the filer and the IRS will not fully process the return until the problems are fixed and re-submitted. When a report is sent back to the company, they would still have to meet the original deadline and would be penalized for late submission. If the SEC would implement a process like this, we believe companies would take the reporting process more seriously and would hold themselves more accountable to do a better job when filing their XBRL financial reports.

As time goes on, large, non-public companies will see the advantages of using XBRL and begin the implementation process themselves. Corporations and
partnerships with several owners would benefit from adopting XBRL because each owner would be able to access the financials and be able to analyze them in their own unique way. This would enable owners an efficient way to follow their investment. It would also allow a more transparent view for passive owners, banks, and other users of non-public companies’ financial statements.

Implementation in the U.S. has been mandated by SEC requirements that companies submit financial reports in XBRL. If the SEC had not enforced this, we believe most companies would have ignored XBRL because it would cost them large amounts of time and money to convert their financial statements. This mandated implementation of XBRL has exposed the benefits of this new format. Through continued use of this reporting format, the SEC and the companies using it will be able to identify problems as they arise and should work together to eliminate them. A commitment to XBRL use should result in extensive benefits. Through these benefits, companies will see their time and cost of implementation pay off.

References


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