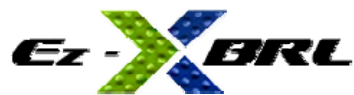




XBRL EXPLORED

Knowledge partner



Simplifying XBRL!

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INTRODUCTION TO XBRL

WHAT IS XBRL?

XBRL or Extensible Business Reporting Language is an open standard which supports information modeling and the expression of semantic meaning commonly required in business reporting. XBRL is XML-based. It uses the XML syntax and related XML technologies such as XML Schema, XLink, XPath, Namespaces, etc. to articulate this semantic meaning. One use of XBRL is to define and exchange financial information, such as a financial statement. The XBRL Specification is developed and published by XBRL International, Inc. (XII).¹

XBRL is a standards-based way to communicate business and financial information. These communications are defined by metadata set out in taxonomies. Taxonomies capture the definition of individual reporting concepts as well as the relationships between concepts and other semantic meaning.²

HOW XBRL WORKS?

XBRL works in a similar way as product barcodes. In case of XBRL, just like bar coding products, we bar code ('mark-up' or 'tag') line items (reported business concepts) within the statements, schedules (notes to accounts) or other business information using a standard list/dictionary of business concepts, called as 'Taxonomies' in XBRL. Examples of such dictionaries or taxonomies could be IN-GAAP C&I Taxonomy, US-GAAP Taxonomy or the IFRS Taxonomy.

Such coded/tagged business information can be:

- Single or multiple facts (Profit, Total Assets, Number of Employees, Annual Production etc.)
- Textual information (Text blocks within Notes to Accounts etc.)



Fig. 1. A sample product bar code

Figure 1 above depicts how a typical product bar code appears. Barcodes stores important information about the product such as:

- Name of the product
- Price of the product
- Manufacturing date
- Date of Expiry
- Quantity, etc.

As illustrated in the example of barcodes, important information about the business facts reported by a company in their financials can be captured using XBRL. For e.g. Net Profit or Loss reported by the company in its financials can be captured in XBRL in the following manner:

¹ Source: <http://xbrl.squarespace.com/storage/WhatIsXBRL-Summary-2008-05-17.pdf>

² Source: <http://xbrl.squarespace.com/storage/WhatIsXBRL-Summary-2008-05-17.pdf>

Fact Value	2,456	The fact reported by the entity in their financials.
Entity Name	ABC Ltd.	Name of reporting Entity.
Fact Name	ProfitLossBalance	Signifies what is being reported. In taxonomies these are called as elements or concepts
Period	Year Ended March 31, 2010	Signifies what period the fact pertains to.
Scaling	In thousands	Signifies if the value has been reported as actual, in thousands, in lacs or crores, etc.
Units	Indian Rupees	Signifies whether a fact is a monetary (i.e. in INR, USD, GBP or EURO etc.) shares, ratio etc.
Definition	The profit or loss derived after deducting all expenses, incurred for earning revenues from the total revenues. Such profit or loss is before any appropriations or write backs of reserves and also before distribution of any dividends, if any. Expenses and revenues includes extraordinary and prior period items	Gives a detailed description/definition of the concept generally available within the taxonomy.
References	a. Companies Act, 1956; Schedule VI; Part II; 2 (a) b. SEBI Listing Agreement; Clause 41; Annexure-I	Accounting references.

It is clear from the above example how XBRL captures all the important information related to the facts reported within the company financials and make it possible for computers to be able to process this information.

A tagged XBRL snippet for the above fact would appear as given below:

```
<in-gaap:ProfitLossBalance contextRef="FYE_31_03_2010" unitRef="iso4217_INR" decimals="-3">2456000</in-gaap:ProfitLossBalance>
```

Where,

in-gaap:ProfitLossBalance is the concept or name of the fact, the value of **contextRef** determines period and entity to which the reported fact belongs to, the value of **unitRef** determines units and the value of **decimals** determines the scaling.

In XBRL/XML terminology **<in-gaap:ProfitLossBalance ...>** is termed as the opening tag and **</in-gaap:ProfitLossBalance>** is termed as the closing tag. The special codes **contextRef**, **decimals** and **unitRef** are termed as its attributes.

Each unique **contextRef** is defined further up in the XBRL instance in the following format:

```

<xbrli:context id="FYE_31_03_2010">
  <xbrli:entity>
    <xbrli:identifier
      scheme="http://www.mca.gov.in/CIN">A123456789A123456789Z</xbrli:identifier
    >
  </xbrli:entity>
  <xbrli:period>
    <xbrli:startDate>2009-03-31</xbrli:startDate>
    <xbrli:endDate>2010-03-31</xbrli:endDate>
  </xbrli:period>
</xbrli:context>

```

Where,

Context declares unique context references that can be used throughout the XBRL instance to refer to the required period, **identifier** identifies the entity to which this context is attached, **startDate** and **endDate** identifies the period of the context.

What computer understands from the above two tagged snippets is that there is a concept called **"ProfitLossBalance"** and has the content of **"2456"** that has been reported in INR thousands for 'ABC Co. Ltd.' entity (identified by the unique identifier **"A123456789A123456789Z"**) with fiscal period ending **"March 31, 2010"**.

XBRL GOVERNING SPECIFICATIONS

There are rules for every language, those rules help in eradicating communication gap, so that the information is easily understood by all who hear or read about it.

Similarly in XBRL to ensure the data is understood by recipients there are rules defined for it, those rules are defined and are categorized under following topics:

XBRL 2.1 specification	It defines the syntax, how should XBRL documents be structured and in what format they should be. It is similar to HTML creation rules, every XBRL document must be constructed in compliance with 2.1 specifications.
FRTA	Financial Reporting Taxonomy Architecture – Lays down the rules for construction of the taxonomies.
FRIS	Financial Reporting Instance Standards – Lays down the rules for construction of Instance documents.
Dimensions Specification 1.0	Lays down the rules as to how the dimensional information is modeled and constructed.
Formula Specification 1.0	Determines if the balance type of the element is Debit/Credit
Substitution Group	How formulae's are created and rules including the syntax that has to be created.
Inline XBRL (Rendering) Specification	What will be the syntax rules for inline XBRL documents.

GENERAL XBRL REPORTING FRAMEWORK³

1. Core taxonomy (or structure of tagging elements) should be predefined by current financial reporting standards, including generally accepted accounting principles and other regulatory disclosure and reporting requirements.
2. Taxonomy extensibility should maintain the level of data comparability as defined by GAAP and other regulatory requirements.
3. Ultimately, companies should deliver required financial reports to regulators using the established XBRL framework.
4. The general public should have equal access to the XBRL-tagged information.
5. Regulators should develop the necessary infrastructure and protocol to ensure the data submission carries on smoothly. (E.g. SEC has timely updated the taxonomy and their infrastructure, initially there were lots of issues in previewing the XBRL output as lot of data was not getting rendered, but SEC has on a regular basis updated the previewer and ensured that all problems faced by the filers are resolved.)

³ Source: CFA Institute

ADVANTAGES OF XBRL

There are many advantages⁴ of XBRL, the key ones are listed below:

AUTOMATED DATA PROCESSING

Tag it once and use it repeatedly. There is a lot of common information, which is required in the financial reporting by the entities, but the same have to be re-keyed every time. But with XBRL if one tags all information once, can create their own custom extended links and just retrieve the required information and generate a report, since the data is machine readable. In addition one could create business rules also for identifying the concepts, most of the entities would continue to use the same labels (Description of concepts) year on year, they could be easily be identified and tagged, referring the source document. Regulators can also see whether data submitted meets the requirements and includes all standard information (nothing mandatory is missed out) with automation and system in place.

STANDARDISATION OF INFORMATION

It is very difficult for the regulators to analyse the data, due to two main reasons

a) Format the data received is in multiple formats like PDF, WORD, EXCEL, HTML or Txt. With XBRL this issue can be resolved, since XBRL data can be read by any system.

b) Reporting is very nonstandard, since company's use their own terminology, with XBRL this issue can be resolved, company can still call its financial concepts by the name they want to, but if they basically are the same then same tag will be used. E.g. "A Company" calls it "Tangible Assets" and "B Company" calls it "Fixed Assets" now concept is same, from accounting perspective both are same, hence same tag will be used. Finally regulators can create their own standard template and have all the data the way they desire.

COST SAVINGS

Tag it once, use it multiple times and automate, the global experience also suggests the same thing that the time spent on creation of reports subsequent time is very less compared to the first time. And companies can focus more on the decision making and compliance aspects.

MULTI-LANGUAGE CAPABILITY

Create it once, and get the data in your own language, for e.g. IFRS taxonomy is available not only in English but also Spanish, Korean and Arabic Languages and many more.

TIME SAVINGS

In XBRL all the data is classified and machine readable "one just needs to know what one wants and thou shall have it in seconds!"

⁴ Source: <http://www.ehow.com>

DATA ANALYSIS

Since the data is machine readable it becomes very easy for analysts and users to run data analysis as XBRL Data is machine readable focus can immediately start on analysis rather than data gathering and data formatting.

USES AND MYTHS ABOUT XBRL

USES⁵

1. Company internal and external financial reporting.
2. Business reporting to all types of regulators, including tax and financial authorities, central banks and governments.
3. Filing of loan reports and applications; credit risk assessments (Capital adequacy requirements)
4. Exchange of information between government departments or between other institutions, such as central banks.
5. Authoritative accounting literature - providing a standard way of describing accounting documents provided by authoritative bodies.
6. A wide range of other financial and statistical data which needs to be stored, exchanged and analyzed.

MYTHS

1. XBRL imposes reporting and regulatory burden on the reporting companies. It is an information exchange standard and not an accounting standard.
2. Taxonomies always make use of generic concepts; specific concepts cannot be tagged using taxonomies. Companies have an option to create their company specific concepts (provided it is approved by the regulator, SEC allows extensions, HMRC doesn't immediately)
3. XBRL cannot disclose the information the way company reports. It is not about disclosing actually but presenting (with Inline XBRL this issue has been overcome)
4. XBRL is cure for all accounting problems. It's just an information exchange standard, if source document is incorrect destination will also be incorrect; however with XBRL it can surely increase the chances of identifying incorrect information.

⁵ Source: <http://www.xbrl.org>

GLOBAL XBRL INITIATIVES

XBRL is getting adopted in various countries from securities regulators, stock exchanges and prime accounting bodies, everyone is talking about XBRL.



Fig. 5. XBRL on a global map⁶

GLOBAL REGULATORY REPORTING APPROACHES⁷

XBRL implementation across the globe can broadly be classified under two categories.



Open Taxonomies – They allow maximum customization to the filers (entity's reporting). These require creation of a structure altogether separately⁸ i.e. extensions (Creating company specific concepts where the concepts are not present in the taxonomy) and modifying the structure, creation of customised linkbases. The filing comprises of "XBRL document and linkbases with the schema file. E.g. SEC (using US GAAP Taxonomy), it allows creation of custom elements, units and linkbases.

Close Taxonomies – They allow no customization of taxonomy to the filers. Further the filers cannot create their custom elements; if an appropriate concept does not exist in the taxonomy then the information need not be tagged. The disadvantage is critical information for the company may be missed, as the concept may not exist within the taxonomy. The filing comprises of "XBRL document" only. E.g. HMRC and Companies

⁶ Source: <http://www.xbrlplanet.org>

⁷ Approaches discussed will be about FinRep (Financial Reporting) not CoRep (Common Reporting) which is used mostly by banks including RBI for Basel II Filings.

⁸ There are certain restrictions placed by all regulators, where multiple approaches are possible for e.g. SEC doesn't accept Scenarios, IFRS doesn't accept Segments.

house, both accept filings in their respective taxonomies, like UK-GAAP, UK-IFRS and Companies House's taxonomy.

SEC has mandated XBRL, whereas UK is going the iXBRL way.

Below table summarizes two major global mandates;

HMRC iXBRL mandate (U.K.) ⁹	SEC XBRL mandate (U.S.) ¹⁰
All companies and some other entities under different acts filing in iXBRL format starting April 2011	Phased XBRL implementation plan spread over 3 years starting 2009 only for certain entities, and by 2011 the scope covers all filers.
What to tag? All individual accounts components including the comparative figures must be tagged. (covers individual financial statements, notes, director's report and auditor's report)	Scope of tagging is in a phased manner, defined by Levels of tagging i.e. I, II, III & IV.¹¹ (covers financial statements and notes)
Guidelines provided to filers to ensure accuracy and XBRL compliance	Guidelines provided to filers to ensure accuracy and XBRL compliance
Test filings submitted to Companies House and HMRC to verify XBRL documents	Online "test filing" and previewing portal for filers to validate and view XBRL filings with the SEC before final submission
Filings done through secure online portal and automated filings through software interface	Secure online filings portal requires XBRL filings to be submitted as Exhibits to existing 10Q/10K filings format to the SEC EDGAR system
Provides online FAQs, sample XBRL documents and other documentation	SEC provides an XBRL portal to help filers view documentation, guidelines and filings submitted by other public companies

⁹ Source: <http://www.hmrc.gov.uk/ct/ct-online/file-return/switching.htm>

¹⁰ Source: <http://www.sec.gov/rules/final/2009/33-9002.pdf>

¹¹ Source: In the first year of compliance only level - I requirements are to be complied with, year two onwards tagging level – II, III & IV are required.

XBRL IN INDIA

STOCK EXCHANGES & SEBI

Unified Electronic XBRL Enabled Filing Platform used by two stock exchanges i.e. BSE & NSE enabling the companies listed in either or both of the exchange to electrically file their disclosures and at the same time helping the investors to get real time access.

RESERVE BANK

Our central bank has already initiated XBRL filings for its internal reporting (Basel II requirements) from the Banks.

ICAI

India's premier accounting body has also been involved with XBRL since past 2 years, has already been involved with creation of two taxonomies – C&I and Banking Taxonomy.

MCA

Filing of Balance Sheet and Profit and Loss Account in eXtensible Business Reporting Language (XBRL) mode for year 2010-2011 onwards. i) For All listed companies in India and their subsidiaries, including overseas subsidiaries; ii) All companies having a paid up capital of Rs. 5 Core and above or a turnover of at least Rs. 100 crores.¹² (Excludes banking, insurance, power, NBFC's and overseas subsidiaries of these companies)

OTHER MAJOR XBRL IMPLEMENTATIONS

US

US Securities regulator, Securities and Exchange commission have mandated XBRL for corporate filers and mutual funds to submit information in interactive data in a phased manner. The phased manner for corporate filers is summarised in the below table.¹³

Who will file?	What to be filed?
Domestic and Foreign Large Accelerated Filers Using U.S. GAAP with market capitalization above \$5 Billion	Form 10-Q or annual report on Form 20-F or Form 40-F containing financial statements for a fiscal period ending on or after June 15, 2009.
All Other Large Accelerated Filers Using U.S. GAAP with market capitalization above \$700 Million or more	Form 10-Q or annual report on Form 20-F or Form 40-F containing financial statements for a fiscal period ending on or after June 15, 2010.
All Remaining Filers Using U.S. GAAP	Quarterly report on Form 10-Q or annual report on Form 20-F or Form 40-F containing financial statements for a fiscal period ending on or after June 15, 2011.

¹² Source: http://www.mca.gov.in/Ministry/pdf/Circular_25-2011_12may2011.pdf

¹³ Source: Rule document 33-9002 available at <http://www.sec.gov>

Foreign Private Issuers with Financial Statements Prepared in Accordance with IFRS as Issued By the IASB	Annual reports on Form 20-F or Form 40-F for fiscal periods ending on or after June 15, 2011.
---	---

UGT (US GAAP Taxonomy) is the most comprehensive taxonomy in XBRL world available to the filers to comply with SEC Interactive Data Mandate, the current version of taxonomy i.e. 2011 (approved by SEC) has about 16,500 elements¹⁴, and it has predefined hypercubes, dimensions, domain and members. In addition the taxonomy also allows the users to create custom elements and relationships.

Structure: Taxonomy has been modularized, it is broadly divided into GAAP and Non-GAAP, the GAAP is further subdivided into Statements (Financial Statements) and Disclosures (Notes to Accounts). Further the taxonomy also consists of five entry points, comprising of;

1. Commercial and Industrial
2. Banking and Saving Institutions
3. Broker and Dealer
4. Insurance
5. Real Estate

All the entry points are linked together with a master schema file, which allows users to select the elements of their choices in case the company has diversified business.

It has wide variety of tags available for tagging numeric values, dates and narratives/textual information.

Taxonomy is easy to use from the perspective, that each element has “Documentation” (definition of the concept) which gives users an idea as to whether the concept is appropriate or not.

The concepts in US GAAP Taxonomy also contain the references with hyperlinks (for the exact reference, known as codification)

GAAP extended links are divided into “Statements” and “Disclosures” whereas Non-GAAP comprises of Document and Entity Information, Country, Currency, Exchanges, Industry classification etc.

UK

HMRC UK’s statutory tax body accepts company tax computations and accounts in Inline XBRL¹⁵ format. Filing of computations and accounts in Inline XBRL is mandatory from April 2011 onwards.

Companies House the registrar of companies has been receiving simple audit exempt accounts in XBRL for a number of years. To-date it has received more than a million filings.

¹⁴ Taxonomy can be found on fasb.org

¹⁵ Inline XBRL is HTML embedded XBRL Document; it focuses on displaying the data exactly the same way it is disclosed by any entity.

UK GAAP/UK-IFRS TAXONOMY¹⁶

UK Accounting and Tax Body has made multiple versions of the taxonomies available to the users, UK GAAP, UK IFRS, CT 600 (Computation of Tax) and Minimum Tagging Taxonomy,

Each of the taxonomies have their different purposes along with their own pros & cons; if companies who are IFRS compliant and want to report to their regulator can use UK-IFRS taxonomy, if the filer prepares their accounts in UK-GAAP than the relevant taxonomy (UK-GAAP Taxonomy) can be referred.

HMRC the Tax body of UK has mandated companies to start filing Tax Computational returns and Accounts from 1st April, 2011, however they have asked users for the minimum tagging requirements (Which cover only mandatory elements) also there is an option for the filers to tag more information than what has been mandated using the comprehensive taxonomy set.

UK is the only country at this point of time which is adopting iXBRL instead of XBRL, in addition the proposed mandate suggests initially the companies will not be required to create custom elements and relationships, and when the regulator feels the companies have enough experience, they will start allowing the filers to create custom elements and relationships. This characteristic makes UK-GAAP Taxonomy a closed taxonomy

Structure: The taxonomy is segregated into Statements and Disclosures, it is a modular taxonomy and segregates between GAAP and Non-GAAP Concepts similar to US-GAAP Taxonomy.

The taxonomy is relatively complex and requires medium level of XBRL knowledge when using dimensions and tuples, UK-GAAP taxonomy as such makes extensive use of dimensions and tuples.

CHINA

China Securities Regulatory Commission (CSRC) uses XBRL to collect information from those they regulate.

Shenzhen Stock Exchange has started using XBRL to collect financial information of listed companies.

IFRS TAXONOMY¹⁷

IFRS taxonomy released by IASB is one of the widely used taxonomies in XBRL world; the taxonomy is available in multiple languages (Arabic, Japanese, Chinese, Spanish and translation in many more languages is in progress). The current version of IFRS Taxonomy available for public use is 2011 version¹⁸. The taxonomy has got predefined hypercubes, dimensions and members.

The current version of the taxonomy has got approximately 2000 concepts, which comprises of elements for numeric concepts to capturing textual information.

Structure: IASB¹⁹ allows users to customize the IFRS taxonomy; it provides an ITMM (IFRS Taxonomy Modules Manager) which allows the users to create their own entry point, which matches their requirements. The organization of IFRS taxonomy files is by individual IFRS's/IAS's. IFRS taxonomy can work well when merged with local GAAP Taxonomies, as the scope of disclosures covers both i.e. Local GAAP and IFRS.

¹⁶ Source: <http://www.xbrl.org/uk/Taxonomies/>

¹⁷ Source: <http://www.ifrs.org/XBRL/IFRS+Taxonomy/IFRS+Taxonomy.htm>

¹⁸ <http://www.ifrs.org/News/XBRL/Final+2011+taxonomy.htm>

¹⁹ International Accounting Standards Board

XBRL documents comprises of Taxonomy (dictionary of concepts/structure) and Instance document (data bank). A representation can be seen in the diagram below²⁰:

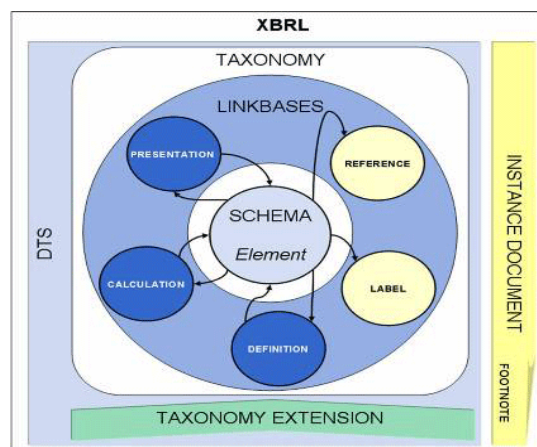


Fig. 2. Schematic illustration of XBRL

TAXONOMY

It is a dictionary of business concepts (from reporting perspective); The word Taxonomy is derived from two Greek verbs TASSEIN = “to classify” and NOMOS = “law, science” so literally the word taxonomy means “Science/law of classification”. It is the meaningful classification of all concepts into groups, such as we group all Balance Sheet related concepts together, further all “Assets” concepts are grouped together and so are “Liabilities”.

Taxonomy Elements	
☐	Total assets total liabilities [abstract]
☐	Total liabilities [abstract]
☐	Shareholders' funds [abstract]
☐	Net deferred tax liability
☐	Loan funds [abstract]
☐	Current liabilities provisions [abstract]
☐	Other liabilities
☐	Total liabilities
☐	Total assets [abstract]
☐	Goodwill on consolidation [abstract]
☐	Fixed assets [abstract]
☐	Investments , net [abstract]
☐	Net deferred tax asset
☐	Finance lease receivables long-term
☐	Current assets loans advances [abstract]

Fig. 3. Schematic illustration of XBRL Taxonomy

²⁰ Source: <http://www.ifrs.org>

SCHEMA

An XBRL Schema contains information about the elements such as their name, id, attributes like (data type, balance type, substitution (for type of information i.e. simple/complex) and period type) It is where all the business concepts are defined.

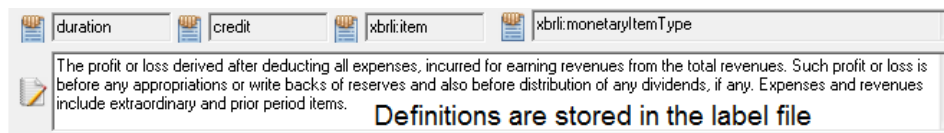


Fig. 4. Illustration of how XBRL properties can be displayed in XBRL processing applications

ELEMENT ATTRIBUTES

Element attributes provide additional information about each taxonomy concept. Following are the major element attributes²¹:

The declaration of ProfitLossBalance in the Indian GAAP taxonomy is as given below:

```
<xsd:element name="ProfitLossBalance" id="in-gaap_ProfitLossBalance"
type="xbrli:monetaryItemType" substitutionGroup="xbrli:item" abstract="false" nillable="true"
xbrli:balance="credit" xbrli:periodType="instant"/>
```

LINKBASES

Linkbases give structure to the XBRL data, they use the elements defined in the schema file and provide structure to those elements. There are different types of structures/linkbases in XBRL which are listed below:

Presentation linkbase	Controls the presentation of the XBRL data. Determines how the data should be presented and in what structure?
Calculation linkbase	Defines the arithmetical relationship between concepts. These include simple addition and subtraction operations only.
Definition linkbase	Defines the dimensional relationship between concepts. Allows user to link additional information to the data.
Reference linkbase	Provides guidance to the users of the taxonomy, as it links the concepts to their statutory references.
Label linkbase	Stores the labels for XBRL Concepts.
Formula linkbase	Allows user the full customization and create custom relationships like EarningsPerShareBasic= NetProfitLoss/WeightedAverageNumberOfShares

²¹ Please note that as XBRL is XML based, custom attributes can be created, however the above mentioned are the standard attributes generally existing in all taxonomies.

INSTANCE DOCUMENT

It can be called as the dataset, which consists of all the information classified making use of taxonomy. It comprises of Fact, Entity Name, Period, Scale Factor and Unit, and the Tag to which information is associated.

IMPORTANT FILE EXTENSIONS

Instance document	.xml/.xbrl ²²
Linkbases	.xml
Schema	.xsd

²² The extension “.xbrl” is rarely used, more widely used extension is “.xml”

PROCESS OF CREATING XBRL DOCUMENTS

MAPPING

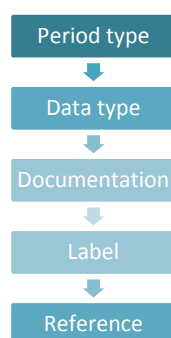
Mapping is the process for identification of elements, such elements are used for categorizing the information within the report.

One may also call it an element selection process:

Global filing manual (version 2011-04-19) sums up the process as follows:

*“When choosing the most appropriate element for facts in one or more periods, the element’s **xbri:periodType** attribute takes precedence over the **type attribute**, which takes precedence over the element’s **documentation string**, which in turn takes precedence over the **label string**, which in turn takes precedence over **link:reference elements**.”*

The above rule for element selection can be summed up in the below figure:



Certain other rules specified by Global filing manual, are as follows;

1. If an element used in numeric facts representing amounts in one or more periods has a definition, then the scope of that definition must include the amounts reported for that line item in the financial statements.
2. An element must not be used in numeric facts representing amounts of a line item in different periods if it has a definition that explicitly excludes one or more of the amounts in the financial statements.
3. When there is a choice among different elements that have definitions consistent with a set of facts in one or more periods, use the element with the narrowest definition.
4. If there is a choice among different elements whose type attribute is consistent with a set of facts in one or more periods, use the element with the most specific type attribute.
5. When there is a choice among different elements having distinct link:reference elements in a standard taxonomy, use the element with the most specific reference.

TAGGING

Tagging is the process of XBRL creation, wherein the information is classified through an application interface so as to generate the XBRL output.

This process is very critical as the information, that is being inputted, must exactly mean the same, as it meant in the source document. For example “Net income” for period year ending 2010 is Rs. 10 million, now in XBRL suppose a user made a mistake in classifying information, and wrongly scaled it to Rs. 10 thousand, the complete meaning changes, not only with the value, but also the contexts (the period applicable to the number) are correctly chosen, in our case it is Fiscal Year Ending, 2010.

There has to be a strong Quality and Analysis process to ensure, all the data entered into XBRL is correct.

Accounting bodies like AICPA have lately come out with documents like SOP 09-01²³, such documents enumerates the process for having an accurate XBRL output.

Tagging as a process could vary from application to application, a lot depends on selection of the application, here are few of the basic functionalities, which the user should consider while selection an XBRL application.²⁴

²⁵

1. Look for a fully conformant XBRL processor:
2. Look for support for XBRL Dimensions,
3. Check which specific conformance suites the software passes
4. Get samples processed and ensure first hand that the software really works
5. Ensure that the software has all the required functionalities to create XBRL instances
6. Try to get a trial period copy and build a prototype

Ensure that you get support for the XBRL software you procure

²³ Performing Agreed-Upon Procedures Engagements That Address the Completeness, Accuracy, or Consistency of XBRL-Tagged Data

²⁴ Source: <http://xbrl.us/Learn/Pages/ToolsandServices.aspx>

²⁵ Source: http://www.hmrc.gov.uk/efiling/ctsoft_dev.htm

VALIDATION

One of the best general definitions of validation is as follows;

“It is the process of determining whether or not the standard at a given phase of its development fulfills the established requirements.”

An XBRL document can be checked for following two types of requirements, one can alternately say, a validation takes place in two stages:

1. XML well-formedness, DTS discovery and XML Schema validation
2. XBRL validation and consistency checking

The first type of validation occurs so as to check the XML standards, whether the document is XML wise valid, this check applies to all the XBRL documents.

The second type of validation i.e. XBRL validation and consistency checking, will comprise of checking the established XBRL rules, defined in XBRL 2.1 specification, Financial Reporting Taxonomy Architecture (FRTA) (it also includes the calculation checks so as to ensure arithmetical accuracy), Financial Reporting Instance Standards, Dimensions specification etc. All of those are established standards of XBRL; however one may also add specific standards, applying to their regulatory framework.

E.g. Checking SEC has defined additional set of rules in Edgar Filer Manual, similarly, Global Filing Manual Rules can also be checked.

In Indian reporting scenario, there can be specific validation checks, to ensure, that all the business rules have been applied, and nothing is left out.

To sum up, validation ensures that the data is compliant and in line with its source, if there are any inconsistencies, it will flag those issues and report a violation.

RECENT DEVELOPMENTS IN THE XBRL STANDARD

INLINE XBRL²⁶ SPECIFICATION OVERVIEW²⁷

Summary

Inline XBRL is a standard for embedding XBRL fragments into an HTML document. The objective is to provide documents which can be viewed in a browser while making use of XBRL tags which can be processed automatically by consuming applications. This specification defines the syntax for such documents and how the syntax maps into an XBRL instance.

What is it?

The Inline XBRL specification is similar to XBRL 2.1 specification as it defines the syntax of the Inline XBRL documents²⁸. Concepts are the same, but the way data is stored is different.

How it works?

In the Inline XBRL Document, data values are nested within Inline XBRL Elements which are themselves nested within HTML or XHTML elements ("Markup Elements"). This technique relies upon the ability of browsers to ignore XML elements that it does not recognise. The browser, in effect, ignores the Inline XBRL Elements and displays the data values as though they were textual content of the Markup Elements. A Processor will ignore the Markup Elements and combine the Inline XBRL Elements and the data values to generate an XBRL instance document.

FORMULA SPECIFICATION OVERVIEW

Summary

Formula specification provides the syntax and rules which will allow the users to derive new facts from the existing information (available in XBRL Instance document)

What is it?

XBRL formula specifications provides syntax for expressing rules that can be used to derive new fact values from the data in XBRL business report, such derivation of fact values can be done by way of generic rules or specific rules, e.g. Current Ratio can be derived by dividing current assets by current liabilities, such formulae's can be set as generic then specific.

How it works?

In XBRL, a value in a business report is identifiable by the information associated with that value. These include the concept that the value measures, the entity that the value describes, the period over which or at which the measurement was taken, the units in which the measurement is taken, and, potentially, a range of other aspects given more specificity in terms of the part of the entity being reported on and the other aspects of information (segment/scenario or footnotes) that should be recognised when interpreting the fact. And since the input is preclassified and standard (using GAAP and accounting rules), user can derive the formulae's from such interactive data, based on requirements.

²⁶ Inline XBRL is a standard for embedding XBRL fragments into an HTML document

²⁷ Source: <http://xbrl.org/Specification/inlineXBRL-part1/REC-2010-04-20/inlineXBRL-part1-REC-2010-04-20.html>

²⁸ Also called ".xhtml" documents i.e. a xml document embedded in html document.

MCA MANDATE²⁹

WHAT TO FILE

1. Balance Sheet
2. Profit and Loss Account
3. Auditors Report
4. Directors Report

COVERAGE

1. All companies in Indian and their Indian Subsidiaries
2. All companies having a paid up capital of Rs. 5 crore and above
3. All companies having a turnover of Rs. 100 crore and above

EXCLUSIONS

1. Banking Companies
2. Insurance Companies
3. Power Companies
4. Non-banking Finance Companies (NBFCs)

TIMELINES

1. Companies having AGM before 30-09-2011 are permitted to file upto 30-09-2011
2. Companies having AGM in September, 2011 are permitted to file within 30 days of adoption of accounts in the AGM.

IMPLEMENTATION APPROACH OF XBRL IN MCA³⁰

It is proposed to include all companies to file their **Balance Sheet and Profit and Loss account statements** in XBRL from Financial Year 2011-12 onwards. With the development of taxonomies for Banks, Insurance, Non-Banking Finance Companies and Power sector, the companies operating in these sectors would also be filing their financial reports in **XBRL** from FY 2011-12. In order to capture sector specific details, it is proposed to allow for extensions in the taxonomy by the filers from FY 2011-12 onwards. If required, the taxonomies would be updated and maintained with applicability of revised Schedule VI from 01.04.2011. Training programs, seminars, conferences, etc would also be organized in tier-II and tier-III cities by the Ministry in association with professional institutes and industry bodies. **[Please note the circular of 7th June, came out later, hence this implementation approach does not include, at this point of time it stands not updated hence Auditors and Directors Report are missing, however the filing must contain Auditors and Directors Report in XBRL. For final mandate most recent circular is to be referred]**

²⁹ Source : http://www.mca.gov.in/Ministry/pdf/Circular_37-2011_07jun2011.pdf

³⁰ Source : <http://xbri.icaai.org/2011/04/26/implementation-approach-of-xml-in-mca/>

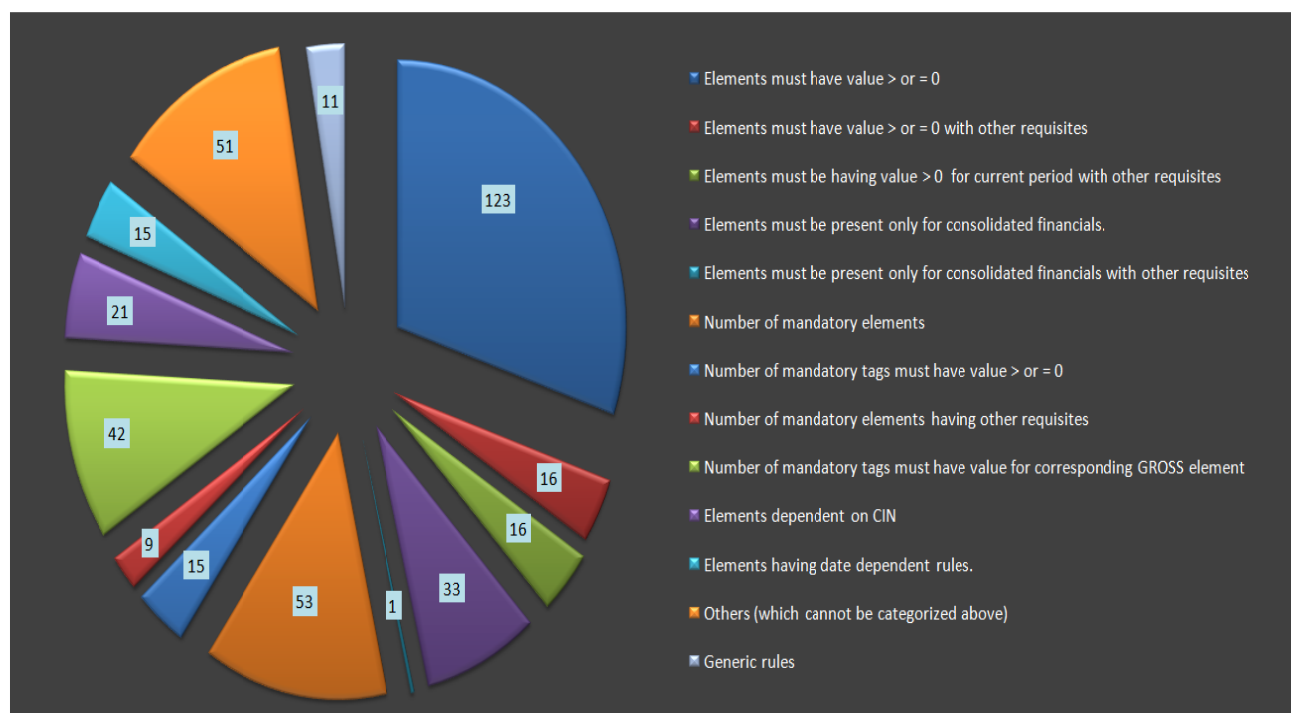


Fig. 8. Business Rules Analysis

Business Rules Analysis (Indian GAAP)	
Rules Category	Number
Elements must have value > or = 0	123
Elements must have value > or = 0 with other requisites	16
Elements must be having value > 0 for current period with other requisites	16
Elements must be present only for consolidated financials.	33
Elements must be present only for consolidated financials with other requisites	1
Number of mandatory elements	53
Number of mandatory tags must have value > or = 0	15
Number of mandatory elements having other requisites	9
Number of mandatory tags must have value for corresponding GROSS element	42
Elements dependent on CIN	21
Elements having date dependent rules.	15
Others (which cannot be categorized above)	51
Generic rules	11
Total Business Rules	406

³¹ Source : http://xbrl.icai.org/wp-content/uploads/2011/06/Business_Rules_Elements.pdf

Abstract

An attribute of an element to indicate that the element is only used in a hierarchy to group related elements together. An abstract element cannot be used to tag data in an instance document.

Attribute

A property of an element such as its name, balance, data type, and whether the element is abstract. Attributes of standard taxonomy elements cannot be changed.

Axis /Dimension

An instance document contains facts; an axis differentiates facts and each axis represents a way that the facts may be classified. For example, Revenue for a period might be reported along a business unit axis, a country axis, a product axis, and so forth.

Context

Entity and report-specific information (reporting period, segment information, and so forth) required by XBRL that allows tagged data to be understood in relation to other information.

Decimal

Instance document fact attribute used to express the number of decimal places to which numbers have been rounded.

Domain

An element that represents an entire set of other elements; the domain and its members are used to classify facts along the axis of a table. For example, "Maharashtra" is a domain member in the domain "States," and would be used to classify elements such as revenues and assets in Maharashtra as distinct from other states. When a fact does not have any domain member specified, that means it applies to the entire domain.

Domain member

An element representing one of the possibilities within a domain.

Element

XBRL components (items, domain members, dimensions, and so forth). The representation of a financial reporting concept, including: line items in the face of the financial statements, important narrative disclosures, and rows and columns in tables.

Element definition

A human-readable description of a reporting concept. From an XBRL technical point of view, the element definition is the label with the type "documentation," and there are label relationships in a label relationships file, but from a user point of view the definition is an unchangeable attribute of the element.

³² Source: <http://www.sec.gov/spotlight/xbrl/glossary.shtml>

Extension taxonomy *or* extension

A taxonomy that allows users to add to a published taxonomy in order to define new elements or change element relationships and attributes (presentation, calculation, labels, and so forth) without altering the original.

Fact

The occurrence in an instance document of a value or other information tagged by a taxonomy element.

Instance *or* instance document

XML file that contains business reporting information and represents a collection of financial facts and report-specific information using tags from one or more XBRL taxonomies.

Item

XBRL technical term for a kind of element.

Label

Human-readable name for an element; each element has a standard label that corresponds to the element name, and is unique across the taxonomy.

Label type

A distinguishing name for each distinct element indicating the circumstances in which it should be used; each is given a separate defining role to use in different presentation situations.

Line item

Elements that conventionally appear on the vertical axis (rows) of a table.

Linkbase

XBRL technical term for a relationships file.

Mapping

Process of determining the elements that correspond to lines and columns in a financial statement and which elements must be created by extension.

Name

Unique identifier of an element in taxonomy.

Namespace

Every element has a Universal Resource Identifier (URI) that identifies the organization that maintains the element definitions, with an indication of what the term covers. In the XBRL US GAAP Taxonomy, namespaces start with *http://icai.org/in-gaap/*. A namespace prefix is not the namespace.

Nillable

An attribute that appears on all taxonomy elements, and is used (false) on elements that, if used in an instance document, must have a non-empty value. XBRL taxonomy tools normally have the default value for nillable as "true." There is no need for any extension to define an element with nillable "false."

Parent-child hierarchy

Relationship between elements that indicates subordination of one to the other as represented in a print listing or financial statement presentation. Relationships files use parent-child hierarchies to model several different relationships, including presentation, summation of a set of facts, and membership of concepts within a domain used as the axis of a table.

Period type

An attribute of an element that reflects whether it is reported as an instant or duration time period.

Prefix or namespace prefix

A shorthand sequence of letters for a namespace; "in-gaap" for example, is a common prefix for the namespace <http://www.icaai.org/in-gaap/2009-06-30>.

Presentation relationships

Relationships that arrange elements allowing them to navigate the taxonomy content in parent-child tree structures (hierarchies).

Scenario

Tag that allows for additional information to be associated with facts in an instance document; this information encompasses in particular the reporting circumstances of the fact, as for example "actual or forecast." The scenario of any fact can be left unspecified.

Schema

Technical term for an element declaration file.

Segment

Tag that allows additional information to be included in the context of an instance document; this information captures segment information such as an entity's business units, type of debt, type of other income, and so forth.

Standard label

The default label for an element. An extension may override the standard label.

Table/Hypercube

An element that organizes a set of axes and a set of line items to indicate that each fact of one of the line items could be further characterized along one or more of its axes. For example, if a line item is Sales and an axis is Scenario, this means that an instance document could have facts that are either for an unspecified scenario or for a specific scenario such as "actual or forecast."

Tag

Identifying information that describes a unit of data in an instance document and encloses it in angle brackets (<> and). All facts in an instance document are enclosed by tags that identify the element of the fact.

Taxonomy, taxonomies

Electronic dictionary of business reporting elements used to report business data. A taxonomy is composed of an element names file (.xsd) and relationships files directly referenced by that schema. The taxonomy schema files together with the relationships files define the concepts (elements) and relationships that form the basis of the taxonomy. The set of related schemas and relationships files altogether constitute a taxonomy.

Type or data type

Data types (monetary, string, share, decimal, and so forth) define the kind of data to be tagged with the element name.

Unit of measure

The units in which numeric items have been measured, such as dollars, shares, Euros, or dollars per share.

Validation

Process of checking that instance documents and taxonomies correctly meet the rules of the XBRL specification.

Weight

Calculation relationship attribute (-1 or +1) that works in conjunction with the balance of the parent and child numeric elements to determine the arithmetic summation relationship

APPENDIX – 1 INDIAN TAXONOMIES

XBRL is becoming a global phenomena for standardizing the way business reporting is done, lots of countries have taken initiatives for adopting XBRL, the first initiative that any country or a regulator can take is to build its own taxonomy using its own GAAP requirements.

In this part, we have tried to explain certain major taxonomies which are used as part of the mandate or are proposed to be part of a mandate.

INDIAN GAAP 2011 TAXONOMY³³

C&I³⁴

2009 Taxonomy

Structure: The first version of the Indian GAAP taxonomy was developed in 2009, which had around 2500 elements; And was based on IFRS 2006 General Purpose taxonomy. The taxonomy comprises of 12 relationship groups (extended links) categorised as;

1. Statements had about 5 extended links for B/S, IS & CF
2. Disclosures had about 7 extended links, for notes and additional details about financial statements.

Indian C&I GAAP taxonomy supported tuples, it had about 9 tuples (to know more refer the next page) - , it doesn't have any inherent dimensions or hypercubes.

2011 Taxonomy

Structure: The second version of the Indian GAAP taxonomy recently released, has about 3000+ concepts, has been drastically revamped in terms of modularization in line with international best practices of creating multiple extended links. There are in all 55 extended link roles, divided into;

1. Statements
2. Disclosures
3. Notes
4. Schedules
5. General information
6. Additional details

The more the number of extended links, the better the browsing of the taxonomy, since it's easy to locate specific concepts, as each of the concepts are logically grouped together, all the user needs to do is look at the right place. In line with its predecessor, the current version also doesn't have any inherent dimensions, however the number of tuples have gone up to 23 in the current version.

³³ Source : <http://mca.gov.in/>

³⁴ C&I stands for Commercial and Industrial

TABLE BELOW SUMMARIZES THE KEY DIFFERENCES IN 2009 AND 2011 C&I TAXONOMY

Types	2011 Taxonomy		2009 Taxonomy	
monetaryItemType				
- Instant	678		661	
- Duration	1119		826	
Total monetary elements		1797		1487
booleanItemType		5		
CINNumberItemType		11		
ContentOfReport		1		
CountryNameItemType		6		
dateItemType		20		
decimalItemType		14		12
DINNumberItemType		1		
IndustryType		1		
LevelOfRounding		1		
NatureOfRelatedParty		1		
NatureOfReport		1		
percentItemType		23		
perShareItemType		14		
pureItemType		3		12
sharesItemType		41		33
ShareType		1		
SRNNumberItemType		3		
stringItemType				
- Abstracts	460		357	
- Non Abstracts	611		524	
Total string elements		1071		881
textBlockItemType		32		
TypeOfBalanceSheet		1		
TypeOfCashFlowStatement		1		
TypeOfDebenture		1		
TypeOfGoods		1		
TypeOfIncomeStatement		1		
TypeOfSubsidiary		2		
Tuples		23		9
Total Elements		3077		2434

BANKING

Banking Taxonomy has around 1150 elements; its structure has been similar to IFRS 2006 General Purpose taxonomy. The taxonomy comprises of 6 relationship groups (extended links) categorized as;

1. Statements has about 3 extended links for B/S, IS & CF
2. Disclosures have about 3 extended links, for notes and additional disclosures.

Unlike C&I taxonomy, the banking taxonomy has got definitions for all concepts (Barring abstracts), however it doesn't have tuples in the taxonomy, however, the users can import those concepts from C&I taxonomy if required.

The taxonomy allows the users to create and add their own dimensions; however, it doesn't have any hypercube/dimensions of its own.

MUTUAL FUNDS³⁵

Securities and Exchange Board of India (SEBI) came out with the first draft of the MF taxonomy in end of February, 2011.

The taxonomy is a very small taxonomy in comparison to the IN-GAAP taxonomy it comprises of 216 elements, which have 7 Hypercubes & 11 Dimensions.

The taxonomy has no Tuple's and has 6 extended links. Broadly categorized into "Detailed information" and "Summarized general information"

³⁵ <http://www.sebi.gov.in/xbri/taxonomy/Launch.html>