XBRL- A Primer

The Institute of Chartered Accountants of India
(Set up by an Act of Parliament)
New Delhi

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Foreword

Information Technology is evolving at a rapid pace bringing-in paradigm shifts in how businesses operate and offer value added services to their clients. Enterprises today are increasingly adopting technology to stay competitive and ahead. Professional accountants have increasing roles to play within enterprises and as consultants, in this rapid technology adoption.

The Institute has always been striving to provide better learning opportunities to its members and students for their continuous updation of knowledge and skills, such that they can fulfill their mission and responsibilities in an efficient manner and enable them to adapt to the environmental changes for qualitative enhancement in their work delivery.

Hindi is the rashtra bhasha. English is an international language. eXtinsible Business Reporting Language (XBRL) is the new generation financial reporting language which enables regulators and other users of information to quickly use data without the need for tedious, time consuming and error prone transcribing process.

XBRL is a global initiative revolutionizing business reporting around the world. The Institute is spearheading the XBRL initiative in India with the establishment of XBRL India Jurisdiction (www.xbrl.org/in) and released an exposure draft of General Purpose Financial Reporting XBRL Taxonomy for Commercial and Industrial Companies Taxonomy (http://icai.org/post.html?post_id=3424/ http://www.icai.org/icai_xbrl/Launch.html), considering the immense benefits that XBRL offers in business reporting and the emerging professional opportunities it offers for the profession.

It gives me immense pleasure to know that the Committee on Information Technology is releasing this very useful publication on "XBRL – A Primer" to enable Chartered Accountants to have a better idea about this language, what it involves, how it operates, role of professional accountants and how to develop further.

The accounting community can play an important role in explaining and encouraging the adoption of XBRL. Major accounting companies are important members of the XBRL Consortium. Through the use of XBRL in companies,

accountants will be able to obtain more rapid and reliable data on company financial performance and greatly reduce effort and costs in gathering and analyzing data.

I deeply appreciate the efforts put in by CA. K. Raghu, Chairman, Committee on Information Technology and Committee Members in coming out with this very useful publication and CA. Jayashree Narayanan for contributing the basic draft.. I also appreciate the efforts put-in by, Mr. K. Venkataramana, Secretary to the Committee, Mr. Ravi K. Arora, Jt. Director and Committee Secretariat their painstaking efforts in coming out with this valuable primer.

I trust that all members will be benefited by this new initiative by the Committee and I urge my fellow members to make the best use of this initiative.

I wish success to all members in future endeavors

September 09, 2009   **CA. Uttam Prakash Agarwal**
New Delhi   *President*

Preface

The Committee on Information Technology has been established to identify the emerging professional opportunities in the Information Technology sector for members and to prepare them to face the threats and challenges ahead. Since its inception, the Committee has proactively considered the modern day requirements and initiated steps to suitably equip the members in terms of knowledge and skills to face the challenges ahead. This publication is another step in equipping members with latest technology update in business reporting.

XBRL is a global initiative revolutionizing business reporting around the world. The Institute is spearheading the XBRL initiative in India with the establishment of XBRL India Jurisdiction and released an exposure draft of ICAI XBRL Taxonomy, considering the immense benefits that XBRL offers in business reporting and the emerging professional opportunities it offers for the profession.

XBRL is a financial reporting language used for electronic communication of business and financial data which is revolutionizing business reporting around the world. It provides major benefits in the preparation, analysis and communication of business information apart from cost savings, greater efficiency and improved accuracy and reliability to all those involved in supplying or using financial data. XBRL stands for e**X**tensible **B**usiness **R**eporting **L**anguage. It belongs to "XML" family, which is becoming a standard means of communicating information between businesses on the internet.

This publication aims to provide a lucid introduction to XBRL, its use and the road ahead, which would be of immense use to the members in understanding, appreciating and developing competencies.

I am very thankful to CA. Uttam Prakash Agarwal, President, and CA. Amarjit Chopra Vice President and CA. Jaydeep N. Shah, Vice-Chairman, IT Committee and the Committee Members for the guidance and support in coming out with this publication. I also appreciate the efforts put in by CA. Jayashree Narayanan and her team members Mr.Sachin Paranjape, CA. Johar Batterywala, CA. Vikas Bagaria, Mr. Rajarshi Sengupta and Mr.Kausik Saha for providing the basic content for this publication. I also express my appreciation for the support given

by Shri K. Venkataramana, Secretary, IT Committee, Shri Ravi K. Arora, Jt. Director and the Committee Secretariat in the finalization of this publication.

I am sure that the members would find this publication immensely useful in understanding, developing competencies and implementing XBRL business reporting language.

September 09, 2009   **CA K. Raghu**
New Delhi   *Chairman,*
                                        Committee on Information Technology

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An Introduction to XBRL

1.1   Background

The last few decades have seen significant changes in the corporate arena all over the world. Globalisation has become the mantra of the day and companies have re-crafted the way they run their business. The changing market conditions, competitive landscape, investor expectations and a series of apparent failures in governance have also seen an increasing demand for more transparency. The corporate world seems poised at a unique point of convergence of increased awareness of good corporate governance, increased regulatory oversight and a convergence of accounting and reporting standards.

1.2   Why the Interest in XBRL?

Today, perhaps more than ever before, there is an increased awareness of the relevance and economics of information.   Each year, organisations the world over devote considerable efforts to reporting, be it internal or external. While technology has been a significant enabler in reporting, Information systems in most large organisations have developed in spurts, driven by immediate to short term needs and often complicated by acquisitions and geographical spread. Data is often maintained in diverse sources/applications and the resulting complexity often creates a challenge in the closure of accounts. Varying reporting requirements, formats and market expectations on the timing of declaration of results, also add to the challenge.

The net result is that the reporting process in most cases still remains a complex, cumbersome one, requiring companies to collate, check, validate, and reconcile significant volumes of data, to arrive at the reporting package. More often than not, despite efforts to ensure accurate information, the risk of error still remains high.

The much publicised mishaps in corporate governance and changing investor expectations have also seen regulators seeking more and more information from companies. However, in many ways the challenge for these agencies has been to sift through the deluge of reports and undertake meaningful analysis to enable a timely, effective follow through.

The quest for a solution in this regard has seen the emergence of various technology platforms and applications. In recent times, eXtensible Business

Reporting Language (XBRL) has emerged as a popular, effective alternative for effective reporting and analysis.

1.3   What is XBRL?

XBRL is an electronic language, a royalty-free open specification developed by XBRL International Inc., a not-for-profit consortium of 500 leading companies and agencies from around the world. The organizations of XBRL International are driving XBRL adoption to ensure greater transparency, efficiency, and agility in business reporting.

XBRL, an XML based language, is used to express business-reporting content. It facilitates the automatic exchange and reliable extraction of business information across diverse software applications.
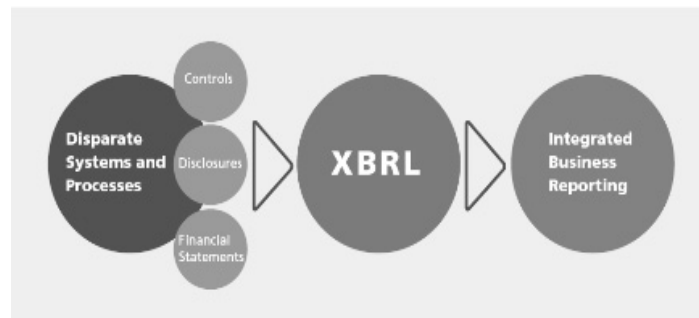
Fig 1: Integrated Business Reporting through XBRL

Source: Deloitte

XBRL simplifies the processes of collecting information and also aids in easy transmission of data and subsequent analysis. Its additional advantage is that it is a royalty free standard that allows users, like regulators, for example, to be isolated from the information systems on the data preparer's side.

1.4   How Does XBRL Work?

1.4.1   The User View

In very simple terms, XBRL can be compared to a Bar Code, for it bar codes different kinds of business reporting information. Instead of treating financial information as a block of text, which is the case in a standard Internet page or a printed document, XBRL provides an identifying code or "tag" for each individual item of data. This allows data to be treated "intelligently".

An XBRL document is an XML document, conforming to the XBRL format and typically contains the information required in a single periodic financial report or statement.

So how does this work?

- To begin with, the computer to be used should have XBRL-enabled software and the documents being accessed should be XBRL-coded or "tagged".

- A tag is a string of computer code that represents one concept; e.g., "product revenues" or "total revenues." Data types are tagged identically: i.e., all company names have the same tag; all current liabilities have another tag, etc.

A collection of tags is called taxonomy. Similar to a dictionary, it specifies the tags (words) to be used, their meaning, their definitions (types of data, structure, and relation to each other) and the relevant rules and formula sets.

Taxonomies and Extensions are explained in detail in the subsequent chapters.

- The computer reads the tags and the software integrates the information selected into a new document.

A useful point to note is that the data can be pulled from many documents in different locations and reassembled into a document. The same documents can also be accessed and read numerous times for similar or different purposes.

1.4.2   The Technology View

The above mentioned simple process is made possible by a collaboration of various elements on a technology platform.

XBRL Taxonomy: As explained earlier, a collection of tags is called a taxonomy. Different core taxonomies exist for IFRS, U.S.GAAP, financial reporting to Central Banks, etc. New tags can be added to a core taxonomy to create a taxonomy extension, to accommodate reporting requirements of local jurisdictions, industries, companies, or other XBRL users.

XBRL Tools: Tools enable viewing, editing, and building instance documents and taxonomies, etc. These tools work in the background to provide a simple user view, while addressing interoperability of data and enabling various processes, such as automated collation, validation, extraction, etc of XBRL documents.

Schematically, an XBRL suite can be represented as under:
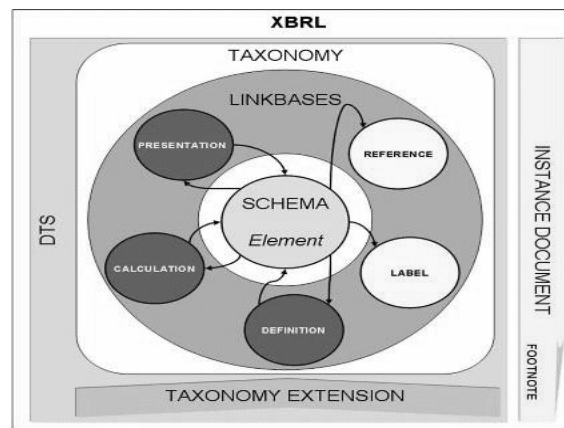
Fig 2: XBRL Components

- Taxonomy Document
    - Defines the concepts that are to be reported
    - Defines the relationships between the concepts
- Instance Document
    - Collection of facts that refer to the concepts in taxonomy document
    - Contains contextual information for the facts

To illustrate, let's look at the following simple financial statement set.

Income Statement	
(From 1st April 2008 to 31st March 2009)	
Revenue	Amount in Rs.'000
Sale of Goods	250
Sale of Services	400
Total Revenue	650
Expenses	
Cost of Goods Sold	200
Cost of Services Delivered	300
Total Expenses	500
Net Income	150

The Taxonomy contains the definitions and relationships of the items in the financial statement; e.g., relationships between concepts such as Revenue, Sale of Goods, Sale of Services, Expenses, etc.

The Instance document contains the actual data with reference to a Taxonomy. The document contains facts such as 250, 400 etc for the concepts in the taxonomy document along with the contextual information such as Period of 1st April 2008 to 31st March, 2009.

The above components are discussed in greater detail in Chapter 4.

As is evident by now, the XBRL solution comprises of various elements, the ownership of which also vests with different communities/agencies. The diagram below provides an idea of the interdependency of the various elements.

Component	Role	Provider
XBRL Documents	Content	User Community
XBRL Taxonomies	Vocabulary	
XBRL Tools	Infrastructure	Third Party Vendors
XBRL		XBRL International
XML	Syntax	World Wide Web Consortium

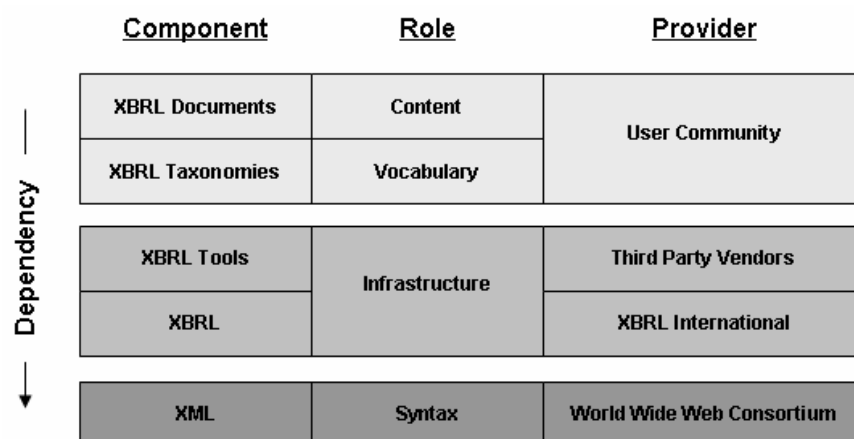*(Dependency — arrow pointing downward along left side)*

Fig 3: Inter-dependency of XBRL Components

Source: Transforming Financial Information – Use of XBRL in Federal Financial Management Financial Information Sharing (FIS) Subcommittee Financial Management Committee Collaboration and Transformation SIG

1.5   Benefits of XBRL

The XBRL framework provides a platform for people, particularly, finance professionals to access documents and transfer or report information electronically. Some advantages of XBRL include:

- *Greater accuracy:* Analysis and exchange of corporate financial information can be more reliable because the computer application accesses data directly. Since data need not be re-entered, the possibility of error is reduced.

- *Better data management:* The XBRL framework allows systematic management of data. Information can be monitored in real time, enhancing validation.

- *Timesaving:* Information can be accessed and collected from any point and across the globe, with relative ease. For example, Regulatory reports can be filed easily, resulting in increased productivity.

- *Reusing data:* XBRL-tagged reports can be shared and used both within organizations and by multiple external organizations (since it is platform neutral) and this process can be repeated. Applications can take advantage of the self-describing nature of XBRL tags to process information automatically for further reporting and analysis.

- *Data Validation:* XBRL tagged reports can be validated for consistency and inter-relationships between various data elements.

- *Easier document reading:* XBRL taxonomies enable the computer to read any document. For example, if the user is using say French, he can collect and reassemble data from documents written say in Finnish or Welsh if they are XBRL-tagged.

- *Transparency:* XBRL allows for increased transparency of financial information to stakeholders, at a granular level. For example, companies reporting under a common taxonomy provide specific details that are immediately comparable by investors and analysts in investment decision-making. This can benefit the organization in various ways, such as improved investor relations, investor coverage, and access to capital markets.

1.6   Who Stands to Benefit?

XBRL benefits both the preparers and the users of business reporting documents. Illustratively,

- *Companies:* Streamlining financial reporting processes throughout a global operation can eliminate divergent accounting systems and enable greater consistency in reporting, thereby reducing costs, increasing operational effectiveness, and decreasing the likelihood of potential errors resulting from the misapplication of standards.

- *Investors:* The investment community is increasingly looking for high-quality financial information. Investors perceive XBRL as an opportunity to analyze companies across the globe on an 'apples to apples" basis.

- *Regulatory Agencies:* Regulatory agencies in different parts of the world are already recognizing the benefits of XBRL and are using it to decrease the cost of regulation while enhancing the regulatory process.

See Appendix 1 for Illustrative case studies related to the deployment of XBRL and its benefits expressed by some organisations.

1.7   When to Use XBRL?

XBRL is suited for many basic business contexts where individuals or organizations must share information, in a comparable format, even when the sources of the information at the User's end are diverse applications/platforms.

Some illustrative situations are filings by multiple organisations to institutions. For example, in the United States of America, public companies reporting financials with the Securities and Exchange Commission (SEC) or multiple organizations sharing the same information amongst themselves. For Example, banks can submit information once to the Federal Financial Institutions Examination Council (FFIEC) XBRL system, which in turn shares it with FFIEC member agencies such as the Federal Deposit Insurance Corporation (FDIC), Federal Reserve System (FRS), and Office of the Comptroller of the Currency (OCC).

The unique feature of the XBRL framework which facilitates data to be provided once and accessed and used and re-used by multiple organisations allows for many potential "Use-case" scenarios.

1.8   What XBRL is Not

For understanding what XBRL is and what it can do, it would be essential also to understand what XBRL is not or what it cannot do.

- *XBRL is not an accounting standard.* Accounting standards are developed by various regulatory standards bodies. XBRL is just a platform for the contents of these reporting standards and the data generated using them to reside and be presented.

- *XBRL is not a chart of accounts.* Charts of accounts are developed by organisations/entities to facilitate internal and external reporting. Given its interoperability, XBRL can however, facilitate the implementation of such framework.

- *XBRL is not a GAAP translator.*

- *XBRL is not a transaction level protocol.* Transactions are the domain of the accounting application being used by the organisation. XBRL focuses on the information contained within business reports.

1.9 Deployment Considerations

The deployment of any technology calls for a business case assessment and stands to benefit the organisation the most when viewed beyond regulatory requirements. XBRL is no different. What has however put it more into the radar, are recent initiatives of regulatory agencies e.g. the SEC, RBI, MCA etc., on various filings which were earlier done either manually or through other electronic means.

Companies should assess the relevance and impact of XBRL on their operations. Indicative steps to consider in this regard include:

- Obtaining an understanding of the various regulatory mandates around XBRL: the reporting requirements, scope, timeline, etc.

- Developing an implementation roadmap to ensure compliance with these mandates. Typical implementation matters to consider include :

  − Training for personnel.

  − Assessing implementation options: internal vs. outsourced deployment support, software and vendor selections and related cost considerations.

- Defining a mechanism to evaluate and sustain the deployment.

While the immediate need for considering XBRL solutions are most likely driven by regulatory reporting, the true benefit of deployment would be achieved only if XBRL solutions are considered as business enablers.

XBRL: Regulatory Perspectives

2.1 XBRL: Ownership and Operation

2.1.1 XBRL International

As mentioned earlier, XBRL is an electronic language, a royalty-free open specification developed by XBRL International Inc., a not-for-profit consortium of 500 leading companies and agencies from around the world. The consortium is governed by an International Steering Committee. The consortium also sponsors working groups to focus on specific subject areas and associated deliverables that contribute to the advancement of the XBRL technology and standard.

XBRL International Inc. is supported by a Standards Board to maintain the consistency and quality of the standard. XBRL International is organized by local jurisdictions representing countries or regions. Local jurisdictions focus on local development and adoption of XBRL and are responsible for developing local taxonomies, or XBRL codes, based on relevant accounting and financial reporting standards. XBRL education and marketing is also managed by local jurisdictions.

As of August 2009, there were 22 Established Jurisdictions and 5 Provisional Jurisdictions, including XBRL India.

2.1.2 XBRL India

XBRL India is the provisional jurisdiction of XBRL International. Its objectives are:

- To promote and encourage the adoption of XBRL in India as the standard for electronic business reporting in India

- To facilitate the education and marketing of XBRL

- To develop and manage XBRL taxonomies

- To keep the developed XBRL taxonomies updated with regard to international developments

- To represent Indian interests within XBRL International

- To contribute to the international development of XBRL

XBRL India is facilitated by the Institute of Chartered Accountants of India (ICAI). Members of XBRL India, among others, include regulators such as the 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.

2.2   Why are Regulators Banking on XBRL?

Regulatory processes have become as complex as the projects they control. To ensure the efficacy and efficiency of those processes, agencies and regulated industries alike are discovering that they require increasingly sophisticated, multi-tiered solutions for managing and communicating information.

Regulatory agencies are responsible for tracking constant changes in the applicable laws and ensuring that companies affected by those laws are in compliance. Those agencies, however, face an information overload. They must process and communicate the changes, often on a daily basis, to legions of regulatory agents in the field, as well as to the companies they monitor.

Regulations, in turn, have a tremendous impact on the business processes of the companies being monitored. To comply, and even to survive, the companies must develop complex solutions to integrate mandated changes into their operations and to return compliance information to the regulatory agencies within the required time-frame.

A number of regulators around the world have introduced and are using XBRL. These include:

- Regulatory reporting for Central banks

- Regulatory reporting for Insurance regulatory authorities

- Regulatory reporting for Stock exchanges

- Regulatory reporting for Stock Market Regulators

See Appendix 2 for an Illustrative list of Projects underway.

By introducing XBRL for reporting, regulators and other authorities obtain data that can be entered automatically into systems without re-keying, reformatting or other "translation" effort.

XBRL simplifies the processes of collecting information and processing it since every little piece of data is tagged for the data transmission and each concept

used is documented in the taxonomy. The data can be validated while being transmitted and can be analyzed with ease subsequently.

On the other side, XBRL is a royalty free standard that allows regulators to be isolated from the information systems on the data preparer's side. Accordingly, information from a discrete information system can be exchanged with regulatory agencies in the form of XBRL instance documents and the regulatory agencies in turn would use their own systems to carry out meaningful analysis.

XBRL can provide efficiencies and cost savings throughout the regulatory filing process for corporates and also allows regulators to focus effort on meaningful analysis and decision-making rather than pure data collation.

Some of the early users of XBRL have been regulators in the financial market and banking supervision institutions.

2.3   XBRL and Global Regulatory Agencies: Some Examples

2.3.1   IASB

The International Accounting Standards Board (IASB) is the independent standard-setting body of the International Accounting Standards Committee Foundation (IASC Foundation). The Trustees of the IASC Foundation are responsible for its governance and oversight, including funding. The Trustees are publicly accountable to a Monitoring Board of capital market authorities.

The mission of the IASB is to develop, in the public interest, a single set of high quality, understandable and International Financial Reporting Standards (IFRSs) for general purpose financial statements.

The IASC Foundation eXtensible Business Reporting Language (XBRL) Team is the unit responsible for the development of a high quality IFRS Taxonomy.

Incepted in the early days of XBRL in 2001 by the Trustees of the IASC Foundation, the XBRL team recently refocused its mission statement which is to provide high quality IFRS taxonomy in the same languages (about 30 translations) and at the same time as IFRSs.

The mission of the XBRL Team is part of the IFRS adoption and implementation strategy and is integrated with the IFRSs development. The XBRL Team is mandated to provide quality assurance of the IFRS Taxonomy as well as its maintenance and co-ordination.

The XBRL Team consists of two pillars: Technology and Accounting. The technology pillar is responsible for providing technical XBRL expertise and developing XBRL tools. The accounting pillar provides in-depth accounting domain expertise necessary when representing the IFRSs in XBRL format.

The XBRL Team is supported by two external committees: XBRL Advisory Council (XAC) and XBRL Quality Review Team (XQRT).

Chapter 3 gives an overview of the current IFRS taxonomies.

2.3.2 SEC

The U.S. Securities and Exchange Commission (the SEC) states that its mission "is to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation."

The oversight exercised by the SEC extends to all categories of participants in the securities markets, primarily:

- Securities exchanges
- Securities brokers and dealers
- Investment advisors
- Mutual funds

XBRL US developed the US GAAP digital dictionary of required disclosures and common reporting practices under contract with the Securities and Exchange Commission (SEC). The SEC on January 30, 2009 issued the final rule to mandate the use of XBRL for various public company reporting and other reporting applications, such as the Risk Return Summary portion of Mutual Fund Prospectus, Rating actions by Credit Rating Agencies, etc., from various timelines from mid-year 2009. Chapter 3 provides an overview of this rule.

2.3.3 AICPA and PCAOB

The American Institute of Certified Public Accountants (AICPA) is the US national, professional organization for all Certified Public Accountants.

The Public Company Accounting Oversight Board (or PCAOB) is a private-sector, non-profit corporation created by the Sarbanes-Oxley Act, a 2002 United States federal law, to oversee the auditors of public companies. Its stated purpose is to 'protect the interests of investors and further the public interest in the preparation of informative, fair, and independent audit reports'. Although a private entity, the PCAOB has many government-like regulatory functions, making it in some ways similar to the private Self Regulatory Organizations

(SROs) that regulate stock markets and other aspects of financial markets in the United States.

The PCAOB continues to be responsible for all audit and attest standards with respect to information filed with the SEC for which assurance is required; the AICPA is responsible for those standards for non-public entities.

The PCAOB previously issued a Staff Q&A regarding providing assurance on XBRL information filed under the SEC's Voluntary Filer Program, while the AICPA previously issued an interpretation to the AICPA Attestation Standards, specifically AT 101; however, XBRL has evolved since such earlier documents were issued.

The AICPA formed an XBRL Assurance Task Force under the direction of the Assurance Services Executive Committee (ASEC), which has been identifying issues and proposing solutions for the PCAOB's consideration. The AICPA also issued Statement of Position (SOP) No. 09-1, "Performing Agreed-Upon Procedures Engagements That Address the Completeness, Accuracy or Consistency of XBRL-Tagged Data," in May 2009, which is applicable to engagements for both public and non-public entities upon issuance.

The Centre for Audit Quality an affiliate of AICPA has in June 2009 published an alert for practitioners regarding XBRL assurance. The alert aims to assist registered public accounting firm auditors regarding audit firm service implications raised by the Securities and Exchange Commission's final rules on XBRL reporting. It addresses potential services the auditor may be asked to provide and certain issues of which the auditor should be aware in connection with audits of companies reporting financial data using eXtensible Business Reporting Language.

This Alert can be downloaded from
http://thecaq.org/members/alerts/CAQAlert2009_55_06012009.pdf.

2.3.4   Other Developments

The Japanese Financial Service Agency (JFSA) has mandated the use of XBRL for electronic filing of financial statements. The mandate affected all listed domestic companies and investment funds in Japan beginning with reports for the first fiscal quarter ended June 2008.

In China, effective April 30, 2009, all 864 companies listed on the Shanghai Stock Exchange completed the mandatory disclosure of annual reports for 2008 in XBRL. It was the first time that simultaneous reports disclosure was achieved as scheduled.

On May 6, 2009 the European Parliament adopted with amendments, in its plenary session, the proposal for the establishment of a Community programme for financial services, financial reporting and auditing. The proposal stressed the importance of converging standards between jurisdictions (or to develop international standards), promoted the Community's involvement in the international standard-setting process for financial markets, and also allocated a community funding budget of €38.7 million (an increase from €36.2 million).

Momentum is building around large scale "national" XBRL projects. These multiagency projects aim to streamline corporate to government and interagency reporting. High profile projects, such as Australia's Standard Business Reporting (SBR) project and the Netherlands National Taxonomy Project (NTP), are being viewed by other countries as a template for the use of XBRL for improving efficiency and reducing costs borne by companies and governments associated with financial reporting.

Exchanges, regulators, and government agencies in other countries have pilots or mandates in place for the use of XBRL in public company filings. These include, among others, Canada, Korea, the United Kingdom, and China.

2.4   XBRL in India

Though India has started late in adopting XBRL, it has gained significant momentum in recent times. The Ministry of Corporate Affairs, the Securities Exchange Board of India, the Reserve Bank of India and the Institute of Chartered Accountants of India have been responsible for the current set of initiatives, a brief overview of which is given below.

2.4.1   Ministry of Corporate Affairs (MCA)

The Ministry is primarily concerned with the administration of the Companies Act, 1956 and other allied Acts and rules & regulations framed there-under mainly for regulating the functioning of the corporate sector in accordance with aforementioned laws and regulations. Among its various roles, it supervises three professional bodies: namely, Institute of Chartered Accountants of India (ICAI), Institute of Company Secretaries of India (ICSI) and the Institute of Cost and Works Accountants of India (ICWAI), which are constituted under three separate Acts of the Parliament for proper and orderly growth of the professions concerned.

The e-governance project, MCA21, was introduced in the year 2006 to enable all companies and their professionals to file their statutory documents online to the registrar of companies (ROC). It enabled the registrars to maintain the

documents in e-form. At present, the data filed in the scanned PDF format cannot be collated as MCA21 provides only the registry functions where the documents filed by the companies are stored.

The Ministry of Corporate Affairs is planning to introduce "Next Generation MCA21" that would be many steps ahead of the previous MCA21. In MCA21, the information of only one company can be accessed at a time but in "Next Generation MCA21", the information of a number of companies can be collated, analyzed and retrieved at the same time. The next generation MCA21 would make filing of documents much easier for companies, and stakeholders would be able to receive financial data in a customized manner.

The government has the largest database of more than 8,00,000 companies, including the private companies, and XBRL is expected to provide significant benefit to the various users of business data, including governments, regulators, economic agencies, stock exchanges, financial information companies and also those who produce or use it, including accountants, auditors, company managers, financial analysts, investors and creditors.

2.4.2   Securities and Exchange Board of India (SEBI)

The Securities and Exchange Board of India (SEBI) was first established in the year 1988 as a non-statutory body for regulating the securities market. It became an autonomous body in 1992 and got more powers through an ordinance. Since then it has been regulating the market through its independent powers.

The SEBI has introduced Clause 52 in the equity listing agreement, requiring listed companies to file information with the exchange only through Corporate Filing and Dissemination System (CFDS). CFDS is the portal put in place jointly by BSE and NSE and offers a XBRL-enabled common platform for listed companies to file such information, statements and reports as may be specified by BSE and NSE.

Listed companies are required, in a phased manner, to file information with the stock exchange only through CFDS.

2.4.3   Reserve Bank of India (RBI)

The Reserve Bank of India (RBI) is the Central Bank of India. It was established on April 1, 1935 in accordance with the provisions of the Reserve Bank of India Act, 1934.

Various departments of the RBI across locations receive significant volumes of Returns from commercial banks. Banks operate on different technological

platforms and accordingly, the modes of communication between banks and RBI differ from case to case. The RBI introduced the On-line Returns Filing System (ORFS) in the year 2004 for commercial banks to upload data in XML format. ORFS met with moderate success but had its limitations since it was only a data collation platform with no back end processing and data analysis capabilities. Data discrepancies across the returns were also noticed since many of the returns have common elements which were not systemically interrelated with each other.

With the objective of adopting XBRL for return submission by commercial banks, the RBI formed a High Level Steering Committee in the year 2007 that chartered a pilot survey for studying the feasibility of adopting an XBRL-based data submission system. Five returns were considered for the first phase, the important ones being Basel II data reporting system (officially called RCA-II) and financial statements; of these, the first one RCA-II has "gone live" and the others are in the final stages of implementation.

2.4.4   The Institute of Chartered Accountants of India (ICAI)

The Institute of Chartered Accountants of India (ICAI) is a statutory body, which was established under the Chartered Accountants Act, 1949 (Act No. XXXVIII of 1949) for regulating the profession of Chartered Accountants in India.

The ICAI constituted the XBRL Group in 2007 for undertaking the development and promotion of XBRL in India. The Institute is spearheading the XBRL initiative in the country and is the provisional jurisdiction of XBRL in India.

The ICAI, India jurisdiction has developed the taxonomy for general purpose financial statements for commercial and industrial sector. The exposure draft of the taxonomy has already been issued and it will be sent for accreditation by XBRL, International shortly. Taxonomy for banks is under preparation and the Exposure Draft is expected to be issued shortly.

In July 2009, ICAI had written to the MCA to consider mandatory filing of financial statements in XBRL.

2.5   The Road Ahead

The versatility of the XBRL framework provides significant opportunities in the area of regulatory filings. In India, in particular, there is considerable scope for reducing overlaps in filing information, which today span a number of regulatory agencies:

- Filings with the Registrar of Companies: This includes both financial and non-financial reporting, such as Annual statements, changes in directorship, changes in Memorandum and Articles of Association.
- Filings with Stock Market Regulators: This includes both financial and non-financial reporting, such as Quarterly and Annual results, board meeting details, significant announcements, etc.
- Filings with the RBI: Reserve Bank of India (Central Bank) has mandated banks and NBFCs various forms and reports to be filed with them at fortnightly, monthly, quarterly and annual intervals.
- Filings with Stock Exchanges
- Filings with the Income Tax Department
- Filings with Excise, Customs and Sales Tax Departments, etc.

Clearly there exists potential for the various agencies and regulated Companies to work together towards common benefits. On March 16, 2009, the High Level Committee on Estimation of Savings and Investment submitted its report to the Government of India in New Delhi. The committee had been appointed on December 12, 2007 to critically review the existing methodologies for estimating saving and investment aggregates for the Indian economy and to suggest measures for improvement. The report recommended that the Ministry of Corporate Affairs (MCA) work with the Institute of Chartered Accountants of India (ICAI) to explore the possibility of using XBRL for its MCA21 database, an e-governance project, to provide easy and secure access to MCA services. The ICAI led the development of the General Purpose Financial Reporting XBRL Taxonomy for Commercial and Industrial Companies (C&I) that was released in October 2008.

The MCA is working with sectoral regulators such as the RBI, the SEBI, the Insurance Regulatory & Development Authority (IRDA), to put in place a centralized data pool that would help banks and lending institutions assess risk factors associated with a particular sector or company. The initiative, using XBRL technology, is being developed by the Institute of Chartered Accountants of India (ICAI).

Regulators are taking steps to make entities under their domain to get XBRL-compliant. The aim is to make data about fund movements within lenders available at a single place in an electronic format so as to make multiple analysis and forecasts at the click of a button. This kind of information pool would also come in handy for regulators in making market forecasts and taking pre-emptive measures in case of any unfavourable trend.

An expert group, which has representation from the RBI, the SEBI and the IRDA, along with the ministry of corporate affairs, is already working closely with the ICAI to prepare a dictionary of computer-aided terms to be used by this networking system.

Similar initiatives have also been taken in other parts of the globe; e.g. the SEC, IASB, and JFSA have established a program to align their XBRL initiatives and taxonomy development efforts going forward.

In the final run, the success of the framework depends on the combined working of the other related communities e.g. the vendors (in providing cost effective solutions) and the accounting and auditing fraternity (in working both on the deployment component and in adapting to auditing in such an environment).

XBRL and Financial Reporting

3.1   Business Reporting

In recent times, there has been an increased focus on the timely availability of relevant information both within organisations and external stakeholders. At a very broad level, Business reporting is today determined by regulations and the company's own internal assessment of information needed to run its business effectively.

Current external reporting is by and large based on Historical Cost and a "one-size-fits-all' model with significant focus on balance sheet and profit and loss numbers and specific non-quantitative information. Internal reporting however typically also includes other relevant quantitative and qualitative data, such as Key Performance Indicators. In recent times, there have been relevant discussions on the need to make such additional information available to the external stakeholders, too.

XBRL, though initially identified to address external reporting requirements, is being increasingly mentioned in both these avenues of reporting. As awareness about XBRL increases, it is expected to play a more active role in both these avenues.

This section focuses on the relevance of XBRL in the context of external financial reporting.

3.2   The Need for a Global Financial Reporting Framework

Due to increased dependency on the global economy and a wide stakeholder's base, companies today face unprecedented challenges. Increasing global competition, heightened regulatory oversight, rising risk awareness, and other factors have considerably altered the contours of the playing field.

Amid the economic downturn and the faltering performance of many public organizations, new concerns have been raised about the effectiveness of the regulatory oversight of capital markets. There is an increasing perception that to overcome these challenges, a common reporting framework is essential. This has, for example, resulted in focused efforts across the globe to move towards International Financial Reporting Standards, or IFRS.

Supporting this has been the adoption of technology framework such as XBRL, which provides a framework to support the effective exchange of documents and data across applications, platforms, and the Internet.

XBRL addresses the need for "something that will give individuals faster access to better information that they can easily use and understand" as noted in SEC Chairman Cox's May 30, 2006 presentation before the American Enterprise Institute. In that presentation, he elaborated "Just in time, we have advances in technology that allow for this change in the game…We need to make searches for information easier…We want to make the numbers derived from financial statements vastly more accurate. And we want to allow companies to communicate with investors on a constant basis. At a time when we have 24-hour news — and even 24-hour pizza delivery — why are we still living by the 10-K and the 10-Q? If investors are going to be responsible for the growth of their investments, for picking which funds to put into their 401(k) nest eggs, they'll need user friendly, responsive numbers that are easily accessible. Interactive data does that by tagging the information on financial statements and making it interactive."

3.3   Financial Reporting and XBRL

The movement towards eXtensible Business Reporting Language, or XBRL, as a standard global framework to support effective production, consumption, and exchange of financial and business information is rapidly gaining acceptance throughout the world. Standard setters, regulators, governments, and lenders in many of the largest economies around the world are embracing XBRL.

In 2009, many companies across the United States, Europe, Asia, and elsewhere started using XBRL, and these numbers are likely to increase dramatically by 2011 as additional mandates go into effect and convergence of global reporting standards continues.

3.4   XBRL-Based Financial Reporting Requirements: An Overview

Some recent developments that are driving the acceleration of XBRL are mentioned below:

3.4.1   SEC Filings

3.4.1.1   Corporates

On January 30, 2009, the U.S. Securities and Exchange Commission (SEC) issued a release adopting final rules, "Interactive Data to Improve Financial

Reporting" (SEC rules), that require issuers to provide their financial statements to the SEC and on their corporate web sites in interactive data format using eXtensible Business Reporting Language (XBRL-tagged data).

The SEC adopted the final rule to improve the ability of financial statement users to access and analyze financial data. The final rule indicates that through interactive data, what is currently a static, text-based information can be dynamically searched and analyzed, facilitating the comparison of financial and business performance across companies, reporting periods and industries.

Under the final rule, a registrant using U.S. GAAP, with a worldwide public float above $5 billion, will first be required to submit an interactive data file with its quarterly report on Form 10-Q or annual report on Form 20-F or Form 40-F (as applicable), containing financial statements for a fiscal period ending on or after June 15, 2009. This means a calendar-year-end entity that files on domestic forms and whose float exceeds the $5 billion threshold will first have to provide an interactive data file with its June 30, 2009, Form 10-Q filing. A domestic registrant with a June 30 fiscal year-end would have to provide an interactive data file in its September 30, 2009, Form 10-Q filing if its float exceeds the $5 billion threshold.

See http://www.sec.gov/rules/final/2009/33-9002.pdf for details of the Rule and the current timelines for initial submission of interactive data.

The U.S. GAAP Taxonomy was developed by XBRL US—the non-profit consortium for XML business reporting standards—under contract with the SEC as a digital dictionary containing a comprehensive set of reporting elements that include GAAP requirements and common reporting practices.

The XBRL data, which the SEC calls "interactive data," is required to supplement—but not replace—a company's traditional electronic filing formats (ASCII or HTML) for annual and quarterly reports, transition reports for a change in fiscal year and reports that contain updated or revised versions of financial statements.

The interactive data file includes the following XBRL-tagged information (interactive data is required for all periods included in a registrant's financial statements):

- Financial statements: each amount on the face of the financial statements will be tagged.

- Notes to the financial statements: each footnote will be individually tagged as a single block of text in the first year of adoption. In subsequent years, an entity must also tag:

    − Each significant accounting policy in the significant accounting policies footnote as a single block of text.

    − Each table in each footnote as a single block of text.

    − Individual amounts (e.g., monetary value, percentage, and number) in each footnote.

Financial statement schedules (each schedule will be individually tagged as a single block of text in the first year of adoption; detailed tagging of individual amounts within each schedule also will be required in subsequent years).

Interactive data submitted to the SEC must also be posted on a registrant's Web site, if it maintains a web site, not later than the end of the calendar day that the information is filed or required to be filed with the SEC (whichever is earlier), and must remain posted for at least 12 months. The SEC believes that making this information available on registrants' Web sites will encourage widespread dissemination of interactive data to the public.

3.4.1.2 Mutual Funds

 The SEC voted on December 17, 2008 to issue a final rule that requires mutual funds to provide interactive data for risk/return summary information in a fund's Form N-1A filing containing (1) an initial registration statement or (2) a post-effective amendment that is an annual update to a registration statement that becomes effective on January 1, 2011. The final rule has not yet been published.

3.4.2   IFRS

The International Accounting Standards Board (IASB) released an expanded IFRS XBRL Taxonomy in June 2008 to support the adoption of XBRL for IFRS-based reporting. This taxonomy has been leveraged as the basis for other XBRL reporting taxonomies. It was updated in 2009 to reflect recent changes and developments in IFRS standards. The IASC Foundation XBRL Team has published two supporting documents to assist users of this Taxonomy. See Chapter 4 for details.

XBRL can accommodate filings under IFRS. Filings have been submitted under the SEC's voluntary XBRL reporting program, and the SEC is coordinating with the International Accounting Standards Board (IASB) and others to align their

respective XBRL and taxonomy development initiatives. The IASB is the London-based board that sponsors IFRS.

3.4.3   Reporting in India

In India, financial reporting using XBRL along the lines of filing with the SEC is yet to come into effect. However, a number of organisations have already initiated or deployed XBRL based reporting requirements. Chapter 2 gives an overview of such initiatives.

3.5   Financial Reporting using XBRL: An illustration

Chapter 1 addressed how a User of a Report can access and use an XBRL based report. This section deals with the use of XBRL from a preparer's position.

The following figure depicts the high level steps involved in preparing XBRL reports:
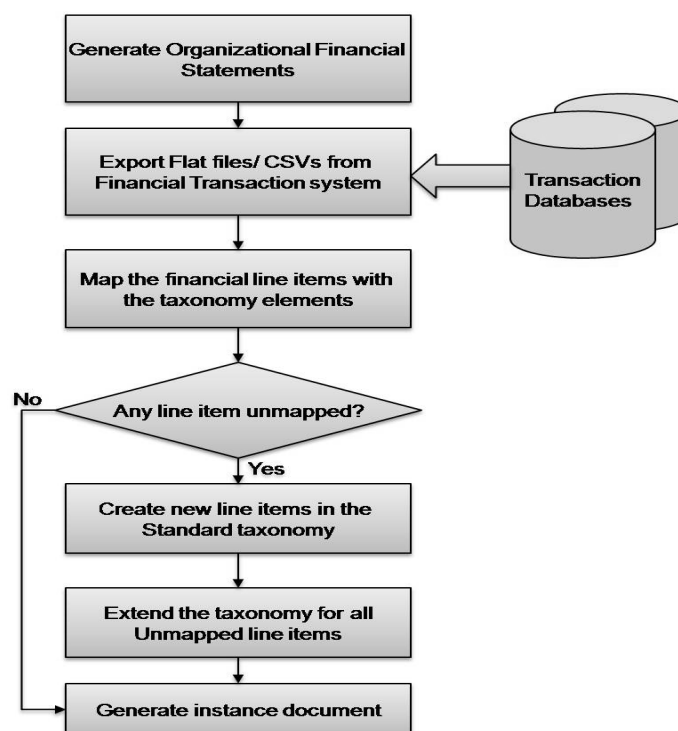
Fig 4: Steps for XBRL Reporting

Source : Deloitte

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Detailed Steps

1.   Generate Financial Statements from the Financial Transaction system like ERP or any other financial transaction system.

2.   From the transaction system, export the source CSV/excel files of the statements into the format specified for loading the data into the tool.

3.   Map the account line items of the financial statement with the corresponding ones in the taxonomy.

Illustratively,

Fig 5: Illustration - XBRL Reporting

Column 'A' represents the line items in the organization's financial statements and Column 'C' represents the taxonomy elements. The following steps are needed to map the line items with the base Taxonomy:

•   Elements present in Column 'A' are first mapped with the base taxonomy line item present in Column 'C'

- While mapping, other details (contexts) like accounting period, precision, unit of measurement, language etc. also need to be provided at the line item level

- After this mapping is complete, few items in Column 'A' may remain unmapped

- This CSV/ excel sheet is the input for the Taxonomy Editor tool

4. For unmapped line items, new line items need to be added to the base taxonomy. If the unmapped items are calculated accounts, corresponding calculation logic needs to be added to the extended taxonomy. Below is a snapshot of the extended taxonomy using Fujitsu Taxonomy Editor.

Note: As part of the illustration of the whole process, the example of Fujitsu Tools has been cited. These only highlight the common features which are available in all XBRL tools. The citation to Fujitsu Tools should not be considered as any kind of preference or bias to these tools.
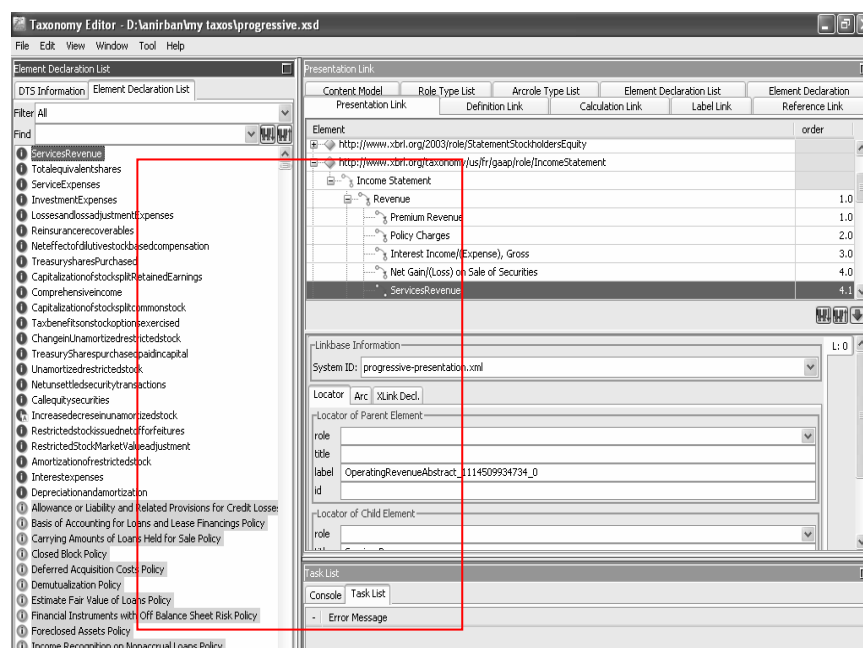

Fig 6: Illustration – XBRL Reporting

The section highlighted in the above image contains the elements which are extended in the taxonomy.

5. Input the extended taxonomy and all other supporting details in the tool to generate the final instance document. One such document generated by the Fujitsu Instance Creator tool is shown below:

Fig 7: Illustration – XBRL Reporting

6. Generate formatted Web-Page outputs of the instance documents created. The illustrative HTML output generated by XBRL Instance Creator of the extended taxonomy is shown below:

Fig 8: Illustration – XBRL Reporting

3.6 Financial Reporting using XBRL: Impact on Auditors

The auditors play a significant role with regard to external financial reporting. Across the globe, professional bodies, such as the AICPA, ICAI, IFAC etc., are responsible for establishing requirements vis-à-vis the audit of such statements.

Clearly, the fundamental expectation from auditors is to provide an assurance on the financial statements prepared by the companies, and this expectation does not change whether the statements are prepared and filed in manual or electronic form However; the inherent characteristics of XBRL based documents have raised the matter of the responsibility of the auditors with regard to these documents.

The recent ruling in January 2009 by SEC, requires issuers to provide their financial statements in interactive data format using XBRL without requiring any audit or assurance on these XBRL tagged data filed by the issuers; however, currently this exemption is provided to encourage more and more issuers to use XBRL, and may not be available in later years. Currently, providing any kind of audit / assurance on the interactive data filed is voluntary.

For issuers who opt to voluntarily provide any kind of assurance, based on the above SEC ruling, American Institute of Certified Public Accountant (AICPA) has issued a Statement of Position (SOP) 09-1 "Performing Agreed-upon Procedures Engagements That Address the Completeness, Accuracy, or Consistency of XBRL-Tagged Data". Auditors' assurance voluntarily provided to issuers under Public Company Accounting Oversight Board (PCOAB), would need to consider PCOAB issued Staff Questions and Answers, *Attest Engagements Regarding XBRL Financial Information Furnished Under the XBRL Voluntary Financial Reporting Program on the Edgar System, and* Interim Attestation Standard AT Section 101, *Attest Engagements* issued on May 25, 2005.

As is the case with any other filings, the creditability and reliability of a document issued increases if it has been audited and certified independently. The preparers and auditors would focus primarily to ensure that the tagged data included in the Financial Statements, including the footnotes to the financials, are complete, accurate and consistent. As part of providing any kind of audit or assurance services in relation to the XBRL tagged data, auditors would use the work of a 'specialist' wherever required in the performance of the assurance services.

Currently there are no auditing standards available in India to provide guidance to the auditors in providing XBRL related assurance services. The ICAI has issued Auditing in a Computer Information Systems Environment SA 401, which

provides standards on procedures to be followed when an audit is conducted in a computer information systems (CIS) environment. However, a common framework for the XBRL assurance services would need to be issued to ensure that the XBRL tagged data are accurate, consistent and complete. Further, when the financial statements including notes are issued in XBRL-tagged form, it would need to be addressed if the auditors' report will also form part of the tagged data. The auditor may need to consider identifying in the auditors' report the financial statements that form a part of his or her opinion.

As Assurance Standards vis-à-vis XBRL documents continue to evolve, potential benefits to the auditing community are expected to grow. XBRL provides auditors with higher quality usable information. For auditors, operating interactive data can save significant time and client expense when performing key audit exercises such as anomaly detection and benchmarking.

It is evident that auditors would have a significant and crucial role to play in validating and providing audit and assurance services on the XBRL tagged documents. This also brings to fore the need to build adequate skills and competencies to tap this potential.

3.7   The Road Ahead

Regulatory agencies and reporting organisations the world over believe that XBRL presents a significant opportunity to the various users of information. The coming years will demonstrate the extent to which this opportunity is tapped and the benefits realised. In the meantime, there is a need especially for the accounting and auditing communities to understand the framework and its deployment effectively and build their skill sets and competencies in this area in order to render the most critical service expected from them by stakeholders – quality and reliable business reporting.

An Introduction to Taxonomies

4.1 What is a Taxonomy?

XBRL uses 'taxonomies', a type of data dictionary for financial reporting, that are applied to different reporting standards, languages, currency types and industries. These taxonomies define the specific tags for individual items of data (such as "net profit").

The following image depicts the relationship of Taxonomy, Instance Document (facts) and Financial Report. The Taxonomy contains the definitions and relationships of the items in the financial statement. The Instance Document contains the actual data with a reference to the Taxonomy.
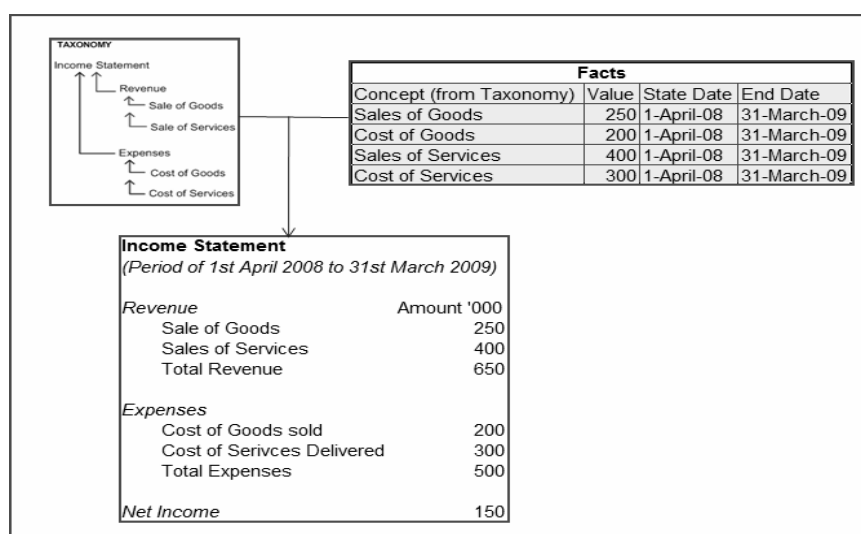
Fig 9: Relationship of Taxonomy, Instance Document and Financial Report

Different taxonomies are required for different financial reporting purposes: e.g., IFRS, US GAAP, etc. National jurisdictions may also need their own financial reporting taxonomies to reflect their local accounting regulations. Generic or core taxonomies have been developed by various jurisdictions to address specific reporting needs such as say, US GAAP.

Once a business reporting application is made compatible with these taxonomies, the application can easily communicate to other XBRL-enabled

applications. More importantly, these taxonomies are not based on local standards, but are being developed at a global level and therefore enable organisations world-wide to speak a common language. In other words, business reporting documents of two different organisations, even though based in different countries, prepared say on the US GAAP taxonomy, will be comparable on like to like terms because of the underlying common taxonomy.

Organisations, including regulators, specific industries or even companies may also require taxonomies to cover their own business reporting needs. Such situations can be handled though "Extension Taxonomies".

Taxonomies and Extensions are created by using Taxonomy Editors. See Appendix 4 for a listing of some currently available tools.

The following paragraphs give a technological view of Taxonomy and Extension Taxonomy and an introduction to some generic or core Taxonomies currently available.

4.2   Structure of a Taxonomy

As indicated earlier, schematically, an XBRL suite can be represented as under:

Fig 10: XBRL Suite

Source : http://www.iasb.org/XBRL/Resources/Fundamentals.htm
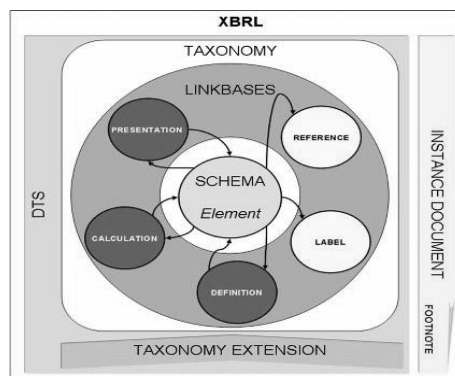
A Taxonomy document consists of the following:

- Schema file containing the definition of the concepts (e.g., Revenue, Sale of Goods, Expenses, etc) used in the business report (.xsd file)
- XML files containing relationship between concepts (.xml files)
    - Definition
    - Presentation

–   Calculation

–   Labels

–   Resources
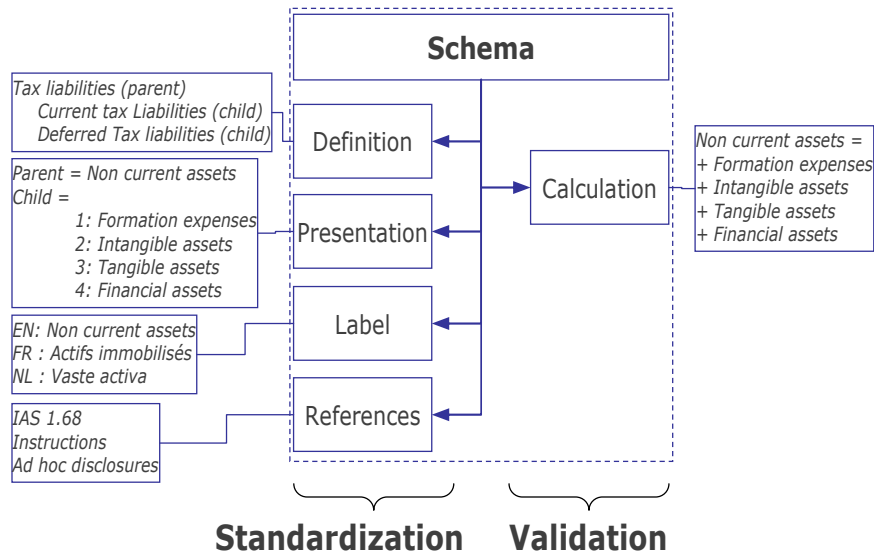
Fig 11: Taxonomy Structure

Source : Deloitte

A brief explanation of the components is mentioned below:

4.2.1   Schema File

- Contains financial reporting concepts that are displayed in the Report
- Defines Data types of reporting concepts
- Contains 'Namespaces' as attributes
- 'Namespace' components are: as follows:
    - xmnls:xbrli: contains elements & attributes unique to XBRL
    - xmnl:link: contains XBRL implementation of xLink. Relates the concepts.
    - xmnls:xlink: contains native XML linking elements
    - xmnls:xhtml: contains xhtml vocabulary
    - xmnls:xml: contains xml related terms

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- xmnls:ex: assigns a prefix to the name of the taxonomy being built

```
<schema
    xmlns:xbrli="http://www.xbrl.org/2001/instance"
    xmlns:link="http://www.xbrl.org/2001/XLink/xbrllin
    kbase" xmlns:xlink="http://www.w3.org/1999/xlink"
    xmlns:xhtml="http://www.w3.org/1999/xhtml"
    xmlns="http://www.w3.org/2001/XMLSchema"
    xmlns:ex="http://www.myexample.com"
    targetNamespace="http://www.myexample.com"
    elementFormDefault="qualified">

 <annotation>
  <documentation> Income Statement
 </documentation>
 </annotation>

<import
namespace="http://www.xbrl.org/2001/inst
ance"        schemaLocation="xbrl-
instance.xsd"/>

<element name="incomeStatement"
type="xbrli:monetaryItemType"
substitutionGroup="xbrli:item"
 id="incomeStatement"/>

<element name="revenue"
type="xbrli:monetaryItemType"
substitutionGroup="xbrli:item" id="revenue">
<annotation>
 <documentation> Revenue in Income Statement
</documentation>
</annotation>

.
.
.
</schema>
```

Fig 12: Schema File

Source : XBRL.Org

- target namespace: declares the name of taxonomy being built

- Documenting is done inside the <documentation> element

- <Annotation> contains the documentation element

- <Import> element: ties the XBRL namespace (declared with prefix xbrli) to actual XML schema file containing the definition of the XBRL vocabulary

- <element> defines a business reporting concept

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4.2.2 Definition Relationship

- Defines parent child relationship between reporting concepts
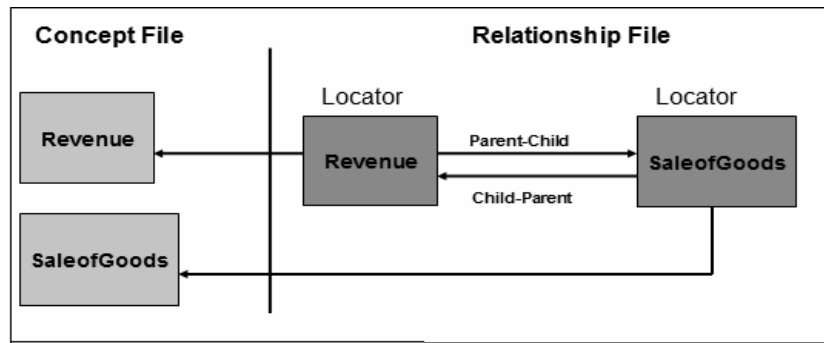
Fig 13: Relationship between Reporting Concepts

Source: Deloitte

- Defines element-dimension relationship between reporting concepts
    - E.g. *Total revenue by Geography is equal to Total Revenue by Product. These two values are the same but the same revenue can be broken down (drill down) through a two different dimension hierarchy*
    - There is no relationship between total revenue by geography and total revenue by product line
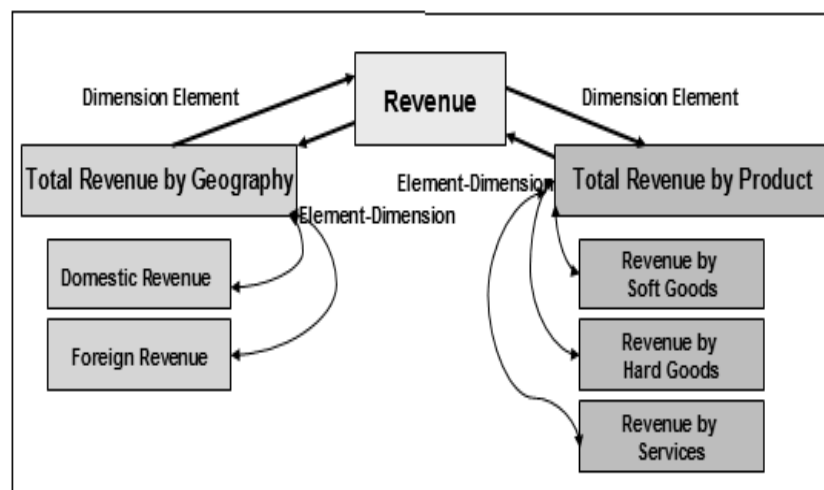
Fig 14: Relationship between Reporting Concepts

Source: Deloitte

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- Defined using <definitionArc> element

4.2.3 Presentation Relationship

- Defines relationship to determine the display order of reporting concepts in the report
- Order attribute
  - indicates the order of display for all immediate children of an element
  - Can have decimal numbers
- Defined using <presentationArc> element

Fig 15: Relationship File

Source: XBRL.org

4.2.4 Calculation Relationship

- Defines calculation relationship between different concepts
- Defined using <calculationArc> element
- Defines the following 4 standard roles

- http://www.xbrl.org/linkprops/arc/xxx where xxx can be as following:
    - child-parent
    - parent-child
    - dimension-element
    - element-dimension

- It is a common practice to create 2 calculation arcs, one for each direction
    - The "from" and "to" attribute values are changed depending on the arc role
    - For child-parent role,the value of "from" is summed into the value of "to"
    - For parent-child role, the value of "to" is summed into the value of "from"
    - For dimension-element, the value of "to" is copied from one of the values of "from"
    - For element-dimension, the value in "from" is copied into the value of "to"

- Calculation relationships are not written for concepts that don't participate in calculations or concepts that don't have a numeric type
    - Additional attribute is called weight
    - Indicates the multiplier to be applied to child when summing up the value
    - Weight of 1 means 100% of child's value is summed to parent
    - Negative value indicates that the value of concept is subtracted from parent
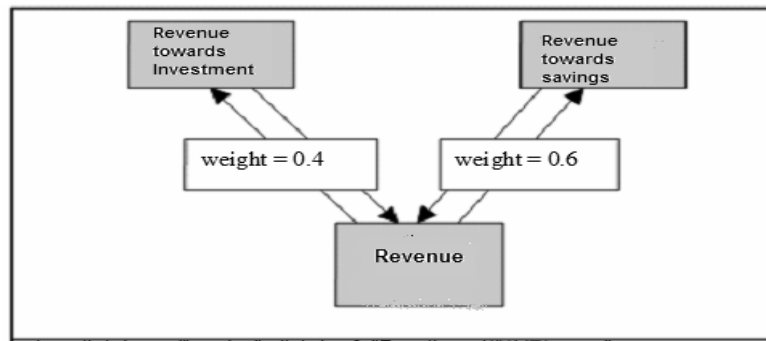
Fig 16: 'Weight' attributes

Source: Deloitte

4.2.5   Label Relationship

- Defines relationship between label resource and reporting concepts displayed in the report; used to attach human readable names to concepts

- Label contains the text to be displayed with concept on business report

- Many labels can be created for a single concept

- Helps to display labels in multiple languages on report

- Defined using <labelArc> element
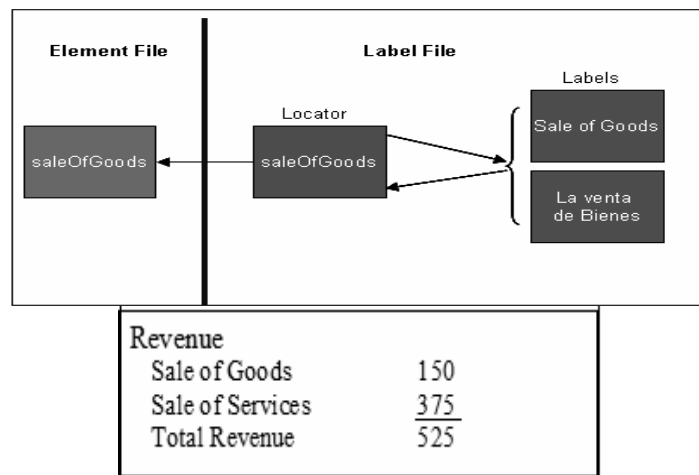
Fig 17: Label File

Source: Deloitte

4.2.6 Resource/Reference Relationship

- Defines relationship between external resource and reporting concepts displayed in the report
- Used to connect a reporting concept with authoritative statements in the published business, financial, accounting and other literature
- Helps link reports to resources outside the XBRL system
- Defined using <resourceArc> element
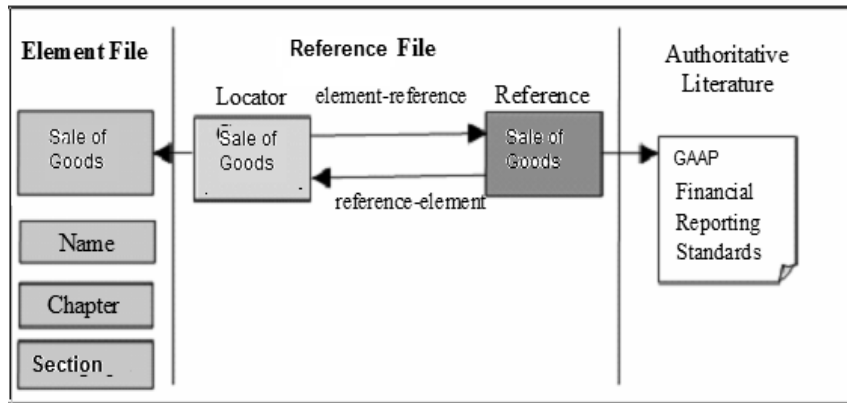
Fig 18: Reference File

Source : Deloitte

4.3 Extension Taxonomy

While mapping the items of a Financial System with a Base Taxonomy, some items may remain unmapped. In such cases, new items need to be inserted in the base taxonomy. For example, while mapping the financial items with base taxonomy, if a matching item for '*Earning per share computation*' is not found in the Base Taxonomy, the Base taxonomy would need to be *extended* to include this company specific item. This process is called Extension of Taxonomy and the updated Taxonomy is called the Extended or Edited Taxonomy. This is the manner in which financial items specific to an organization are handled in the XBRL framework. This concept has been further elaborated in Para 3.5 of Chapter 3.

An Extension Taxonomy allows an organization to create and customize concepts and elements for their particular reporting practices. Extension taxonomies import and then build on or "extend" the core reporting taxonomy.

- Create new extension of XBRL taxonomy schemas to define elements that are not already defined in the taxonomies that one is leveraging

- Create presentation, definition, and calculation link bases that establish the relationships between the new XBRL elements in extension schemas and the XBRL elements in the schemas that one is extending

- Create new XBRL link bases that provide labels and references for the new XBRL elements in the extension schemas

- Any taxonomy can have the following specializations:
  - Foundation Terms: Base level Taxonomy
  - Industry Terms: Extension for Industry specifications
  - Company Terms: Company specific terms

4.4   Some Currently Available Core Taxonomies

4.4.1   IFRS Taxonomies

4.4.1.1 IFRS Taxonomy 2009

On April 2, 2009, the International Accounting Standards Committee (IASC) Foundation XBRL Team released the final version of the IFRS Taxonomy 2009.

The IFRS Taxonomy 2009 is a translation of International Financial Reporting Standards (IFRSs) as of January 1, 2009 into XBRL. The IFRS Taxonomy 2009 and Due Process Handbook for XBRL Activities are freely available on its website www.iasb.org/XBRL/IFRS+Taxonomy

As explained in Para 3.4.2 of Chapter 3, the IASC Foundation XBRL Team has published two supporting documents to assist the users of the IFRS Taxonomy:

- The IFRS Taxonomy Guide is specifically prepared for users of the IFRS Taxonomy who are already familiar with XBRL and who have an understanding of the application of IFRSs in XBRL.

- The IFRS Taxonomy Illustrated is a visualisation of the IFRS Taxonomy in a tabular, easy to read format, which has been specially prepared for accountants, auditors and those wanting a comprehensive overview of the content and structure of the Taxonomy and does not require the knowledge of XBRL.

The IFRS Taxonomy Guide is available in a free electronic format with interactive linkage to eIFRS in the IASB website.

4.4.1.2 IFRS for SMEs Taxonomy

The International Financial Reporting Standards (IFRS) for SMEs Taxonomy is currently being developed by the IASC Foundation XBRL Team and is due for release by December 2009. Just as the IFRS for SMEs is based upon the full set of IFRSs, the IFRS for SMEs Taxonomy is built on the foundation of the IFRS Taxonomy 2009.

4.4.2   US Taxonomies

On April 20, 2009, XBRL US released the 2009 US GAAP Taxonomies for public use. Once the SEC formally accepts the 2009 taxonomies, entities that provide an interactive data file (i.e., an XBRL exhibit) in SEC filings will use these taxonomies to prepare their exhibit.

The US GAAP Taxonomies released include:

- Document and Company Information (all companies)
- Commercial and Industrial Taxonomy (most companies)
- Banking and Savings Institutions Taxonomy
- Brokers and Dealers Taxonomy
- Insurance Taxonomy
- Real Estate Taxonomy
- Schedule of Investments

The US GAAP Taxonomies can be downloaded with other resources for implementation and use including the Preparers Guide, and Case Studies from - http://xbrl.us/taxonomies/Pages/US-GAAP2009.aspx website.

The other current Taxonomies available are:

- Mutual Fund Risk / Return Summary Releases 2008
- Schedule of Investments, Releases 2008
- US GAAP Investment Management Taxonomy

FASB Codification and XBRL USGAAP Taxonomy

The Financial Accounting Standards Board (FASB) released the Accounting Standards Codification on July 1, 2009 and it is effective for financial statements with interim or annual periods ending after September 15, 2009. The Codification reorganizes thousands of U.S. GAAP pronouncements into roughly 90 accounting topics, using a consistent structure, and replaces existing

authoritative accounting pronouncements including those issued by the FASB, EITF, AICPA, and other organizations. It also includes relevant SEC guidance that follows the same topical structure in separate sections in the codification.

The XBRL U.S. GAAP Taxonomy has been updated to reflect the FASB Accounting Standards Codification and is effective for interim and annual periods ending after September 15, 2009, FASB and XBRL US announced on August 4, 2009.

A new codification extension taxonomy that incorporates the new codification references is available on the XBRL US Web site (http://xbrl.us/taxonomies/Pages/FASBCodification_2009.aspx). Preparers using the U.S. GAAP Taxonomy to create XBRL-formatted financial statements can now link directly from the taxonomy extension to the specific codification reference as posted on FASB's Codification Web site(http://asc.fasb.org/).

4.4.3   ICAI XBRL Taxonomy

The ICAI has finalised the draft containing the general purpose financial reporting XBRL taxonomy for commercial and industrial companies. This draft taxonomy covers the financial statements, viz., Balance Sheet, Statement of Profit and Loss, and Cash Flow Statement, and the related non-financial information.

The draft taxonomy conforms to the Indian Accounting Standards and Company Law while containing the architectural features of the IFRS general purpose taxonomy 2006. The taxonomy designed is for Commercial and Industrial group (C&I), which includes trading entities, oil and gas companies, service providing entities, real estate and construction companies and all other commercially operated entities.

The XBRL Taxonomy for the banking sector is currently being developed.

The Exposure Draft of General Purpose Financial Reporting XBRL Taxonomy is for Commercial and Industrial Companies which is available in the XBRL 2.1 format of xml files and is a usable version. These taxonomy files can be viewed by loading it onto any XBRL 2.1 compliant software that provides the functionality of reading taxonomies. The taxonomy file set is available as a zipped file. The users can download the zipped file at a convenient location in their computer and unzip and extract the files.

For detailed instructions on downloading and viewing the taxonomy, visit the web page http://icai.org/post.html?post_id=3591

4.5   The Road Ahead

As more and more countries and regulators consider XBRL, more such taxonomies will emerge. It merits thought that because these taxonomies are meant for a particular purpose and do not incorporate other common reporting practices, users would need to create numerous taxonomy "extensions" to accommodate their financial reporting needs.

The creation of numerous extensions significantly increases the complexity and difficulty of creating electronic financial reports. One of the key benefits of XBRL is that it enables companies to directly compare business and financial data; this comparability will be reduced if preparers and other extenders create large numbers of custom elements.

Also, if jurisdictions or regulators such as central banks define their own taxonomy extensions independently, or with limited collaboration, to meet their reporting needs, global electronic based reporting could become fragmented, with different regions using potentially inconsistent and incompatible customized extensions.

This warrants monitoring by the global XBRL standard setters. The coming years are likely to see an assessment of such information and possible evaluation of extensions for inclusion in the core taxonomies.

Opportunities for Chartered Accountants

5.1 The Future in XBRL

XBRL has become a necessary concomitant to the impending convergence and standardization of the financial reporting framework. As discussed in Chapters 2 and 3, regulatory agencies around the world have begun the process of adopting and enforcing XBRL as a reporting format at a swift pace, constantly enlarging the scope of its use. As its usage evolves, XBRL is expected to be used at various levels of information creation and exchange, both within organisations and with external agencies, including:

- Internal reporting within companies
- Reporting to Regulators in India and aboard
- Reporting to various external agencies such as Financial Institutions, Credit Rating Agencies, etc
- Easy exchange of information between regulatory bodies, or between government departments

In addition to such financial applications, XBRL is expected to play a considerable role in storing, exchanging and analysing business and statistical data too.

The list given above sufficiently indicates the permeating nature of XBRL on the reporting environment and its undeniable impingement on both the attest and non-attest functions of Chartered Accountants.

This Chapter discusses the opportunities that are expected to present themselves to Chartered Accountants (CAs).

5.2 Opportunities for Services

The gradual adoption of XBRL as a medium of financial reporting has received considerable support from regulatory authorities, internationally. As regulatory requirements take further shape in India, each Company will be faced with the following challenges:

- To assess the XBRL reporting requirements that will be applicable to the Company

- To consider the impact of XBRL implementation on its reporting systems and internal controls

- To examine the options available for implementing XBRL

- To identify XBRL tools best suited to its processes and environment

- To identify appropriate XBRL taxonomies and explore the need for Extensions

Each of these challenges translates into service avenues for Chartered Accountants both within and outside the Company to enable it to take decisions that support and complement its reporting processes.

The rollout of XBRL can be expected to generate the following kinds of engagements:

5.2.1 Compilation Engagements

At the initial stage of XBRL adoption across companies, opportunities for CAs will stem from the need to outsource XBRL document preparation to meet immediate mandate requirements.

5.2.2 Advisory Engagements and Agreed Upon Procedures

As the extent of XBRL adoption within an organization increases, there will be a need to bring XBRL reporting in-house and begin developing internal capabilities. From here on, the task will be to integrate / embed XBRL into source systems and use the same for internal as well as external reporting.

Typically, the implementation of XBRL by a Company involves three phases / activities, where the involvement of CAs can be envisaged –

- Implementation

- Testing

- Training

Implementation Services

The initial implementation of XBRL-tagged financial information, will, no doubt, see companies face technological issues, including change management, adaptation to new processes, etc. The services that can be offered by Chartered Accountants to assist companies address these issues include

- Knowledge Imparting services, such as

    – Familiarising clients with XBRL by imparting an understanding of how it works

- Educating clients about Company specific taxonomies and the reporting standard taxonomy

- Creating an awareness of other uses of XBRL in the organization, apart from external reporting

- Design & Implementation services encompassing -
  - Assessment of the adaptability of current processes and systems of the Organization to XBRL reporting
  - Development of an implementation roadmap for sustainable XBRL reporting based on the Company's financial reporting process and technology infrastructure
  - Definition of the XBRL architecture and design guidelines
  - Assistance in acquiring appropriate XBRL Tools after identifying the products in the market that are appropriate to the Company's particular processes.
  - Development of reporting taxonomies in Indian GAAP, US GAAP, or IFRS as applicable to the reporting requirements of the Company
  - Performing gap analysis of financial statements to the reporting standard taxonomy (be it Indian GAAP, US GAAP or IFRS)
  - Building necessary taxonomy extensions
  - Tagging financial statements, financial statement schedules and footnotes
  - Coordination of the iterative development and testing of specific taxonomies, e.g. the Corporate Income Tax Taxonomy

- Design validation services to review and validate the instance document, extensions, etc.

- Compilation of the XBRL package for reporting / filing with the appropriate authorities

Testing Services

Once implementation is complete, it becomes necessary to test the completeness, accuracy, and consistency of an entity's XBRL-tagged data of information for a specified date and period.

Any XBRL implementation exercise involves risks such as the use of the wrong taxonomy, errors in data tagging and account-to-tag mapping, breach of integrity of tags in a real time reporting scenario, security risks and risks associated with outsourcing or with vendors.

Through Agreed Upon Procedures, suitably tailored to each Company's individual needs and the expectations of its management and audit committees, CAs will be expected to interalia,

- verify that all applicable regulatory requirements have been met in the taxonomy used

- evaluate the accuracy of data tagging and definition of associated metadata, such as precision, currency, etc.

- review the approval and selection process for application of tags

- assess the completeness of the Company's data tagging to ensure that all data are accounted for and all accounts mapped

- review customizations and taxonomy extensions

- review measures to maintain tag integrity through deployment of automated controls and monitoring in a real time environment

- review the approval of financial statements based on tagged data

- assess security measures such as encryption, firewalls etc.

thus mitigating the risks expected in the implementation phase.

In time, new auditing pronouncements may regulate the manner of acceptance and execution of such agreed upon procedures. For example, April 28, 2009, the AICPA issued SOP 09-1, to provide guidance to practitioners who perform agreed-upon procedures engagements with respect to XBRL-tagged data.

Training Services

Training services begin from the pre-implementation stage and continue till after implementation and testing. Initially, this involves an assessment of the XBRL readiness of the staff and determination of the extent of skills / training required for each Company. Ranging from purely awareness creating programmes to specific and in-depth sessions, training will then be imparted to clients on the following aspects:

- Skill development to employ and use new processes, tools and technology

- Understanding the taxonomy of the reporting standard and mapping it appropriately to the Company's own financial information

- Recognizing possible risks in XBRL implementation and ensuring that they are adequately covered

- Assessing the completeness and accuracy of XBRL-tagged data

- In-depth technical training to build taxonomies and customize labels

5.2.3　Other Related Opportunities

With the introduction and growth of reporting in the XBRL format, there will be a greater need for CAs to participate in the evolution of policies / practices with respect to

- Regulatory Matters
  - Defining the responsibilities of the preparers of financial statements and auditors
  - Determining the role of auditors in the context of Interactive Data vis-à-vis traditional financial statements
- Taxonomies
  - Development of new taxonomies
  - Maintenance and updation of existing taxonomies
- Preparation of Guidance Documentation
  - For preparer and user guidance
  - For Company specific extensions
- Tool Evaluation
  - Evaluation of available software tools
  - Development of new software tools

Audit committee pre-approval requirements would need to be factored for permissible services to audit clients and their affiliates.

5.3　The Road Ahead

The adoption of XBRL in financial reporting is certain to change the current methods of accounting and audit. As stated in the XBRL website (www.xbrl.org), "through the use of XBRL in companies, accountants will be able to

- Obtain more rapid and reliable data on company financial performance.
- Greatly reduce effort and costs in gathering and analysing data.
- Simplify and automate tasks.
- Focus effort on analysis and value-added work.
- Make better use of software to improve efficiency and speed."

On the services that can be performed by a Chartered Accountant, the ICAI mentions diverse services from accountancy to taxation, from management

accounting to share valuation, from risk assessment to company secretarial work, etc.

It is however to be noted that as with any technology based solution, there is a need to invest in developing the skill sets required. The XBRL framework is an interesting mix of technology and accounting. While the second is an area of familiarity, the technology element is something that CAs would need to understand. The degree of proficiency required vis-à-vis the technology element would depend on the area of service that a CA intends to focus on. For example, developing Taxonomies and Extension would require a significant degree of expertise in related tools. CAs would therefore need to evaluate the various opportunities that will present themselves in XBRL reporting and develop their own professional roadmaps.

It can be said with a fair degree of certainty that with the implementation of XBRL in companies, and on their part, investment in developing/enhancing their own skill sets, CAs will be able to move up the value chain in all their functions by focussing more on the analysis of data, rather than its collation, thus making work processes more efficient.

XBRL Deployed - Illustrative Case Studies

Case Study 1

XBRL implementation for Grants Management at the Nevada Department Agriculture

Source: White Paper Envisioning XBRL for Applications beyond Financial Reporting issued by the State Government of Nevada

Background

The Nevada Department of Agriculture had more than 60 different grants for which information was gathered and maintained on a variety of spreadsheets and Word documents. Each month a detailed report was prepared in Excel for grant managers and owners. The information for this report was collated manually in excels spreadsheet. The information included grant reimbursements, footnotes and other information. Needless to say, this process was very time-consuming and required about two weeks for each grant-reporting cycle. Further, such an approach was prone to errors and it did not result in any real time meaningful information for decision making.

XBRL at Nevada Department

While the department was committed to openness and transparency, however tracking grants and other financial information across multiple agencies and departments running different software on incompatible systems was not easy. In 2007, the Nevada Department of Agriculture decided to use XBRL as a solution to grant reporting and two of Agriculture's grants were selected for the XBRL pilot. The end objectives in mind were timely and accurate data with stronger internal controls, reduced costs, a standardized system of seamless data exchange, business processes and data elements. XBRL fit the bill perfectly.

The Outcome

The grants managers now use XBRL for entering the initial grant information. The front end interface for this input was a spreadsheet like template to facilitate ease of use. The grant information now included grant eligibility along with pertinent details relating to utilization of these grants, further broken down into various components like salaries, supplies etc. All that grant managers needed to do was update initial information on this template that had X-forms underneath it.

The X-forms data was tagged at the source and then housed in a grants repository, which had grant instance documents, GL (General Ledger) instance documents, grant taxonomies, and also GL taxonomies.

With the removal of manual manipulation of the data, internal controls were strengthened.

Case Study 2

Water Boards EMU reporting: European reporting obligations fulfilled digitally

Source: Water Boards EMU reporting. European reporting obligations fulfilled digitally – www.semansys.com

Increasing pressure on performance, transparency and costs

Local and regional water management in The Netherlands is in the hands of the Water Boards, or Waterschappen. They are responsible for flood control, water quantity, water quality and treatment of urban wastewater. Water Boards are decentralized public authorities with legal tasks and a self-supporting financial system. In 1850 there were about 3500 Water Boards. Mergers reduced this number to 48 by January 2003, employing about 11,000 people. The Water Boards have united their common interests in the Association of Water Boards or Unie van Waterschappen.

The Water Boards finance their work from two taxes that they levy: the Water Board charge and the pollution levy. Their financial operation is subject to national and European regulations, just as is the case with all other national and decentralized public institutions. European Union (the European Government, EU) as well as the European Central Bank (ECB) require a complex scheme of quarterly financial reports, called EMU reporting. The Dutch statistics agency CBS is chartered to receive, process and to relay these reports. CBS does this not only for the Water Boards, but also for the other decentralized government entities provinces (states) and municipalities (cities).

Will transparency result into additional burden?

The Water Boards and CBS faced the challenge of how to introduce an additional reporting duty without causing additional administrative burden. The Boards maintain about 50 reporting relationships of varying complexities. Adding yet another would only be possible on the basis of a completely new and universal approach that would reduce the efforts involved in existing reporting duties. The solution needed to represent ease of adoption for the Board's IT

people and accounting departments, as well as for the applicable vendors of financial systems. Keywords were low cost, easy deployment, based on open standards and open architecture.

What should be the Approach?

The Association of Water Boards concluded that the global standard for digital reporting XBRL could be the answer to the needs of the Water Boards concerning EMU-reporting. The Association and solution provider decided to jointly define a proposition towards the individual Boards. Most of the members of the Boards expressed their commitment to invest in XBRL, if and when CBS would agree to accept the standard. With that commitment the consortium had little trouble convincing CBS to embark on this journey.

What is the Solution?

CBS managed to produce an approved taxonomy including 641 newly defined reporting elements in about a month, with no software training. To facilitate the reception of XBRL reports or instance documents, CBS also decided to keep things as simple as possible.

What was achieved?

This is one of the first XBRL implementations in the public domain with a full cycle implementation using the public internet as the transport medium for reports. CBS has recognized the value the accrued benefits. The Ministry of the Interior of The Netherlands informed provincial and municipal government about the requirement to provide EMU reporting to CBS in XBRL as from 2004. The costs involved were also minimal. The report producers have spent just a couple of thousand of Euros while the impact was manifold. EMU is just one of the 50 reporting duties a Water Board has; EMU reporting is required from tens of thousands of institutions in Europe; CBS has hundreds of thousands reporting relationships. Once all this is standardized on XBRL and a common taxonomy framework, the savings would be immense.

Case Study 3 : Microsoft Corporation

Source : http://www.microsoft.com/msft/FAQ/xbrl.mspx

Microsoft published select financial data in XBRL format including core financial statements such as the Income Statement, Balance Sheet, Statement of Cash Flow, Statement of Stockholders Equity, and Business Division/Segment Revenue (Earnings Report only) in XBRL for its Earnings Reports, Form 10-Q and Form 10-K filings. Investor Central publishes financial statements WebPages using XBRL. The XBRL tags are displayed in line in XBRL mode (<>).

Microsoft's website states: "XBRL increases the re-usability of financial statement information. Instead of creating multiple report outputs for multiple purposes, a single XBRL document can be created that addresses most needs. This reduces the number of total reports that need to be created and also reduces the re-keying of financial data for analytical and other purposes. As a result, this helps reduce manual errors and gives Microsoft better ability to proof and control its financial data. Externally, investors will have better access to financial results because XBRL facilitates effective and timely analysis of that information. As a leader in financial reporting and in technology, filing Form 10-Q and 10-K XBRL financial statements to the SEC is one way of demonstrating the belief that XML–based standards, like XBRL, will play an important role in changing how companies share and leverage financial information.

By making its financial information publicly available in XBRL, Microsoft also provides a sample for both internal and external software developers as they move forward in creating XML and XBRL driven tools. Making the Microsoft financial statement information available in XBRL format enables any user, anywhere in the world, on any device, to perform reviews and analyses of the data via the Internet.

XBRL Deployed – Illustrative List of Projects

Sl. No.	Project Type	Project Name	Brief Description of the Project	Organization Undertaking the Project	Entity Type	Status of the Project
Source:XBRL.org (Website reference**:** http://www.xbrl.org/frontend.aspx?clk=uSLK&val=53)						
United States of America						
1	Initiative	XBRL Initiative	NA	Financial Accounting Standards Board (FASB)	Not for Profit	Development
2	Regulatory Reporting	Interactive Data to Improve Financial Reporting	Collect financial information from approximately 15,000 public companies and 8,000 mutual funds which are regulated by the SEC.	US Securities and Exchange Commission	Government	In Production
3	Regulatory Reporting	FFIEC Call Report Modernization	Uses of XBRL by FFIEC to collect call report information from 9000 regulated financial institutions and distribute it to 7 different agencies which make use of the information.	Federal Financial Institutions Examination Council (FFIEC)	Government	In Production
4	Initiative	XBRL Initiative	RIXML	RIXML	Consortium	Development
5	Initiative	XBRL Initiative	NA	AICPA	Not for Profit	Development
6	Initiative	XBRL Initiative	NA	International Federation of Accountants (IFAC)	Not for Profit	Development
7	Initiative	Bryant College XBRL Education Initiative	NA	Bryant College	Education	Development

XBRL – A Primer

Sl. No.	Project Type	Project Name	Brief Description of the Project	Organization Undertaking the Project	Entity Type	Status of the Project
8	Taxonomy Creation	IBM Corporate Data Governance Council Risk Management Taxonomy	Risk reporting by public companies.	IBM Corporate Data Governance Council	Public Sector	Development
9	Canonical-based Exchange	Office of the Controller (Nevada) XBRL Project	Use of XBRL to transfer information relating to collections of receivables.	Office of the Controller, State of Nevada	Government	Development
10	Initiative	XBRL Initiative	Open Compliance and Ethics Group	Open Compliance and Ethics Group	Not for Profit	Development
11	Regulatory Reporting	Ohio State Auditor XBRL Project	Use of XBRL by regulators to collect information from those they regulate.	Office of Auditor, State of Ohio	Government	Development
12	Regulatory Reporting	Oregon CAFR Project	Financial reporting by 88,000 state and local governmental entities within the US.	Office of State Auditor, State of Oregon	Government	Prototype
13	Information Supply Chain	Mix Market	Information supply chain which collects information from microfinance lenders.	Microfinance Information Exchange (MIX)	Not for Profit	In Production
14	Prototype	UTC Voluntary SEC Filing	Internal prototype to test XBRL and to participate in SEC VFP.	United Technologies Corporation	Private Sector	Prototype
15	Analysis	Comparison of Companies Globally with Superior Analytics	Internal system for analysis of public companies which they track.	Morgan Stanley	Public Sector	In Production
16	Taxonomy Creation	ICI Taxonomy	Taxonomy for use by 8,000 mutual funds for reporting to the SEC.	Investment Company Institute (ICI)	Not for Profit	In Production

Sl. No.	Project Type	Project Name	Brief Description of the Project	Organization Undertaking the Project	Entity Type	Status of the Project
17	Canonical-based Exchange	Integrate Family of Disparate Financial Systems XBRL Project	Integration of legacy accounting systems.	US Department of Housing and Urban Development, Federal Housing Administration (FHA)HUD	Government	In Production
18	Analysis	Individual Investor Analysis	Internal prototype to test XBRL and to participate in SEC VFP.	Microsoft	Public Sector	In Production
19	Analysis	iMetrix Product	Use of XBRL to distribute analytical information.	Edgar Online	Public Sector	In Production
South Africa						
1	Regulatory Reporting	Pension Fund Project	Use of XBRL by regulators to collect information from those they regulate.	FSB, Registrar of Pension Funds	Government	Development
2	Regulatory Reporting	South African Revenue Service Project	Use of XBRL by regulators to collect information from those they regulate.	South African Revenue Service	Government	Development
3	Prototype	XBRL Financial Statement for Johannesburg Stock Exchange	Use of XBRL to collect financial information of listed companies.	Johannesburg Stock Exchange	Stock Exchange	Voluntary Filing
Australia						
1	Regulatory Reporting	APRA Statistics Project	Use of XBRL by regulators to collect information from those they regulate.	Australia Prudential Regulation Authority (APRA)	Government	In Production
2	Regulatory Reporting	Department of Treasury (Australia) Project	Use of XBRL by regulators to collect information from those they regulate.	Department of Treasury (Australia)	Government	Development

SI. No.	Project Type	Project Name	Brief Description of the Project	Organization Undertaking the Project	Entity Type	Status of the Project
3	Regulatory Reporting	Australian Tax Office Project	Use of XBRL by regulators to collect information from those they regulate.	Australian Tax Office	Government	Mandatory Filing
4	Regulatory Reporting	Australian Bureau of Statistics Project	Use of XBRL by regulators to collect information from those they regulate.	Australian Bureau of Statistics	Government	Development
5	Regulatory Reporting	Australian SBR	Use of XBRL for reporting to government.	Australian Government	Government	Implementation Phase
			India			
1	Taxonomy Creation	XBRL Taxonomy for Commercial and Industrial Companies	Development of taxonomy to enable companies to prepare the general purpose financial statements, i.e., Profit and Loss Account, Balance Sheet and Cash Flow Statement, in XBRL	Institute of Chartered Accountants of India	Not for Profit	Development
2	Regulatory Reporting	National Stock Exchange of India XBRL Project	Use of XBRL to collect financial information of listed companies.	National Stock Exchange of India (NSE)	Stock Exchange	Voluntary Filing
3	Regulatory Reporting	Reserve Bank of India XBRL Project	Use of XBRL by regulators to collect information from those they regulate.	Reserve Bank of India	Government	Mandatory Filing
4	Regulatory Reporting	India's Listed Companies Filing Using XBRL	Use of XBRL to collect financial information of listed companies.	Securities and Exchange Board of India	Stock Exchange	Voluntary Filing
5	Regulatory Reporting	Bombay Stock Exchange XBRL Project	Use of XBRL to collect financial information of listed companies.	Bombay Stock Exchange (BSE)	Stock Exchange	Mandatory Filing
6	Regulatory Reporting	Insurance Regulatory and	Use of XBRL by regulators to collect information from	Insurance Regulatory and	Government	Development

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Sl. No.	Project Type	Project Name	Brief Description of the Project	Organization Undertaking the Project	Entity Type	Status of the Project
		Development Authority (IRDA)	those they regulate.	Development Authority (IRDA)		
7	Regulatory Reporting	Ministry of Company Affairs (India) XBRL Project	Use of XBRL by regulators to collect information from those they regulate.	Ministry of Company Affairs (India)	Government	Development
8	Regulatory Reporting	Ministry of Corporate Affairs	Taxation and Accounting	Ministry of Corporate Affairs	Government	Development
9	Taxonomy Creation	XBRL Taxonomy for Banks	Development of taxonomy to enable banks to prepare their financial statements, i.e., Profit and Loss Account, Balance Sheet and Cash Flow Statement, in XBRL	The Institute of Chartered Accountants of India	Not for Profit	Development

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- White Paper Envisioning XBRL for Applications beyond Financial Reporting issued by State Government of Nevada

- SEBI Corporate Filing and Dissemination System

  http://www.corpfiling.co.in/home/homePage.aspx

- IFRS Taxonomy - www.iasb.org/XBRL/IFRS+Taxonomy

- IFRS for SMEs Taxonomy-

  http://www.iasb.org/XBRL/IFRS+Taxonomy/IFRS+for+SMEs+Taxonomy.htm

- US Taxonomy - http://xbrl.us/taxonomies/Pages/US-GAAP2009.aspx

- US Mutual Fund interactive data - Investors can browse all available filings or search for a desired fund - http://a.viewerprototype1.com/viewer

- ICAI XBRL Taxonomy - http://icai.org/post.html?post_id=3591

- Transforming Financial Information – Use of XBRL in Federal Financial Management issued by Financial Information Sharing (FIS) Subcommittee Financial Management Committee Collaboration and Transformation SIG-Date Released: March 2007

- eXtensible Business Reporting Language - Moving to a global standard for electronic business reporting issued by Deloitte & Touché LLP

- XBRL report preparation:

    - http://www.fujitsu.com/downloads/INTSTG/xbrltools/fujitsu-instance-creation.pdf

    - http://conference-xbrl.demo.apogeehosting.net/Program/Presentations/Preparer%20-%20Getting%20Started%20-%20Fujitsu.pdf

Acknowledgement: Reference has been made to the content/materials in the above mentioned sites/documents in the preparation of this Primer.

Illustrative List of Tools

XBRL member companies provide a variety of software tools specifically to assist those creating XBRL taxonomies and instance documents.

The following list is limited to tools for taxonomy and instance creation. The full range of XBRL related Products and Services from members of the consortium can be obtained from the website: http://www.xbrl.org/ProductsandServices/

Instance Document Creator	Taxonomy Editor
1. Blast Radius (XMetal) http://www.xmetal.com	1. Coyote Reporting http://coyotereporting.com/services.html
2. CaseWare International http://www.caseware.com	2. Edicom http://www.edicomgroup.com
3. CompSci Resources, LLC http://www.compsciresources.com/products.html	3. Fujitsu http://www.xbrl.org/%20%20%20%20http:/software.fujitsu.com/en/interstage-wand/activity/xbrltools/index.html
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7. Dyn AccSys (Xabra Tools) http://www.xabra.org/	7. Semansys http://www.semansys.com
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10. J2R (Batavia) http://www.batavia-xbrl.com	
11. Hitachi Systems and Services http://download.hitachi-system.co.jp/xbrl/information.asp	
XBRL Validation tool	
1. Coyote Reporting http://coyotereporting.com/products.html#xrun	10. Rivet Software http://www.rivetsoftware.com
2. Hyperion http://www.hyperion.com	11. Reporting Standard S.L. http://www.reportingstandard.com
3. Decision Soft http://www.decisionsoft.co.uk	12. Savanet http://www.savanet.com

4.	**Microsoft (Microsoft FRx)** http://www.microsoft.com/dynamic/en/us/products/frx.aspx	13.	Semansys Technologies http://www.semansys.com
5.	Fujitsu http://www.xbrl.org/%20%20%20%20http:/software.fujitsu.com/en/interstage-xwand/activity/xbrltools/index.html	14.	Semansys Technologies http://www.semansys.com
6.	Neo Clarus http://www.neoclarus.com	15.	Snappy Reports http://www.snappyreports.com
7.	J2R (Batavia) http://www.batavia-xbrl.com	16.	Snappy Reports http://www.snappyreports.com
8.	Reporting Standard S.L. http://www.reportingstandard.com	17.	UBmatrix http://www.ubmatrix.com
9.	Neo Clarus http://www.neoclarus.com	18.	UBmatrix http://www.ubmatrix.com
	XBRL Viewer		
1.	CompSci Resources, LLC http://www.compsciresources.com/products.html		

The following table gives a brief description of some of the above mentioned tools to familiarise the reader with the tool.

Tool	Brief description
Fujitsu	**Taxonomy Editor** This tool, Taxonomy Editor is a taxonomy edit tool for XBRL 2.1. This application graphically represents taxonomy structures, and enables users to create various taxonomies through simple operations. It provides functions to separately manage five different linkbases (Presentation, Calculation, Definition, Label, and Reference) that express relationships among element definitions specific to XBRL. Taxonomy Editor is useful not only as an editor but also as a taxonomy browser and a tool for learning about the XBRL 2.1 Specification. **Instance Creator** Instance Creator is an application to create and edit instance documents for XBRL 2.1. This application graphically represents taxonomy structures, and enables users to create instance documents through simple operations. It effectively utilizes five XBRL linkbases (Presentation, Calculation, Definition, Label, and Reference) that express relationships among element definitions specific to XBRL

Tool	Brief description
UB Matrix	**Taxonomy Designer** **UBmatrix™ XBRL Taxonomy Designer** is a desktop application designed for building, extending, and maintaining XBRL taxonomies. As a complete integrated development environment it also offers features like an instance document editor, a built-in XBRL 2.1 compliant processor, a business rules editor, and input document mapping tools. The Taxonomy Designer user interface offers multiple views, including concept relationships, calculations, languages, and properties that stay synchronized as the taxonomy is browsed. Taxonomy Designer offers support for the most current XBRL 2.1 specification including dimensions and tuples, and has a built-in interface to Enterprise Application Suite for sever-based multi-user version tracking. **UBmatrix™ Report Builder** UBmatrix™ Report Builder Microsoft Office Edition seamlessly integrates with Microsoft® Excel to assist your finance and compliance team in preparing XBRL report submissions for the U.S. Securities and Exchange Commission and other regulatory bodies. Report Builder provides an excellent desktop tool for creating, interacting with, and validating XBRL documents. Report Builder leverages the familiar user interface of Excel enabling users to easily prepare, review, and analyze data in XBRL documents. Report Builder fits equally well into manual or automated workflows. And because Report Builder comes with UBmatrix's industry leading XBRL engine, the document is guaranteed to be valid with the taxonomy.
Spider Monkey	Spider Monkey is a taxonomy designer and editor and is available in three versions: **Spider Monkey Enterprise's** unique multi-user editing functionality is suited to large scale taxonomy development efforts. **Spider Monkey Professional** is ideally suited for creation and maintenance of XBRL corporate extension taxonomies. It has intuitive XBRL Dimensions interface, and native support for the XBRL US GAAP taxonomies. **Spider Monkey Personal** Taxonomies developed with

Tool	Brief description
	this tool can be used for both commercial and non-commercial purposes.
Rivet	There are several products available for creating a taxonomy, tagging data viewing the XBRL documents, etc. Given below are some of the widely used ones **Dragon Tag** XBRL Enabler is an easy-to-use Microsoft Office add-in that creates Interactive Data filings from financial statements (and accompanying notes) in Microsoft Word and Excel documents. **Dragon View** is an XBRL review and comparison tool which can be used whether the documents are tagged using Rivet's Dragon Tag XBRL tagging software or another tagging product. With Dragon View, you can open, review the details and export or print the data from any XBRL instance document or taxonomy. This is helpful to perform extensive reviews of XBRL documents before they are filed with the authorities.

Illustrative List of Reference Books on XBRL

1. XBRL For Dummies (For Dummies (Business & Personal Finance)) by Charles Hoffman and Liv Watson

2. XBRL for Interactive Data: Engineering the Information Value Chain by Roger Debreceny, Carsten Felden, Bartosz Ochocki, and Maciej Piechocki

3. Financial Reporting Using XBRL: IFRS and US GAAP Edition by Charles Hoffman

4. Financial Reporting in the XBRL Age: A Step-by-Step XBRL Implementation by Financial Executives Research Foundation Inc.

5. XBRL: Potential Opportunities and Issues for Internal Auditors by Glen L. Gray; PhD; CPA with XML/XBRL Tutorial by Clinton E. White; Jr.

6. Guide & Workbook for Understanding XBRL by Clinton White

7. Accountants Guide to XBRL by White Clinton E.

8. XBRL Reference Guide: Guidance for the Application and Conversion Capabilities of XBRL by Inc. Financial Executives Research Foundation

9. Everything You Wanted to Know About XBRL, but Were Afraid to Ask: A CFO's Guide by Financial Executives Research Foundation

10. XBRL implementation strategies: the bolt-on approach.(XBRL)(XBRL (document markup language)): An article from: Strategic Finance by Gianluca Garbellotto

11. Essentials of XBRL: financial reporting in the 21st century by Bryan P. Bergeron

12. New Dimensions of Business Reporting and XBRL by Roger Debreceny, Carsten Felden, Maciej Piechocki

13. Financial Accounting and Reporting by Barry Elliott

14. XBRL essentials by Charles Hoffman, Carolyn Strand

15. eBook:http://books.google.co.in/books?id=a1NRYltkRIQC&dq=Essentials+of +XBRL+financial+reporting+in+the+21st+century&printsec=frontcover&sour ce=bn&hl=en&ei=Fml0SoSiG5GBkQXQ242EDA&sa=X&oi=book_result&ct= result&resnum=4#v=onepage&q=&f=false

Note: The list of books does not conform to any system of bibliographic documentation.

Glossary of Commonly Used Terms Relating to XBRL

Some Relevant Technical Terms

attribute: a property of an element (e.g., its name, balance, and data type).

block tagging: the process of applying a selected element to a block of text in a report

calculation linkbase: a file containing calculation relationships between elements.

Context: the company- and report-specific information that indicates the relationships of tagged data to other information.

definition linkbase (or dimensional linkbase):a file used to define dimensional relationships between elements.

Dimension: a tool in the XBRL standard that allows preparers to leverage XBRL tags to create simple tables and more complex pivot-style tables within financial statements.

extension taxonomy: — a taxonomy that allows users to add to a base taxonomy by creating new elements or changing element relationships and labels without altering the original taxonomy. It will usually consist of a "schema file" (an XBRL term for an element declaration file) and several "linkbases" (an XBRL term for a relationships file).

Identifier: an identifier for the business entity. For example, an SEC registrant might use the Central Index Key (CIK) code as its identifier.

instance document: an XML file that contains an entity's report-specific information. It represents a compilation of the reporting entity's financial and report-specific information using elements from one or more taxonomies.

label linkbase: a file used to associate labels with designated tags.

Linkbase: a technical term for relationships file.

Mapping: the process of determining the appropriate tag or element for an item in the financial statements, including the notes to the financial statements and financial statement schedules, or determining if a new extension element should be created.

Meta-data: "data about data" of any sort in any media. An item of metadata may describe an individual datum, or content item, or a collection of data including multiple content items and hierarchical levels, for example a database schema. In data processing, meta-data is definitional data that provides information about or documentation of other data managed within an application or environment.

Schema together with linkbases define an XBRL taxonomy. The purpose of XBRL schemas is to define taxonomy elements (concepts) and give each concept a name and define its characteristics. It can be regarded as a container where elements and references to "linkbase" files are defined.

Namespace: an XML namespace is a collection of names, identified by a Uniform Resource Identifier (URI) reference, which are used in XBRL documents as element types and attribute names.

presentation linkbase: a file that defines the organizational relationships (order) of elements using parent-child hierarchies.

reference linkbase: a file used to associate elements within the taxonomy to references to authoritative accounting literature.

relationships file: a taxonomy file that defines specific relationships between elements and other data about elements. There are five standard relationships file types: Presentation, Calculation, Definition (Dimensional), Label, and Reference.

Schema: defines the structure and the content of the XBRL documents that refer to it, by defining, in particular, the elements and attributes and providing information about their type and possible content.

Scheme: a Uniform Resource Locator (URL) for referencing the naming authority framework for the identifier (see "identifier" above). Not to be confused with schema (see "schema" above). For example, if an SEC registrant uses its CIK code as the identifier, the scheme might reference the related listing of CIK codes.

tag (noun): an XBRL tag, or element, is a computer-readable financial reporting term or concept (e.g., a line item on the face of the financial statements, an important narrative disclosure, or an item disclosed in a financial statement schedule).

tagging (verb): the process of associating or applying selected tags or elements to financial data, as well as adding context to the data. The tagging process is performed during the creation of an instance document.

Taxonomy: a dictionary of computer-readable business reporting terms (known as tags or elements) in which each term is defined and assigned a relationship to other terms. An XBRL taxonomy can also be defined as an electronic description and classification system for the contents of financial statements and other business reporting documents. Taxonomies may represent hundreds or even thousands of individual business reporting concepts, mathematical and definitional relationships among them, along with text labels in multiple languages, references to authoritative literature, and information about how to display each concept to a user.

Uniform Resource Identifier (URI): a string of characters used to identify or name a resource on the Internet.

Uniform Resource Locator (URL): a type of Uniform Resource Identifier (URI) that specifies where an identified resource is available and the mechanism for retrieving it.

Validate: the process of verifying that certain aspects of instance documents and taxonomies comply with XBRL specifications.

XBRL: - An XML-based technology standard that improves the way information is created, processed, distributed and analyzed by using "tags" that package information such as definitions, labels, references and time period around individual numbers or text.

Some Relevant Regulatory Terms

AICPA: American Institute of Certified Public Accountants is the national, professional organization for all Certified Public Accountants

Central Index Key (CIK): a unique, public number that is assigned to each entity that submits filings to the SEC. Use of the CIK allows the SEC to differentiate between filing entities with similar names.

EDGAR: Electronic Data-Gathering, Analysis, and Retrieval system, performs automated collection, validation, indexing, acceptance, and forwarding of submissions by companies and others who are required by law to file forms with the U.S. Securities and Exchange Commission

GAAP: Generally an accepted accounting principle is the standard framework of guidelines for financial accounting. It includes the standards, conventions, and rules accountants follow in recording and summarizing transactions, and in the preparation of financial statements (referring

IASB: Independent Standard-Setting Board is appointed and overseen by a geographically and professionally diverse group of Trustees (IASC Foundation)

who are accountable to the public interest Supported by an external advisory council (SAC) and an interpretations committee (IFRIC) to offer guidance where divergence in practice occurs

ICAI: The Institute of Chartered Accountants of India (ICAI) is a statutory body established under the Chartered Accountants Act, 1949 (Act No. XXXVIII of 1949) for the regulation of the profession of Chartered Accountants in India.

IFRS: International Financial Reporting Standard is accounting regulations developed to guarantee comparable balance sheet preparation and disclosure

IFRS Taxonomy: a taxonomy developed by the IASC (International Accounting Standards Committee) Foundation that represents concepts defined in the International Financial Reporting Standards as issued by the International Accounting Standard Board (IASB) and the relations between them.