XBRL - A new dimension of internet corporate reporting: A concept

Amit Kumar Jain
Assistant Professor, D.A.V. College Jalandhar City

Abstract
XBRL (eXtensible Business Reporting Language) is an Internet-based business reporting language that is rapidly becoming an international standard for financial reporting. XBRL tags data so that documents can be instantly created or retrieved in a variety of formats. XBRL holds the promise of improving the efficiency of producing, disseminating, and using a company’s financial (and non-financial) information. XBRL can yield cost savings, greater efficiency, improved accuracy and reliability to both suppliers and users of financial data. Against this background the present paper throws light on important issues of XBRL. This is a conceptual paper.

Keywords: XBRL, reporting language, accuracy, reliability

Introduction
EXtensible Business Reporting Language (XBRL) is a language for the electronic communication of business and financial data revolutionizing business reporting around the world. XBRL is a member of the family of computer languages based on XML (Extensible Markup Language), which is a standard for the electronic exchange of data between businesses and on the internet. Under XML, identifying tags are applied to items of data so that they can be processed efficiently by computer software.

It provides major benefits in the preparation, analysis and communication of business information. It offers cost savings, greater efficiency and improved accuracy and reliability to all those involved in supplying or using financial data.

Origin
XBRL is being developed by XBRL International (XII), an international non-profit consortium of approximately 650 major companies, organisations and government agencies working together to build the XBRL language and promote and support its adoption. This collaborative effort began in 1998 and has produced a variety of specifications and taxonomies to support the goal of providing a standard, XML-based language for digitizing business reports in accordance with the rules of accounting in each country or with other reporting regimes such as banking regulation or performance benchmarking.

Research Related To Xbrl
In this section, we summarize the current status of the research related to XBRL, with particular emphasis on the following topics: Value of XBRL Formatted Financial Statements, Transparencies and Corporate Governance, Assurance on XBRL Instance Document. Value of XBRL Formatted Statements and Firm Characteristic.

According to Tan and Shon (2009) [9], currently, there are about 125 firms which have voluntarily submitted over 540 filings to the SEC in XBRL format since the inception of VFP program. Tan and Shon (2009) [9] analyze the VFP filings and demonstrate that the VFP firms tend to be more profitable firms with varying degrees of growth potential compared to a matched sample of non-XBRL filing firms. Furthermore, they find that subsequent to filing for the first time in XBRL, VFP firms experience an increase in analyst following and trading activity in their stocks. This is an interesting result; it re-enforces the notion that XBRL increases transparency and promotes efficient consumption of financial data.
Hodge et al. (2004) \cite{10} performed an experiment with 96 second-year MBA students as surrogates for nonprofessional financial statement users to investigate whether using an XBRL-enhanced search engine helps nonprofessional financial statement users acquire and integrate related financial information when making an investment decision. In particular, they investigate the search capability of XBRL-formatted financial information in the context of recognition versus disclosure of stock option compensation. According to Statement of Financial Accounting Standard (SFAS) No. 123, Accounting for Stock-Based Compensation (FASB 1995), managers are allowed to either recognize the fair value of stock option compensation in the income statement as an expense or disclose this information in the footnotes. Using the disclosure approach makes the reported income higher than the income reported under the recognition approach. However, if the investor integrates the information in the footnote with the information in the income statement then he/she should come to the same conclusion. However, research indicates that financial statement users react more to the recognized information than to the disclosed information (e.g., see Hirst and Hopkins 1998, see also Hodge et al 2004 for more detailed references) \cite{11}.

Hodges et al (2004, p. 687) \cite{12} experiment revealed interesting results: “... many users do not access the technology, but those who do use it are better able to acquire and integrate information. Specifically, we find that when stock option accounting varies between firms, the use of an XBRL-enhanced search engine increases the likelihood that individuals acquire information about stock option compensation disclosed in the footnotes.” They also conclude that individuals who used the XBRL search engine technology to integrate the information had different investment decisions compared to individuals who did not use the technology. Furthermore they observe that “… search-facilitating technologies, such as XBRL, aid financial statement users by improving the transparency of firms’ financial statement information and managers’ choices for reporting that information (p. 687).”

Pinsser and Wheeler (2009) \cite{13} investigate the relationship between XBRL use and perception by nonprofessional investors. They use 61 MBA students as proxies for nonprofessional investors. Their findings indicate that “while perceptions of XBRL are generally positive, increased use of XBRL leads to more positive perceptions.” They further assert that “organizations promoting the spread of XBRL should consider making access to XBRL analysis tools as easy and widely available as possible. Additionally, organizations that issue XBRL-formatted reports are perceived more positively than ones that do not issue such reports (a halo effect),” Transparencies and Corporate Governance The following statement by Cox, Chairman of SEC, makes clear the value of XBRL in terms of providing transparency of the information disclosed (Block and Orl 2007) \cite{14}. “Once real-time disclosure was combined with interactive data. We began to find clues that had previously gone undetected. That led directly to the discovery of what we now know were billions of dollars of backdated stock option awards.”

Roohani (2007) \cite{15} argues in his paper about how XBRL would facilitate corporate governance and provide transparency to employees, investors and creditors, and regulators. Alles and Piechocki (2009) \cite{16} examine the question whether XBRL will improve corporate governance. They develop a framework for understanding how tagged data can be used to change the way in which decisions affecting governance are made. They argue that: for XBRL to fundamentally change governance it has to add more value than simply facilitating data exchange. The information value chain analysis indicates that new ways of viewing and manipulating data yield better information, which when combined with more powerful analytic tools leads to the knowledge that allows better decision making about governance. Hence, the value added from XBRL comes from using it as a tool to users, by seeing problems in a new way, are stimulated to generate new information and knowledge. The above perspective has significant implications for XBRL. The use of XBRL-GL will meet the above challenge and facilitate a systematic examination of how data can be used in governance decision making.

Premuroso and Somnath (2008) \cite{17} examine whether early and voluntary filers of financial information in XBRL format demonstrate superior corporate governance and operating performance relative to their non-adopting peers. Their findings suggest a positive association between corporate governance and the firms who have participated in the SEC voluntary XBRL filing program. They also find that “firm performance factors including liquidity and firm size are also associated with the early and voluntary XBRL filing decision.” Assurance on XBRL Instance Document Although the SEC (2008) is requiring XBRL formatted reports to be furnished by top 500 public companies in the USA starting middle of June 2009 along with its traditional filings, it is not requiring that these XBRL-formatted reports be audited by a third party for its true representation of the ASCII/HTML report filed with the SEC. The only requirement is that these reports should look like the one submitted in traditional format when viewed through the SEC viewer. In addition, the SEC (2008, p. 19) asserts that data in the interactive data file submitted to SEC would be: “protected from liability for failure to comply with the proposed tagging and related requirements, if the interactive data file either Met the requirements, or Failed to meet those requirements, but failure occurred despite the issuer’s good faith and reasonable effort, and the issuer corrected the failure as soon as reasonably practical after becoming aware of it.” However, without assurance on the XBRL-formatted reports, it seems there would be a low level of confidence on the fairness of the information obtained from the XBRL-formatted document.

Recently, Srivastava and Kogan (2008) \cite{18} have argued that: “while waiving the assurance requirements and providing liability protection for XBRL filings is a very significant relief to the SEC filers, and will moderate their resistance to this new filing requirement, this is a short-time band-aid that has to be eliminated sooner rather than later, asmore and more financial statement users will start tying their systems to the “interactive data” in XBRL provided online by the SEC. Since “interactive data” is designed to be automatically utilized by computers without human intervention and for various purposes, it will completely replace the standard format data in most applications, and, thus, has to be assured to be relied on.” PricewaterhouseCoopers has performed an assurance service on the United Technologies Corporation’s (UTC) instance document, but they do not describe their methodology (Boritz and No 2007). Boritz and No perform a mock audit.
of the 10Q XBRL instance document of UTC to identify issues and difficulties involved in the assurance process. In their audit process, Boritz and No primarily trace every item in the paper version to the XBRL instance document and every item from the XBRL document to the paper version. They spent about 63 hours completing the task and concluded that they had high assurance that “the 10-Q XBRL-Related Documents were a complete and accurate reflection of UTC’s 10-Q.” The question still remains what constitutes a complete and accurate reflection or “true representation” of UTC’s 10-Q. Plumlee and Plumlee (2008) describe the process of how an XBRL instance document is created and discuss the issues involved in providing assurance on XBRL instance documents. However, they do not provide any conceptual framework for performing an audit of the XBRL instance document. Srivastava and Kogan (2008) develop a conceptual framework for providing assurance on XBRL instance document, especially for the purpose of furnishing the XBRL version of financial statements along with the traditional reports. In the process of generating a set of assertions, they assume that the traditional format statements have been audited in accordance with the current requirements, and can be relied on as a benchmark for comparison. However, when the traditional format financial statements are phased out, and the XBRL version becomes the main (and only) format of the SEC filings, Srivastava and Kogan (2008) contend that framework will have to be revisited to be merged into the statutory audit methodology.

According to Srivastava and Kogan (2008), the main assertion for providing assurance on the XBRL instance document under the SEC requirement, is that “the XBRL instance document is a true representation of the electronic document (ASCII or HTML) filed with the SEC.” They propose three sets of assertions for the main assertion to be true. The first set is derived from the possible data deficiencies in the XBRL instance document and is presented below:

Completeness: the XBRL instance document has no omissions of relevant facts / data from the traditional format document. A violation of this assertion would occur if, for example, a line item on the traditional balance sheet, such as accounts receivable value, is omitted from the XBRL instance document.

Existence: the XBRL instance document has no insertions of facts / data not present in the traditional format document. A violation of this assertion would occur if, for example, a piece of information, such as an element describing the amount of accounts receivable for the current quarter is present in the XBRL instance document, while the audited financial statement does not provide it.

Accuracy: All element values and / or attribute values (such as context, unit, etc.) on the XBRL instance document accurately represent the facts in the traditional format document. Thus, this assertion has two sub-assertions: Element Accuracy, and Attribute Accuracy. A violation of this assertion would occur if, for example, element values and / or attribute values (such as context, unit, etc.) are in error. An example of an erroneous element value would be the XBRL instance document describing the amount of accounts receivable for the current quarter as $50,000.00 while the audited financial statement showing this amount to be $60,000.00. An example of an erroneous attribute value would be a wrong context Ref value that misidentifies $50,000.00 as the amount of accounts receivable for the current quarter, while the traditional format document states that it is actually for the previous quarter.

The second set of assertions is based on the possible deficiencies of the mark-up in the XBRL instance document. These assertions are described below:

Well-formedness: The XBRL instance document is well-formed, i.e., it complies with all XML this assertion would be an erroneous tagging of data that violates XML syntax rules. For example, a missing closing tag such as </Accounts Receivable> would make the XBRL instance document severely deficient. Validity: The XBRL instance document is valid, i.e., it complies with all rules of XBRL and referenced XBRL taxonomies. A violation of this assertion would be an erroneous tagging of data that violates XML Schema. For example, an element with a missing required attribute such as unit Ref would be a violation.

Proper Representation: The XBRL tagging in the instance document properly represents the facts in the traditional format document. A violation of this assertion is an inappropriate choice of XBRL element to tag traditional format document datum. For example, the accounts receivable balance for the current quarter on the traditional report is tagged as <current Assets>.

The third set of assertions is based on possible deficiencies of XBRL taxonomies used by the filer. These assertions are described below:

Proper Taxonomies: The XBRL instance document references appropriate general and industry-specific XBRL taxonomies. A violation of this assertion would be an improper choice of general and industry-specific XBRL taxonomies by the filer. For example, in place of using the approved US GAAP-Insurance XBRL taxonomy, the filer has used the US GAAP - Commercial and Industrial XBRL taxonomy. Valid Taxonomy Extensions: the XBRL taxonomy extensions referenced by the XBRL instance document are valid, i.e., they comply will all rules of XML and XBRL. An example of violation of this assertion would be a taxonomy extension element that does not have a required attribute.

Proper Extension Elements: the new elements in the XBRL taxonomy extensions referenced by the XBRL instance document are introduced appropriately. An example of violation of this assertion would be an introduction of an extension element called <Insurance Receivable> in place of the standard element <Premiums Receivable> in the US GAAP - Insurance XBRL taxonomy.

Proper Link bases: the link bases in the XBRL taxonomy extensions referenced by the XBRL instance document are appropriate. Inappropriate / erroneous link bases in XBRL taxonomy extensions (including the choice of inappropriate/misleading labels) would be a violation of this assertion. Similar to the traditional audit, the above assertions would provide a structured approach to audit an XBRL instance document. The assurance provider can obtain relevant items of evidence pertaining to each assertion; evaluate them individually for the level of support he/she gets from each item of evidence for the corresponding assertion. Next, the assurance provider can aggregate all the items of evidence to determine the overall confidence whether all the assertions are met. Depending on the level of support for each assertion, the assurance provider may decide to collect more evidence, propose correction to the instance.
document, qualify the opinion, or give a clean opinion. Just for illustration purposes, Srivastava and Kogan (2008) [8] provide a list of specific audit procedures pertaining to each assertion. Such a list would make the audit process more efficient and effective compared to an approach which is ad hoc with no conceptual framework.

Concept
As a concept, XBRL enables various systems and software to exchange business information using common, standardized, universal terminology. Instead of treating financial information as a block of text as in a standard internet page or a printed document - it provides an identifying tag for each individual item of data. This is computer readable. It is a technical supply chain standard for moving financial and business reporting information into an interactive, comparable, intelligent, machine-readable information format. XBRL makes the data readable, with the help of two documents – Taxonomy and Instance document. Taxonomy defines the elements and their relationships based on the regulatory requirements. Using the taxonomy prescribed by the regulators, companies need to map their reports, and generate a valid XBRL instance document. The process of mapping means matching the concepts as reported by the company to the corresponding element in the taxonomy. In addition to assigning XBRL tag from taxonomy, information like unit of measurement, period of data, scale of reporting etc., needs to be included in the instance document.

How does XBRL work?
XBRL makes the data readable, with the help of two documents – Taxonomy and Instance document. Taxonomy defines the elements and their relationships based on the regulatory requirements. Using the taxonomy prescribed by the regulators, companies need to map their reports, and generate a valid XBRL instance document. The process of mapping means matching the concepts as reported by the company to the corresponding element in the taxonomy. In addition to assigning XBRL tag from taxonomy, information like unit of measurement, period of data, scale of reporting etc., needs to be included in the instance document.

How do companies create statements in XBRL?
There are a number of ways to create financial statements in XBRL:
- XBRL-aware accounting software products are becoming available which will support the export of data in XBRL form. These tools allow users to map charts of accounts and other structures to XBRL tags.
- Statements can be mapped into XBRL using XBRL software tools designed for this purpose.
- Data from accounting databases can be extracted in XBRL format. It is not strictly necessary for an accounting software vendor to use XBRL; third party products can achieve the transformation of the data to XBRL.
- Applications can transform data in particular formats into XBRL. The route which an individual company may take will depend on its requirements and the accounting software and systems it currently uses, among other factors.

Is India a member of XBRL International?
India is now an established jurisdiction of XBRL International. A separate company, under section 25 has been created, to manage the operations of XBRL India. The main objectives of XBRL India are
- To create awareness about XBRL in India
- To develop and maintain Indian Taxonomies

To help companies, adopt and implement XBRL

Meaning of Taxonomy
Taxonomies are the reporting-area specific hierarchical dictionaries used by the XBRL community. Specific tags are coined for each item and their attributes and interrelationships are defined. Different taxonomies are required for different business reporting purposes. Some national jurisdictions may need their own reporting taxonomies to reflect local accounting and other reporting regulations. Many organisations, including regulators, specific industries or even companies, may require taxonomies or taxonomy extensions to cover their own specific business reporting needs.

In the Indian context for example XBRL India has developed draft General Purpose Financial reporting XBRL taxonomy for Commercial and Industrial Companies.

Example of ‘Tag’ in XBRL Taxonomies
Company’s net profit has its own unique tag. Computers can treat XBRL data "intelligently": they can recognise the information in a XBRL document, select it, analyse it, store it, exchange it with other computers and present it automatically in a variety of ways for users. XBRL greatly increases the speed of handling of financial data, reduces the chance of error and permits automatic checking of information.

Benefits of XBRL
XBRL is:
- An open technology standard for reporting and analyzing business and financial information
- Software agnostic, or independent
- Accounting framework neutral
- XBRL is not:
- A standardized chart of accounts
- A way to require the reporting of specific information
- A transaction level activity (although it can summarize general ledger transactions)

XBRL offers major benefits at all stages of business reporting and analysis by way of automation, cost saving, faster, more reliable and more accurate handling of data. Which in turn helps in improved analysis and in better quality of information and decision-making. XBRL enables users of financial data to switch resources away from costly manual processes, typically involving time consuming comparison, assembly and re-entry of data. They are able to concentrate effort on analysis, aided by software which can validate and manipulate XBRL information. For example, information search which would otherwise have taken hours can be completed with XBRL before one blinks his eye.

Governments, regulators, economic agencies, stock exchanges, financial information companies, those who produce or use it, including accountants, auditors, company managers, financial analysts, investors and creditors, etc. stand to benefit from the use of XBRL. Accountancy software vendors, the financial services industry, investor relations companies and the information technology industry - all have a huge business opportunity to develop XBRL compliant packages.

The following table gives a birds eye view of the benefits that different stakeholders would derive out of XBRL:
Steps involved in implementing the XBRL project
- define requirements towards future reporting platform
- analyse them regarding their fulfillment when XBRL is used
- what are the driving forces of XBRL implementation
- changes in legal regulations
- technical issues
- international adoption
- others

Application of XBRL
XBRL can be applied to a wide range of business and financial data. Among others it can handle:
- Company internal and external financial reporting.
- Business reporting to all types of regulators, including tax and financial authorities, central banks and governments.
- Filing of loan reports and applications; credit risk assessments.
- Exchange of information between government departments or between other institutions, such as central banks.
- Authoritative accounting literature - providing a standard way of describing accounting documents provided by authoritative bodies.
- A wide range of other financial and statistical data which needs to be stored, exchanged and analysed.

Worldwide acceptance of XBRL
XBRL is quickly spreading across the world, by way of increasing participation from individual countries and international organizations. It is now preferred as a standard for business and financial reporting worldwide. Many countries are mandating XBRL, for example, China, India, Singapore, Germany, France, Belgium, Chile, Spain and State of Nevada while in others such as Canada, Sweden it is voluntary.

XBRL has gained momentum globally due to adoption by Regulatory authorities. The US Securities and Exchange Commission has played a vital role in accelerating adoption of XBRL in the US. A voluntary filing program for filing returns in XBRL format initiated by SEC in early years is moving towards mandatory filing in a phased manner. The SEC mandated the use of XBRL for public company reporting and other reporting applications as under:

1. **Public Company Reporting** – all public companies must file in XBRL format; companies with worldwide public float greater than $5 billion to comply first starting with period ending June 2009; all other large accelerated filers to comply starting with period ending June 2010; all other public companies comply with period ending June 2011

2. **Risk Return Summary Portion of Mutual Fund Prospectus** – mutual funds must begin publishing the risk return summary portion of their prospectuses in XBRL format starting January 1, 2011.

3. **Credit Rating Agencies** – Credit rating agencies are reporting all ratings actions (initial rating, upgrades, downgrades, etc.) in XBRL format starting in August 2009 (180 days after publishing in Federal register).

Japan is also one of the early adopters of XBRL and had started voluntary XBRL reporting program for financial services institutions gradually expanding the range of reports since 2005. The Financial Services Agency (FSA) has implemented a system which requires around 5,000 listed companies and 3,000 mutual funds to submit their financial information in the XBRL format. Many countries around the world are steadily implementing XBRL in their reporting frameworks.

**XBRL-IFRS Taxonomy**
International Accounting Standards Board published IFRS taxonomy 2009 which is a complete translation of IFRS into
XBRL in India
XBRL India is the Indian Jurisdiction of XBRL International. Its main objective is to promote and encourage the adoption of XBRL in India as the standard for electronic business reporting in India. Members of XBRL India among others include regulators such as Reserve Bank of India (RBI), Insurance Regulatory and Development Authority (IRDA), Securities and Exchange Board of India (SEBI), Ministry of Corporate Affairs (MCA), stock exchanges like Bombay Stock Exchange Limited (BSE) and National Stock Exchange of India Limited (NSE), and some private sector companies.

Some Regulatory Initiatives

RBI’s initiatives
The Reserve Bank of India has already launched the Basel II reporting system using eXtensible Business Reporting Language (XBRL) through the existing Online Returns Filing System. With a view to providing direction for implementation of XBRL, RBI had set up a high level Steering Committee to develop and test the XBRL based reporting format.

SEBI initiatives
Some of the significant developments which have since taken place in Indian securities market with the encouragement of SEBI include setting up of a XBRL enabled platform for corporate reporting (www.corpfiling.co.in) by BSE and NSE. Both these have migrated to XBRL from the paper based model and offer a unified electronic platform, popularly known as ‘CorpFiling’ system, which enables the companies listed in either or both of the exchanges to electronically file their disclosures.

An example of XBRL application in Industry
Infosys Technologies Limited voluntarily furnished eXtensible Buisness Reporting Language (XBRL) data to the United States Securities and Exchange Commission electronically in a 6k exhibit (A monthly report of foreign private issuer with SEC) way back on May 2005. It was also participating in SEC’s voluntary program for Reporting Financial Information on EDGAR using XBRL.

Conclusion
When it comes to XBRL, much is still unknown. This is true not only at the individual accounting and finance professional level, but also among the very regulators who are leading this call to action. Regardless of the many variables involved, implementation is becoming inevitable. Rather than being reactive and scrambling once mandated, forward-looking and strategic finance executives and organizations will take proactive steps to ensure their employees are ready to implement the most time- and cost-effective implementation possible.

References
14. www.rbi.org.in