# XBRL – A MAJOR STEP IN GLOBALIZATION OF INTEGRATED FINANCIAL REPORTING SYSTEM

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***ABSTRACT***

*The most important role of financial statements is to present a true and fair picture of the business activities to the stakeholders so that they can use the information for meaningful decision making. To achieve that goal, stakeholders today are asking for integration of both financial and nonfinancial (environmental, social, and governance) performance measures in order to assess the attractiveness of a company (Watson et. al 2011). The challenge is to provide high quality information to the stakeholders efficiently and securely over the internet throughout the information supply chain. Requirements to file the financial reports in XBRL (eXtensible Business Reporting Language) format by various regulatory agencies around the world represent a crucial step in providing information to stakeholders in an efficient and secure way throughout the information supply chain.*

*XBRL is developed to address the limitation of traditional HTML reports, when used for data exchange. Traditional HTML reports are self-contained and its information cannot be automatically identified or retrieved by other computer software applications. XBRL solves this problem by 'tagging' individual items of data so that another computer can understand it and work with it.*

*The objective of this article is to provide a review of XBRL concepts that are important for professional accountants. The article explains the need for its origin in the US and its global acceptance, applications, advantages, risks, and implementation issues related to XBRL. Our effort is to provide the practitioners and users of XBRL with the information about XBRL and to underscore the need for its implementation. Opportunities and challenges created by XBRL implementation are also discussed. Current state of XBRL development in India has been summarized as well.*

## EED FOR XBRL

We will start with the example of transport industry in the United States of America (USA) in the 1960s. To send the goods from one part of the USA to another the goods were loaded on to a truck, then to transport it by the train those goods were unloaded at the train station and reloaded on to a train. At its destination the goods were again physically offloaded from the train and reloaded into another truck to its final destination. When the concept of 'containerization' was introduced, the non-value added activities of unloading and reloading were eliminated. The goods were loaded into a container which was hauled at the back of a truck, the same container was then loaded on to the train, and finally the same container was attached to another truck for transportation to its final destination. The process of containerization eliminated the need for loading and reloading the goods thus making the process more efficient and error free.

Until very recently, around the globe, a very similar situation existed in the corporate world for financial reporting. Companies are required to file the financial information with the regulatory agencies like Securities and Exchange Commission (SEC), Securities and Exchange Board of India (SEBI), Internal Revenue Services (IRS), Banks etc. These regulatory agencies would then pick information from the submitted financials and rekey the data for their analysis. Same was the case with analysts and stakeholders who followed a company. So each entity would extract and rekey the data and create its own reports for a very specific purpose. The effort of extracting and rekeying the data is at best a non-value added activity. By some estimates, in the 1990s the cost of this non-value added activities comprised of 11% of the total salaries paid in the United States. Similar was the case over rest of the world.

The first step to remove the redundancy in financial reporting and analysis started in 1998, when Charles Hoffman, a CPA, started to investigate the use of XML (eXtensible Markup Language) for financial reporting purposes. In 1999, Charles was joined by a member of AICPA and they developed some initial financial reports and called it XFRML (eXtensible Financial Reporting Markup Language). It was presented to the AICPA; that quickly realized the importance of the effort and joined it by providing funding. Later on the name was changed from XFRML to XBRL.

XBRL has been developed by XBRL International, a not for profit consortium of over 550 companies and organizations, which promotes it globally. For the last decade, XBRL development has been on the agenda for IASB (International Accounting Standards Board). The IASB is the independent standard-setting body of the IFRS Foundation. IASB is responsible for support and adoption of IFRS and development of XBRL taxonomy for IFRS.XBRL will also meet the requirements of regulators, lenders, analysts, tax authorities, and others consumers of financial information, who are increasingly demanding reporting in XBRL. Due to the efforts of XBRL International, IFRS taxonomy is already used in Australia, Belgium, Chile, France, South Africa, and the US. XBRL is now widely adopted and is at various stages of implementation by over 550 organizations in 117 countries, including 19 stock exchanges, and 10 country-wide taxing authorities. The next few paragraphs will discuss XBRL and its benefits and the process of creating business reports using XBRL.

## VERVIEW OF XBRL

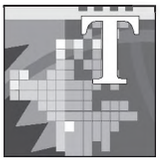
XBRL is used to electronically communicate business and financial data between issuers (businesses) and receivers (regulators, supervisors, investors, analysts, and aggregators) of financial information. XBRL is not an accounting standard. An understanding of XBRL properly begins with a discussion of XML, the Extensible Markup LanguageXBRL and HTMLaremembersofafamily of XML languages.

HTML is like a weak sibling of XML (Tomblin et. al 2003). At most HTML contains a predetermined set of tags that can determine how a webpage will be displayed and contain some metadata (data about data) that describes the webpage. HTML cannot tell us about the nature and structure of data. XML on the other hand does not have any predefined tags. One of the strengths of XML is that it can be used to create tags for a variety of purposes. In addition descriptive tags can be created to describe the data. For example, 'sales revenue is $12000.' In HTML, there is no simple way to extract or separate the sales revenue data in the statement and use it for an alternate purpose. In XML, however, it can be described as <SalesRevenue> $ 12000<\SalesRevenue>. The tag is self-describing and provides a logical structure for contained data in plain text. Also since XML is vendor and system independent, and in plain text it is simple to construct a system (software application) to import, export, and process the XML data. Also, it is easy to add functionality by adding tag attributes.

Because XBRL is derived from XML hence it has naturally inherited all its strengths (and potential weakness). XBRL leverages the same mechanism of XML and augments it with an extensive metadata structure for capturing a greater breadth and variety of information about the data. Although XML- based, it consists of more than just markup tags. It was actually designed to carry processing instructions that tell computers what to do with data. It has the ability to 'tag' or code each element of the financial or business report with information such as description, units, currency etc. A 'tag' is like a barcode for an individual piece of information in the information supply chain. XBRL tags identify an individual piece of information rather than a complete document.

XBRL is essentially a dictionary of "tags" that can be applied to each element in a financial statement. The tags of the XBRL specification are organized into a logical structure known as taxonomy - a system for the classification of data. Taxonomy tells standard software what the item represents and how it relates to other items in the report, much like giving all the facts in the report a unique barcode. For example, an accounting element like 'asset' can be tagged. The computer then needs to be taught the attributes (owned by the company, used over a period of time etc.)of an asset. In case there is a new item in current assets, the eXtensible or expandability of the language ensures that a new element can be easily added to the existing structure. XBRL can capture information about relationships

among elements through a variety of link bases - presentation, calculations, formulas, and reference rules. The following paragraphs explain some technical terms that a professional accountant should know about XBRL. Once technical terms are introduced, the process of creating a XBRL document is explained.



**ECHNICAL TERMS IN XBRL**

Tag:In XBRL financial data is tagged so that it can be easily understood by machines. Below is an example of flexibility that is offered by XBRL in defining tags. Content in a tag is not limited to one item.

<First Name>Suneel</FirstName>

*Opening Elements Tag* — *Content Closing* — *Element with Tag*

*<MiddleName>Kumar</MiddleName>*
*<SalesRevenue>12000</SalesRevenue>*
*if there is no content in 'MiddleName' element tage in XML can be written as*
*<MiddleName/>*
*Or <MiddleName></MiddleName>*

Tag is like a barcode for the item in financials. For example, <SalesRevenue>12000<\SalesRevenue>. The words"Sales Revenue" together with opening and closing bracket is a tag. The closing tag is distinguished by <\>. The tag is self-describing and provides a logical structure for contained data in plain text. Note that there is no space in the element name. In between tags there is a value. The above tag is in a machine readable form. From the above example, the computer understands that there is something called sales revenue with a value of 12000. The value of 12000 will appear in the 'instance document.'

To explain the term to a machine,XBRL allows each element of financial statements to carry certain properties through the concept of metadata. Metadata is data about data. For each element its 'attributes' and 'relationships'to other elements is defined. Sales Revenue has a monetary value and normal balance of revenue is a credit balance. All the properties to identify sales revenue and how a computer should treat it, is provided in the schema files.

Below is an example from Ernst & Young, LLC website regarding the information that is tagged for the 'cash equivalent' element. (Figure 1)

ABC Corporation (in millions)

Balance Sheet

| | June 30 | |
|---|---|---|
| | 2009 | 2008 |
| Assets | | |
| Current assets: | | |
| Cash equivalents | $ 19,188 | **$ 21,081** |
| Short-team investments (including securities pledged as collateral of $3,797 and $ 9,624) | 54,322 | 86,183 |
| Total cash and short-team investments | 73,510 | 107,264 |
| Accounts receivale, net of allowance for doubtful accounts of $ 357 and $ 426 | 35,601 | 29,252 |
| Inventories | 3,538 | 4,640 |
| Deferred income taxes | 5,562 | 6,091 |
| Other | 7,514 | 6,641 |
| Total current assets | 126,175 | 153,888 |

**21,081-What is being tagged?**

cash/cash equivalents: **21,081,000,000**

Currency: **US dollars**

Reporting period: **2008-06-30**

Balance: **Debit**

Company : ABC Corporation

Statement : Balance Sheets

Definition : **Cash equivalents, excluding items classified as marketable securities, include short-team, highly liquid investments that are both readily convertible to known amounts of cash, and so near their maturity that they present insignificant risk of changes in value because of changes in interest rates**

**Figure 1**

Element: An element is a business concept (assets, liabilities, etc.) which is defined based on specific rules (but without the prefixes), such that it can be understood by the computer.

Figure 2 provides an example for XBRL element 'Deferred Tax Assets Net' along with its attributes.

**Element Attributes**

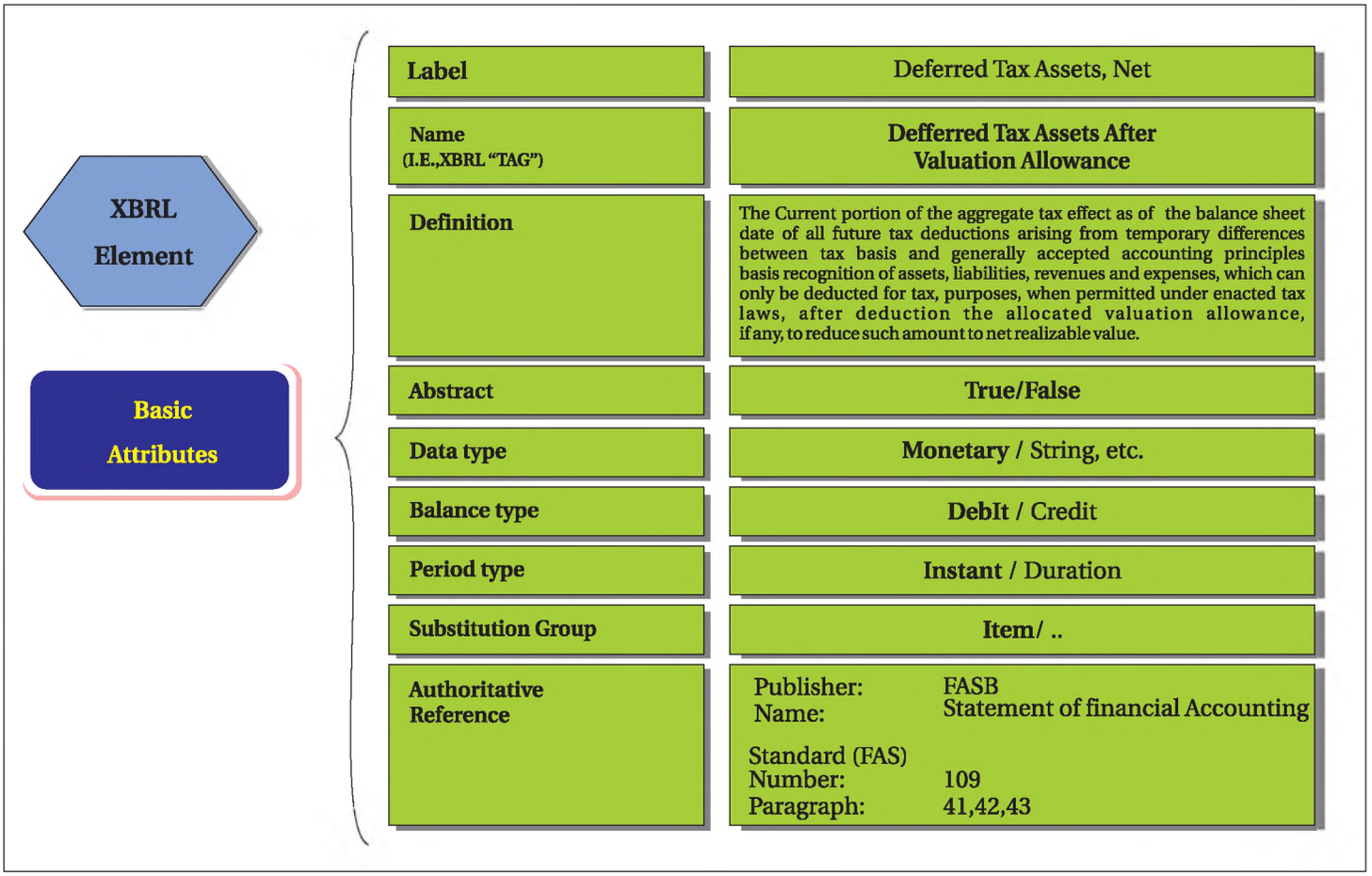





**Figure 2**

**Abstract:** Abstract combines all tags of the same group under one heading, in a way that the hierarchy among the elements can be depicted in a systematic and logical manner. Below is an example from US GAAP taxonomy for Assets Abstract.

**XBRL US GAAP Taxonomy Element**

AssetsAbstract
AssetsCurrentAbstract
CashAndCashEquivalentsAtCarryingValue
MarketableSecuritiesCurrent

**Taxonomy:** The word taxonomy implies classification of some kind of knowledge or rules governing this classification. The taxonomy of XBRL is, in literal terms, a dictionary of elements that are reported. The taxonomy provides the tags (barcodes) for all the elements appearing in the annual report.In XBRL taxomony consists of core part which is a schema(s) and linkbases. Schema contains the definitions of elements (such as assets along with its characteristics) whereas linkbases provides relationships among those elements.

**Linkbase:** Linkbases define relationships, based upon certain criteria, among elements and link them with a specific external resource that justifies their existence. To show the relationship link between say assets and current assets, first the items need to be located through a 'locator.' Then an 'arc' from asset to current asset will link the two elements. As a matter of good practice, relationship information is shown in a separate file than the definition file. Based on the types of relations, there are five categories of link bases (layers): presentation, calculation, definition, reference, and label.

The presentation link base uses parent-child relations to organize elements, which makes it easier for the user to search for elements/concepts. Calculation link bases contain the validation rule that applies to all instance documents referring to a particular taxonomy. Definition link base provides the opportunity to define different kinds of relations. Reference relationship presents relationships between elements and

external regulations or standards. Figure 3 shows an element (Deferred Tax Assets, Net) along with its three relationships.

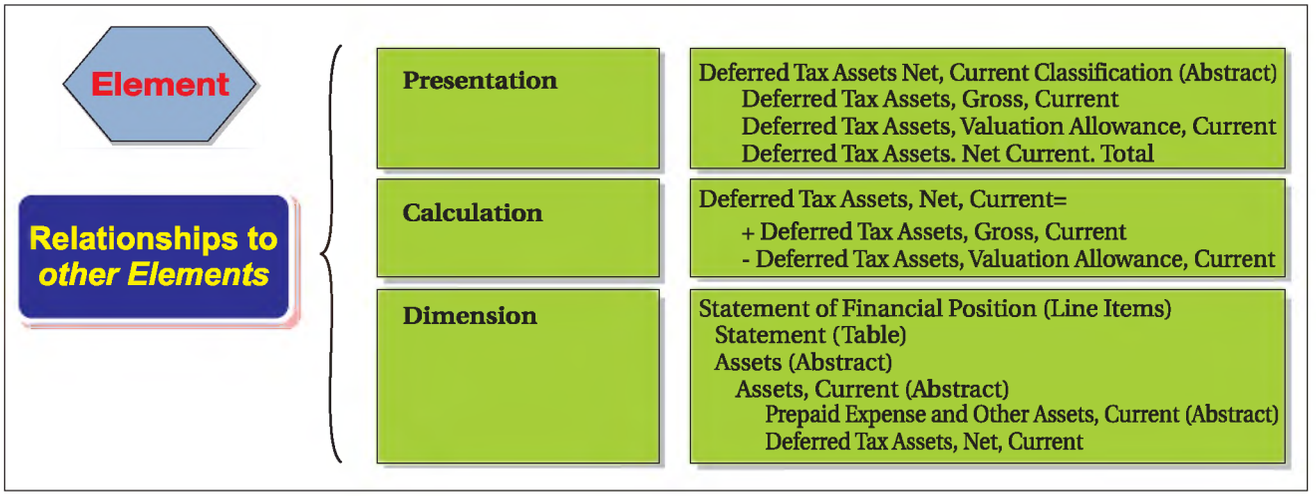





**Figure 3**

There might be some differences in definitions of elements as per Indian (or US) GAAP and IFRS. That means there is a need to define interactions between two GAAPs. Similarly there is a need to define the relationship between Assets and Accounts Receivables. To define those relationships, XBRL uses the technology of XML Linking (X Link). All the relationships are defined in the linkbases, which are classified as per the specific purpose.Through the Label Linkbase, a different label can be assigned for a different purpose even in a different country.

Schema: The main purpose of schema is to provide a computer with the necessary information to be able to identify the accounting term and how to process it. An XBRL schema stores information about the elements in the taxonomy. For example, names, ids, balance, and other characteristics of the element are stored in the schema. It is a space where an unstructured list of elements and references to linkbase(s) files are described. Schemas along with linkbases form the XBRL taxonomy. To distinguish between the elements defined under two different schemas, namespaces (http://xbrl.iasb.org/int/fr/ifrs) are used. Namespaces are a way to identify where different parts of the XML documents come from. Since XML documents are built over multiple layers based technologies, there are multiple namespaces to be declared. Although namespaces read like a URL address, they are not the same as a URL address and for convenience they can be assigned a prefix. For example, ifrs = http://xbrl.iasb.org/int/fr/ifrs. In this case namespace (http://xbrl.iasb.org/int/fr/ifrs) can be identified by ifrs.

After the schema file, all XBRL taxonomy concept file contains an import element. This links the XBRL namespace to the actual schema file that contains the definition of actual XBRL vocabulary. After the <schema>element and <import>element the concept definitions follows. The element simply defines a business concept. XBRL uses a link to connect concepts.

Figure 4 provides an example of a partial schema information document created by The Institute of Chartered Accountants of India (ICAI).

| | | Type Group | Substi-tution | Balance Type | Period | Abstract | Nillable |
|---|---|---|---|---|---|---|---|
| 1 | Sources of Funds | Monetary | Item | Credit | Instant | False | True |
| 2 | Shareholders Funds | Monetary | Item | Credit | Instant | False | True |
| 3 | Minority Interest Net | Monetary | Item | Credit | Instant | False | True |
| 4 | Net Deferred Tax Liability | Monetary | Item | Credit | Instant | False | True |

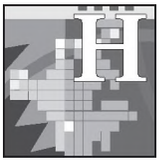
**Figure 4**

Taxonomy Extension: It is expected that most of the concepts will be defined in the public taxonomies, such as IFRS. Public taxonomies define elements and relationships among them according to particular standards or rules, such as International Accounting Standards (IAS). XBRL defined concepts help companies to create financial statements that are XBRL compliant and valid in accordance with the requirements of regulators. For a specialized and diverse industry, say finance, companies are required to provide information on additional concepts. XBRL allows for addition of an element not included in the base taxonomy, without loss of integrity or comparability of data. This will invariably involve modifying relationships among elements. Taxonomy extensions can be created by regulators or an issuing company itself.

Tagging: The creation of XBRL documents involves the process of tagging the document. Tagging is the process of assigning barcodes to all the elements appearing in the annual report.

Instance Document: An XBRL document can be viewed as a system of barcodes. These barcodes not only contain the information but also attributes that describe the information. A XBRL instance report is an electronic document which contains the elements, their values, and an explanation of the context in which they are placed. For example a footnote appears on the instance document and provides additional information about the elements on the report. Once all the elements appearing in the annual report have been tagged the XBRL instance document is generated and the process is complete.The XBRL instance document contains all the facts that are reported in the annual report along with the descriptive attributes about the data that is reported. The instance document is platform independent and can be reused to represent and transfer data as per the requirements of the user.

(http://www.irisbusiness.com/xbrl_introduced.php)



**ow is a XBRL Document Created**

To implement XBRL reporting process will require professional experts with in-depth knowledge of accounting and financial reporting systems and auditing procedures. Accounting professionals will need to interact with the IT professionals for selection of the right software. XBRL team will need to be formulated to implement XBRL in the organization. Figure 5 shows the entire process of how XBRL works along with its deliverables. Figure5has been provided by the SEC in its preparers' guide. The figure is followed by three steps explanation for creating a XBRL document.

**How does XBRL work?**

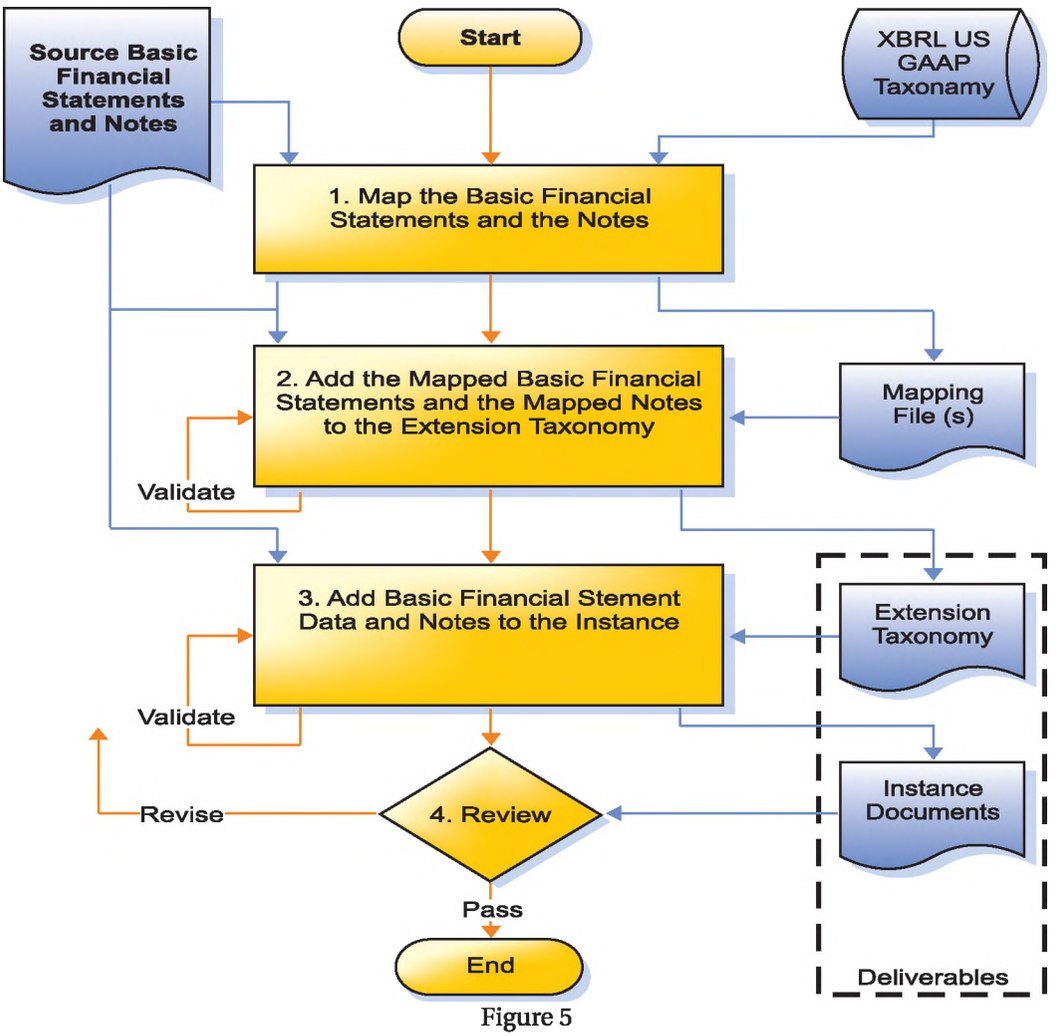



Figure 5

**Blue indicates Information and Information Flow; Orange indicates Process and Process Flow**


**Step 1: Map Financial Statements and Notes to the Published Taxonomy.**

Mapping involves following procedure to be followed by the XBRL team. Start with the set of published financial statements. Compare the concepts (line item) in the financial statements to the elements in the published taxonomy. Assign a taxonomy element to each financial statement concept (line item). If an appropriate concept cannot be found by the company's XBRL team, then note that difference to create extension taxonomies. Similar process is used for notes. The process can be performed using a spreadsheet. The XBRL team can list the financial statement line items and disclosures in one column and the corresponding concept from the published taxonomy element in the adjacent column. The process of selection may need significant judgment in mapping for some financial statement items. XBRL team must therefore involve a professional accountant, who is familiar with the financial statements,for mapping and reviewing. An example of mapping, from the preparers guide, is provided below in Figure 6(Copyright 2008 XBRL, US Inc).

**Mapping of a Balance Sheet**

| | Financial Statement as Prepared | XBRL US GAAP Taxonomy Element | Remarks |
|---|---|---|---|
| 1 | Assets | Assets Abstract | |
| 2 | Current Assets: | Assets Current Abstract | |
| 3 | Cash and cash equivalents | Cash And Cash Equivalents At Carrying Value | |
| 4 | Marketable debt and equity securities (Note 3) | Marketable Securities Current | |
| 5 | Accounts receivable (Note 4) | Receivables Net Current | |
| 6 | Inventories (Note 5) | Inventory Net | |
| 7 | Current deferred tax assets (Note 12) | Deferred Tax Assets Net Current | |
| 8 | Other current assets | Other Assets Current | |
| 9 | Total Current Assets | Assets Current 4..8 | Total of |
| 10 | Property, Plant, and Equipment at cost, net (Note 6) | Property Plant And Equipment Net | |
| 11 | Deferred Tax Assets (Note 12) | Deferred Tax Assets Net Noncurrent | |
| 12 | Other Assets (Note 7) | Other Assets Noncurrent | |
| 13 | Total Assets | Assets 9+10..12 | Total of |
| 14 | | | |
| 15 | Liabilities and Stockholders' Equity | Liabilities And Stock holders Equity Abstract | |
| 16 | Current Liabilities: | Liabilities Current Abstract | |
| 17 | Short-term borrowings (Note 8) | Short Term Borrowings | |
| 18 | Current maturities of long-term debt (Note 9) | Long Term Debt Current | |
| 19 | Accounts payable, Trade | Accounts Payable | |
| 20 | Accrued payroll and employee benefits | Employee Related Liabilities | |
| 21 | Other accrued liabilities | Accrued Liabilities | |
| 22 | Total Current Liabilities | Liabilities Current 17..21 | Total of |
| 23 | Long-Term Debt (Note 9) | Long Term Debt Noncurrent | |
| 24 | Other Long-Term Liabilities | Other Liabilities Noncurrent | |
| 25 | Total Liabilities | Liabilities 22..24 | Total of |
| 26 | Commitments and Contingent Liabilities (Note 14) | Commitments And Contingencies Not numeric | |
| 27 | Stockholders' Equity (Note 10): | Stockholders Equity Abstract | |
| 28 | Class A Common stock, issued 5,094,370 shares in 2013 and 5,089,370 shares in 2012 | Common Stock Value | |
| 29 | | Common Stock Shares Issued Parenthetical | |
| 30 | Paid-in capital | Additional Paid In Capital Common Stock | |
| 31 | Retained earnings | Retained Earnings Accumulated Deficit | |
| 32 | Accumulated other comprehensive income | Accumulated Other Comprehensive Income Loss Net Of Tax | |
| 33 | Treasury stock-at cost, Class A Common stock, 128,000 shares | Treasury Stock Value | |
| 34 | | Treasury Stock Shares Parenthetical | |
| 35 | Total Stockholders' Equity | Stock holders Equity 28,30..33 | Total of |
| 36 | Total Liabilities and Stockholders' Equity | Liabilities And Stock holders Equity 25+35 | Total of |

**Figure 6**

**Step 2: Create and Validate the Instance Document.**

The instance document is an XBRL-formatted financial report which can be read by computers. To create an instance document, the preparer associates the factual financial information with elements from both the published and extension taxonomies, using a tagging software. Thus published and extension taxonomies serve as inputs to generate the instance documents. The taxonomy contains the elements and structure for the financial statements. The instance document contains the quantitative (21,081) and contextual information from the financial statements and includes the period being reported (e.g. for the year ended June 30, 2008) and the monetary type (e.g., U.S. dollars) in the report. The process of associating is called tagging and an instance report is the outcome of the tagging process. Contextual information is separated from the original taxonomy so that the taxonomy concepts can be reused. Contextual information changes from period to period. Figure 7 shows an example for XYZ company's current assets being tagged. Figure 8 shows an example of tagging a note in detail.

XYZ Company's Current Assets, with Elements Tagged

| **XBRL Contexts** | **December 31,2013** | **December 31,2012** | |
|---|---|---|---|
| (In thousands, except share information) | | | |
| **ASSETS** | | | **XBRL US GAAP Taxomony Mapped Element** |
| Current assets:<br>Cash and cash equivalents | $ 663 | $ 649 | Assets, Current [Abstract]<br>Cash and Cash Equivalents, at Carrying Value, Total |
| Marketable debt and equity securities | 6,283 | 5,095 | Marketable Securities, Current, Total |
| Accounts receivable (Note 4) | 24,138 | 25,532 | Accounts Receivable, Net, Current, Total |
| Inventories (Note5) | 20,152 | 24,007 | Inventory, Net |
| Current deferred tax assets (Note 13) | 503 | 493 | Deferred Tax Assets, Net, Current |
| Other current assets | 908 | 366 | Other Assets, Current |
| Total current assets | $ 52,647 | $ 56,142 | Assets, Current, Total |

**Figure 7**

Tagging a Note Table in Detail

| **Domain Member** | **Line Item Element** | **2007-12-30** | **2006-12-31** |
|---|---|---|---|
| Land Member | Property, Plant & Equipment, Gross | 31659000 | 31601000 |
| Building & Building Improvements (Member) | Property, Plant & Equipment, Gross | 79726000 | 79696000 |
| Leasehold Improvements (Member) | Property, Plant & Equipment, Gross | 84737000 | 76606000 |
| Equipment (Member) | Property, Plant & Equipment, Gross | 203532000 | 193117000 |
| Construction in Progress (Member) | Property, Plant & Equipment, Gross | 8420000 | 5377000 |
| Property, Plant and Equipment, Type (Domain) | Property, Plant & Equipment, Gross | 408074000 | 386397000 |
| | Accumulated Depreciation, Depletion & Amortization, Property, Plant & Equipment | 209117000 | 188675000 |
| | Property, Plant & Equipment, Net, Total | 198957000 | 197722000 |

**Figure 8**

Since XBRL is based on XML, all instance reports generated in XBRL go through two levels of validation. At level 1, it needs to be ensured that all XML rules are followed. Level 1 validation ensures that correct syntax is used. At level 2, the validation check ensures that XBRL document confirms to vocabulary in XML schema. Figure 9 shows the two validation levels.

**XML Validation**

| | |
|---|---|
| Confirm to vocabulary in XML scheme (Element names, attributes & structure) | Level 2: Valid XML |
| Follow rules of XML (Syntax check) | Level 1: Well Formed |

**Figure 9**

**Step 3: Review the Instance Document.**

Use of XBRL instance documents does not alter management's responsibility, under any law, for the completeness, accuracy, and presentation of its company's financial statements. Instance document should be reviewed by the XBRL team including professional accountants who are most familiar with the company's financial statements.

**ENEFITS OF XBRL**

A good example of benefits of XBRL implementation is release of information on Singapore companies and industry segments by Singapore Accounting and Corporate Regulatory Authority (ACRA) through an online tool called Open Analytics. Entrepreneurs can access the information and perform competitive analysis. Banks can use it to assess the attractiveness of the firms, sectors etc. Analysts can monitor the performance trends in the industry. Uses are endless from the same set of data that is made available as each user can generate its own customized analysis without wasting time on collecting, compiling, and reentering the data.There is no doubt that global adoption of XBRL will revolutionize the financial reporting process. Some of the general benefits of XBRL can be classified into following categories:

**Increase in Efficiency:** XBRL has the potential to eliminate most of the non-value added activities relating to extracting and rekeying the data and increase the usability of financial information. XBRL eliminates rekeying errors and misclassifications by third parties. Tags with established definitions remove ambiguity as to what a data point represents. Improvements in data quality translate into better analytics for your firm and for your clients. With full adoption of XBRL, companies can automate data collection and improve information system at the company.

**Decrease in Costs:** Data from different company divisions with different accounting systems can be assembled quickly, cheaply and efficiently. Once data is gathered in XBRL, different types of reports using varying subsets of the data can be produced with minimum effort. A company'sfinance division, for example, could quickly and reliably generate internal management reports, financial statements for publication, tax and other regulatory filings, as well as credit reports for lenders. Automated software packages can check data for accuracy.

**Standardization in Data Collection:** The taxonomy specifies the characteristics of various elements of financial statements thereby ensuring consistent interpretation globally. "The IASB (International Accounting Standards Board) is developing a taxonomy which reflects International Financial Reporting Standards (IFRS). National XBRL jurisdictions will extend this taxonomy to reflect their particular local implementation of IFRS. Taxonomies will thus be available to enable those reporting under IFRS in different countries to use XBRL, enhancing efficiency and comparability as adoption of IFRS expands around the world."

**Stakeholders' Satisfaction:** Increasing usability and convenience of data collection and analysis will benefit potential investors and stakeholders, thereby improving customer relationships. Users can use the data as per their requirements. It will also help increase access to new sources of capital globally thereby helping reduce the cost of capital.

**Increased flexibility:** XBRL will allow providers to extend taxonomies for new information exchanges without undermining existing taxonomies. This eXtensible feature when used to the fullest will help provide integrated reports that include both the financial and non-financial performance measures without programmatic changes.

**Potential for improved Transparency:** Through its layered component-based architecture, it will become feasible to access the detailed information about any subject or issue of interest. Although the degree of transparency will be controlled by the organization, it will still be possible to evaluate organizational performance and effectiveness on specific financial and ESG (environmental, social, and governance) issues.

**XBRL Implementation Challenges:**

In terms of challenges the validation errors generated by software may be highly technical and difficult to comprehend. Creation of an extension schema poses another challenge. Although default schema and linkbase files exist in all taxonomies, there is a need to customize each link to suit the company's reporting requirements. On one hand, all concepts in a standard taxonomy may be needed and on the other there may be a need to create additional concepts under a specific role. Existing taxonomies should be used so that duplicate or unnecessary extensions are not needed. In addition, the existing taxonomy should be used correctly.

In the US "Public companies have submitted 1,400 filings in XBRL format to date to the Securities and Exchange Commission's (SEC) EDGAR (Electronic Data Gathering And Retrieval)system since the mandate for public company reporting in XBRL became effective in June 2009. Over 5,000 problems related solely to the use of the US GAAP Taxonomy have been identified in those filings, ranging from incorrect signs to missing concepts." (XBRLUS, pp. 1).Other common errors relate to 1) no value when values is required 2) zero values when value should be there 3) incorrect negative value

4) incorrect values. "These issues are problematic because they ultimately lead to 1) mistakes in how public company financial data is reported and presented, and 2) a lack of comparability in financial fundamentals from company to company." (XBRL, US, pp. 1). Trained experts in XBRL are still in short supply and cost of implementation will be another major factor. (Note: EDGAR system will soon be replaced by Interactive Data Electronic Applications (IDEA) to give investors a better and more up-to-date financial disclosure in a form they can readily use).

In all the optimism about XBRL, it is easy to forget as to what is not included in the purview of XBRL. XBRL neither represents a set of accounting standards nor a chart of accounts. It is not a GAAP translator so it will not translate financial statements from one GAAP to another. XBRL does not represent a transaction protocol(Singal, 2009). It is about reporting business information and not about capturing data at the transaction level. XBRL is not a proprietary technology and therefore is expected to be widely used in software applications.

**Applications of XBRL**

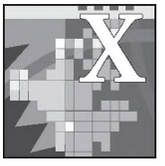
XBRL is becoming a standard means to communicate information between businesses and on the internet. For the countries that are going to adopt XBRL standard, it will impact nearly every corporate entity in that country. XBRL creates agreement on how to identify reporting concepts and allows disparate systems and different organizations to use the numbers that relate to that concept. Because the information provided by XBRL can be easily customized to the needs of the users, it has many applications. We will discuss some of the general applications for XBRL and some of them directly follow from the benefits mentioned earlier.

Fraud Prevention: Transaction history in many organizations still remains disaggregated leading to significant loss of economic resources due to inefficient fraud prevention system. Currently the information is either not available or lost from many critical control points in real time. XBRL will empower forensic accountants to dig deeper and conduct a comprehensive analysis from multiple data sources with significantly less effort, instead of just wasting their time in compiling data from multiple sources for analysis. For example, in the US, the Federal Financial Institutions Examination Council, the umbrella agency for banking regulations, found that when the data was filed in XBRL, its 90 day review cycle was significantly reduced to two days. The analysis of comprehensive data may also help in assessment of business risks due to comprehensive auditing.

Financial Reporting and IFRS Conversion: XBRL based reporting is poised to become regulatory standards in many more countries. Companies will need to move to XBRL reporting format to be in compliance with IFRS and national GAAPs. XBRL allows for reporting under different taxonomies and therefore can be used to satisfy filing and reporting requirements in many countries.

Corporate Performance Management: Corporate performance management is important for both external and internal stakeholders. Stakeholders today are interested in a comprehensive assessment of the company's attractiveness. In addition to financial measures, that includes the ESG (environmental, social, and governance) factors as well. Through XBRL the current taxonomy can be extended to include more elements that measure the ESG factors as well. Thus XBRL can provide opportunities to the outsiders to give a more complete picture of the organization performance and its other responsibilities. In the same way, the GAAP taxonomy can be extended to link it with management reporting structures. Reports can then be provided internally to any user at any level in the organization in real time.

Investment and Lending Analysis: Currently, there exists a significant gap between what the issuers provide and what the receivers want in terms of information. Translating the available information to match individual needs, an investor has to spend lot of time and effort. For example to compare revenue growth/profit margins trend data of a company with its peers or the industry will require a lot of manual rework of the data. With XBRL, less time will be spent in getting the data ready for analysis and more time can be devoted for actual analysis and decision making. For banks and financial institutions also, availability of more standardized information and the ability to customize it for its use will speed up the lending process. Following paragraphs discuss the development of XBRL in India and expansion of opportunities for professional accountants.




**BRL DEVELOPMENT IN INDIA**

The Institute of Chartered Accountants of India (ICAI), the premier accounting and standards setting body in India recognized the importance of XBRL reporting along with the adoption of IFRS. In 2007, ICAI facilitated the constitution of a group with representation from various regulators – SEBI, Reserve Bank of India (RBI), Insurance Regulatory and Development Authority (IRDA), and MCA (Ministry of Corporate Affairs) for development and promotion of XBRL in India. In December 2008, XBRL India was established with local jurisdiction of XBRL International. ICAI also registered 'XBRL India' under Section 25 of the Companies Act for managing the Indian jurisdiction of XBRL International. The primary objective of XBRL India is to promote and encourage the education, marketing, and adoption of XBRL in India. XBRL India is also entrusted with the responsibility of maintaining and updating taxonomies in line with the international developments. Members of XBRL India (http://www.xbrl.org/in/) include regulators, stock exchanges, software companies, and others. XBRL India has developed General Purpose Financial Reporting XBRL taxonomy for Commercial and Industrial Companies and the banking sector which is acknowledged by XBRL International (XII). Other taxonomies for Insurance, Power, and NBFCs (Non-Banking Financial Companies) are under the process of being developed (Editorial Board ICAI, 2011).

MCA, the regulator of companies in India, has mandated, in the first phase, the filing of financial statements for the year ended March 2011 in XBLR format vide general circular no. 09/2011 dated 31st March 2011 in respect of the following classes of companies:

(a) All companies listed in India and their subsidiaries, including overseas subsidiaries;

(b) All companies having a paid up capital of Rs. 5 crore and above or a Turnover of Rs. 100 crore or above.

This will cover more than 25000 companies. In the second phase it will be made applicable to Banking, Insurance, NBFCs, Power sector, and unlisted companies. The mandate, first of its kind, from MCA has been coined as 'Big Bang' because of its application to wide range of companies. It would be the first time when there will be an interface of the user of financials with the full range of financial statements. Other regulatory agencies like BSE and NSE have also transitioned from paper to XBRL, but have not exposed filers to XBRL documents. RBI has asked banks to submit certain reports in the XBRL format. SEBIis going to adopt a phased implementation of filing/reporting of financials by Mutual Funds and Listed Companies.

## BRL AND OPPORTUNITIES FOR PROFESSIONAL ACCOUNTANTS IN INDIA

MCA has mandated that all companies having a paid up capital of INR 5 Crores (INR 50 million) and above or a turnover of INR 100 Crores (INR 1 billion) or above will file balance sheet and profit and loss account for the year 2010-11 onwards using XBRL taxonomy. Excluded from the mandate are banking, insurance, Non-Banking finance companies and their overseas subsidiaries.

Professional Accountants in India will be beneficiaries of this change because the implementation of XBRL will open up multiple opportunities for creation of XBRL documents (Jani, 2011). Professional help of Chartered Accountants will be required in following areas:

- Assessment of XBRL reporting requirements that would be applicable
- Evaluation of various options available for implementing XBRL and selection of the best alternative
- Development of country specific taxonomies, which is dictionary of all the elements and requirements as laid by the accounting standards and company law requirements
- Creation of financial documents (instance documents) that are to be mapped to taxonomies
- Assessment of impact of XBRL implementation on company's existing MIS system
- Help in investment and credit analysis activities as the information will be easy to compare across companies

To facilitate the process of implementing, XBRL India and ICAI plans to host a series of workshops. The workshop will provide the basic training tools and the process of creation of XBRL documents. For details please visit www.xbrl.org/in.

## ONCLUSION

In conclusion, the XBRL based reporting has the potential to change financial reporting and analysis process globally, for good. XBRL would greatly increase the speed of handling of financial data, reduce the chance of error, and permit automatic validation of information. Consumers of financial data, including investors, analysts, financial institutions and regulators, can receive, find, compare, and analyze data much more rapidly and efficiently in XBRL format. XBRL is flexible so it can adapt to different languages and different GAAPs. Companies can use XBRL to save costs and streamline their processes for collecting and reporting throughout the information supply chain. XBRL will obviously improve the quality of corporate information for internal and external reporting purposes. The XBRL reporting will impact decisions about the investments, lending, and investment in the economy. Thus XBRL has the potential to impact economic policy at a global level.

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