



IRIS BUSINESS SERVICES

# XBRL - An Overview

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Introduction to XBRL and the basic concepts of XBRL



## Understanding XBRL

### Introduction

**X**BRL stands for eXtensible Business Reporting Language. It is an open standard, and being developed by XBRL International, a non-profit organization. XBRL is a revolutionary concept in the world of business and financial information and will have a far reaching impact across the entire financial reporting chain. Worldwide adoption of XBRL as the information standard for business and financial reporting has gathered substantial pace in past two years with regulators in US, Japan, European Union, China and now in India successfully implementing XBRL based reporting systems.

XBRL means bar-coding business information with tags. The business information no longer remains a block of text but each information element is tagged which makes it computer-readable.

Traditional business reporting is done in various formats viz. printed financials, spreadsheets, PDF documents, html and so on. All these are human readable and can be interpreted by human beings or by systems with human intervention. The structure of XBRL makes handling and processing of business data platform independent. It supports all the standard tasks involved in compiling, storing and using business data.

All types of entities can experience cost benefits and process efficiencies with the use XBRL. Extensibility being one of the underlying principles of XBRL, it can be easily adapted to a wide variety of different requirements. All the stakeholders of the financial information supply chain can benefit.

### Need for XBRL

XBRL is rapidly being adopted worldwide as a de facto financial and business reporting standard. XBRL facilitates convergence of accounting standards by the ability to align financial concepts among public taxonomies. Stock Exchanges, Supervisory and Regulatory bodies across globe are looking forward for XBRL adoption. Few reasons why should XBRL be adopted-

- 1. Accurate and Quality Data** – XBRL validates the data based on the rules and relationships defined amongst the data elements, which results in obtaining clean and valid.
- 2. Automation** – With XBRL, the intelligence of understanding and interpreting the data is transferred to the system and this facilitates automation in data processing and management. By using XBRL, companies and other producers of financial data and business reports can automate the processes of data collection.
- 3. Reduce cost of ownership of data** – The XBRL data is interoperable and thus created once can be used by multiple agencies seamlessly. And as a result of interoperability the overall cost of creating data and meeting the compliance requirements is reduced dramatically. Moreover, XBRL is a open and royalty free standard

## XBRL - An Overview

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**4. Reduce reporting burden** – Many of the information requirements of the different agencies is similar and companies have to submit the same multiple times. As the data is interoperable, the redundant information elements can be done away with and thus reducing the reporting burden on enterprises

**5. Seamless Integration** – The XBRL data carries along with it, the additional attributes and facts, which makes the data self-explanatory. And thus the data remains no longer dependent on any application or platform for interpretation and processing. The XBRL data can be easily integrated into any system

**6. Efficient Business Processing** – As XBRL cuts down the time spent on less efficient process like re-keying and re-arranging data, the entire business process now becomes more efficient and productive. XBRL will streamline the preparation of business and financial reports for internal and external decision making.

**7. Easy location of data** – All the information is identified with a unique XBRL tag and this makes locating the data from a vast information repository or from a voluminous report very easy and quick. Since related information is linked (like facts and relevant footnotes), retrieving information is done in no time.

**8. Consumer oriented reporting** - Consumers can collaborate and share the analytical concepts and are no longer dependent on the reporting concepts embedded in specific software. And consumers can now dynamically design and share their own business reports.

**9. Social Analytics** - The existing social media like Wikipedia, Facebook, etc, facilitates collaboration of a wide range of participants. XBRL enables a similar social collaboration of analytical and modeling concepts.

**10. Real-time data** – Because of automation and creation of accurate and valid data, the processing of data becomes much faster and so does its dissemination. Thus the information seekers can access the data in real-time.

**11. Better Coverage by Analyst community** – The time required for analysis is quite high because the data is first rekeyed, validated and arranged according to the needs. Since all these activities are no longer required in XBRL based framework and hence the analyst have time to focus on small companies

**12. Comparative Analysis** – XBRL, being a universal standard, facilitates comparison between companies across globe

**13. Transparent Data** – XBRL facilitates better and faster access to information; transparency in the whole information supply chain is increased.



# XBRL - An Overview

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## Beneficiaries of XBRL data

### Regulators

- Greater transparency through ease of analysis of the regulated entities filings
- Increase data accuracy
- Dramatically reduced the time to process filings from weeks to days
- Rise in analyst productivity
- Validate and review data much more efficiently and usefully than they have hitherto been able to do.

### Corporate Community

- Cost savings in preparation, report creation, analysis. High flexibility through the use of dashboard based business rules. This leads to significant savings in man hours and lead time in compliance and consolidation
- Faster availability of data into standard reports
- Extracts data from accounting packages and makes it standardized and portable
- Provides a common framework of definitions
- Easy data handling due to standardization and automation, centralization of delivery
- A pioneering status among enterprises in the use of XBRL in India. Image enhancement in the marketplace through Increase of quality and consistency of data

### Auditors

- Automate financial statements handling, cutting out time-consuming and costly collation and re-entry of information.
- Accurate and Quality Data
- Facilitates audit trail

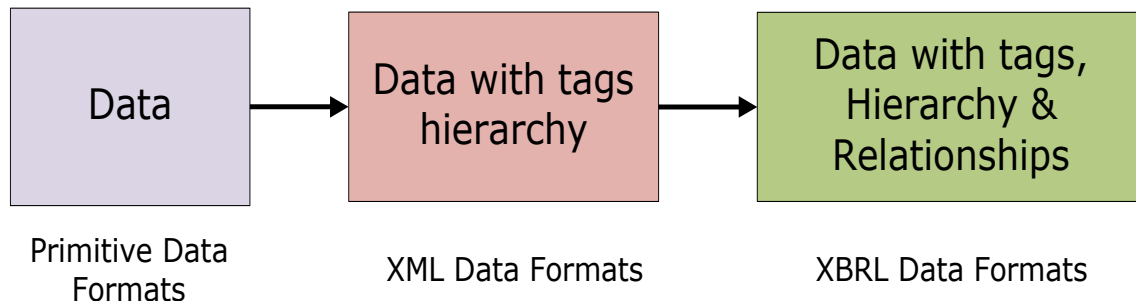
### Equity Analyst/Investment Banker/Credit Analyst/Investors

- Easier access to financial data
- Easier analysis and comparison of financial data
- Utilizing a publicly available XBRL database of Risk Return filings or prospectuses, could easily, in a matter of minutes, identify funds for review based upon fund type, return history and expense information
- Simplify the selection and comparison of data, and deepen their company analysis
- Time required for analysis, validation and arranging financial information according to the needs is greatly reduced.

# XBRL - An Overview

## How XBRL works

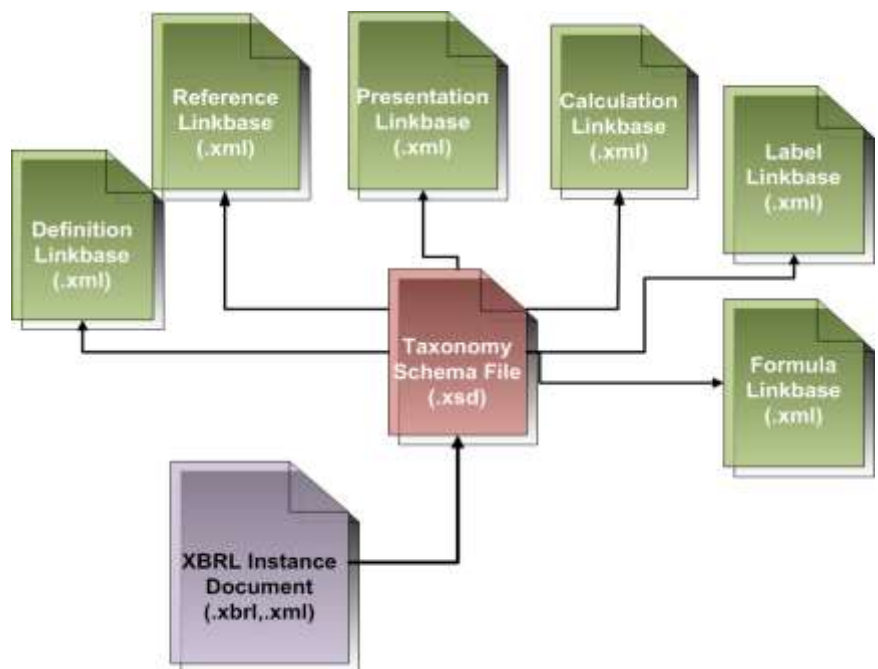
XBRL has evolved from XML (extensible mark-up language) which is based on the concept of meta-data. This meta-data provides context to the information which makes the data almost self-explanatory. Wherever the XBRL data moves, it carries along with it the context, which makes it intelligent and thus any software application can interpret and process the data. Information attributes like the period of the information, data structure it will hold (monetary, percentage, text etc) are attached to the data. In addition, labels in any language can be applied to information and also references to the legal or authoritative literature can be added.



- ✓ XBRL combines hierarchical xml data with relationships and references between the data points
- ✓ It links the data xml files with various other files containing definitions, presentation, calculation, references relationships
- ✓ XBRL data files are a set of XML and XSD files.

## XBRL documents

An XBRL document comprises of taxonomy and instance document. Taxonomy contains description and classification of business & financial terms, while the instance document is made up of the actual facts and figures. Taxonomy and Instance document together make up the XBRL documents.



# XBRL - An Overview

## Taxonomy

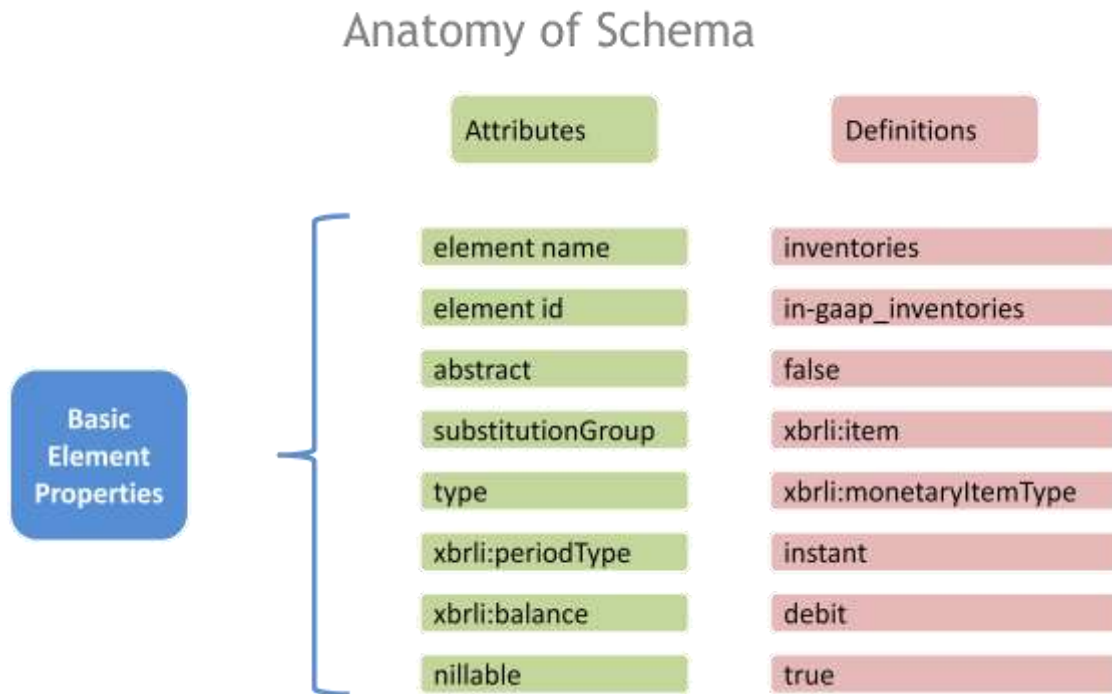
Taxonomy can be referred as electronic dictionary of the reporting concepts. Taxonomy consists of all the data definitions, the basic XBRL properties and the interrelationships amongst the concepts. It includes terms such as net income, EPS, cash, etc. Each term has specific attributes that help define it including label and definition and potentially references. 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.

## Schema

XBRL Schemas together with linkbases define 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.

**Element Name:** It specifies the name of the concept which is defined. A style guide has to be followed to define the element name. There are many rules to be followed while defining the element name which is given the LC3 convention.

**Element ID:** This attribute makes the concept defined unique. To make it unique, a prefix is attached to the element name which creates a reference point for the accounting concept, for example, 'in-gaap\_CashAndCashEquivalents', which shows that the item 'CashAndCashEquivalents' is from the Indian GAAP.



# XBRL - An Overview

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**Data Type:** This attribute defines the type of the fact that will be reported against the specified element. The most common data types that appear in financial statements are Monetary Items, String Items, and Decimal Items.

**Abstract:** It helps to determine if the element carries any value against it. Abstract = True or False. It is used as a place holder to bind the elements. Abstract, where Abstract = True, it will not have a value but will be recognized as the heading for all the elements that fall under the head of 'CashAndCash Equivalents'.

**Period Type:** This helps in determining the nature of the element and defines the flow and stock concept of accounting with regard to every element in the taxonomy. Here the elements are distinguished into 'Instant' & 'Duration' where 'Instant' refers to the stock concept (E.g.: Assets & Liabilities as on a particular date) and 'Duration' refers to the flow concept (E.g.: Sales, costs, profits, etc from reporting period start date to reporting period end date).

**Substitution Group:** It defines the association of elements with other elements in the schema. For substitution group set to item, it means that the element is not associated to any other item in the schema and neither is it grouped with other elements in any way

**Balance Type:** This attribute states the balance type of the concept that is being defined in the schema. The elements which are monetary item types are given a balance type of debit or credit depending on the nature of the concept.

## *Linkbases*

XBRL linkbases and XBRL Schemas define together XBRL taxonomy. Taxonomies with only the core elements (concepts) defined in an XBRL Schema would be useless. The purpose of XBRL linkbases is to combine labels and references to the concepts as well as define relationships between those concepts. There are five different kinds of linkbases. Each has a special purpose.

**The label linkbase:** The goal of the XBRL Consortium is to create and develop a world-wide standard for electronic business reporting. This requires the taxonomies to represent business data in multiple languages. Therefore it is possible to create an element (concept) in the taxonomy with labels in different languages and or for different purposes e.g. a short label PPE compared to its long label Property, plant and equipment. Those labels are stored and linked to their respective elements in a label linkbase.

**The reference linkbase:** Most of the elements appearing in taxonomies refer to particular concepts defined by authoritative literature. The reference linkbase stores the relationships between elements and the references e.g. IAS, Para 68. The layer does not store the regulations themselves but the source identification names and paragraphs.



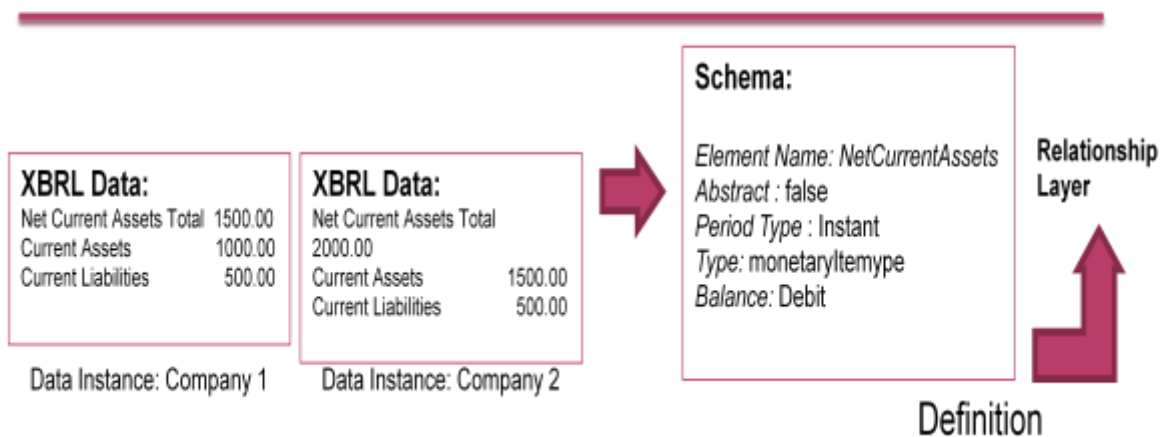
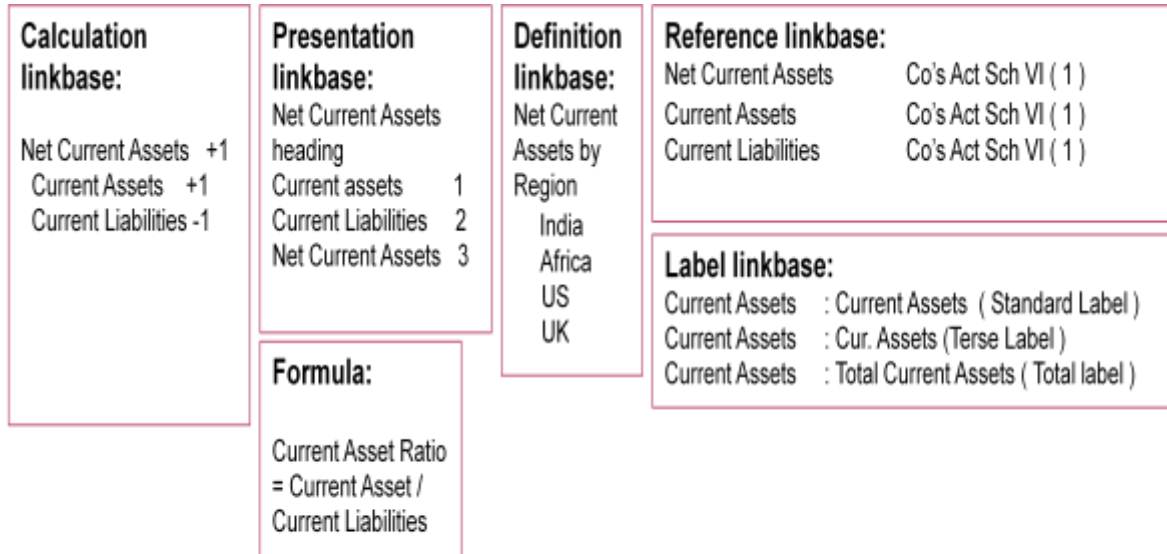
# XBRL - An Overview

**The presentation linkbase:** Business reports are in general organized into identifiable data structures e.g. a Balance Sheet. The presentation linkbase stores information about relationships between elements in order to properly organize the taxonomy content. This enables a taxonomy user to view a one dimensional representation of the elements.

**The calculation linkbase:** The idea of a calculation linkbase is to improve quality of an XBRL report (XBRL instance). The calculation linkbase defines basic calculation validation rules (addition/subtraction), which must apply for all instances of the taxonomy.

**The definition linkbase:** The definition linkbase stores other pre-defined or self-defined relationships between elements. For example a relationship can be defined that the occurrence of one concept within an XBRL instance mandates the occurrence of other concepts.

**The formula linkbase:** Advanced and user defined mathematical and logical relationships between concepts





# XBRL - An Overview

## Instance Documents

An XBRL instance document is a business report in an electronic format created according to the rules of XBRL. It contains facts that are defined by the elements in the taxonomy it refers to, together with their values and an explanation of the context in which they are placed. XBRL Instances contain the reported data with their values and "contexts". Instances must be linked to at least one taxonomy which defines their contexts, labels or references.

An instance document contains the "code" for the tags and the structure that belongs to the tagged data. Instance documents are built from a combination of XML specs and XBRL, structured to produce financial statements. The document provides data plus structure for machine recognition, and human readability.

The XBRL instance holds the following information:

- Business Facts
- Contexts define the entity (e.g. company or individual) to which the fact applies, the period of time the fact is relevant. Date and time information appearing in the period element must conform to ISO.
- Units define the units used by numeric or fractional facts within the document, such as USD, shares. XBRL allows more complex units to be defined if necessary. Facts of a monetary nature must use a unit from the ISO namespace.
- Footnotes use link to associate one or more facts with some content.
- References to XBRL taxonomies

```
1 <!-- Generated by IRIS FinX -->
2 <!-- IRIS Business Services Private Ltd -->
3
4 <xbrli:xbrl xmlns:tcs="http://www.tcs.com/20090331" xmlns:in-gaap="http://www.xbrl.in/in-gaap/2009-06-30" xmlns:lin
5 <link:schemaRef xlink:type="simple" xlink:href="tcs-20090331.xsd"/>
6 <xbrli:context id="I2009">
7 <xbrli:entity>
8 <xbrli:identifier scheme="http://www.tcs.com/20090331">TCS</xbrli:identifier>
9 </xbrli:entity>
10 <xbrli:period>
11 <xbrli:instant>2009-03-31</xbrli:instant>
12 </xbrli:period>
13 </xbrli:context>
14 <xbrli:unit id="INR">
15 <xbrli:measure>iso4217:INR</xbrli:measure>
16 </xbrli:unit>
17 <xbrli:unit id="INRPerShare">
18 <xbrli:divide>
19 <xbrli:unitNumerator>
20 <xbrli:measure>iso4217:INR</xbrli:measure>
21 </xbrli:unitNumerator>
22 <xbrli:unitDenominator>
23 <xbrli:measure>xbrli:shares</xbrli:measure>
24 </xbrli:unitDenominator>
25 </xbrli:divide>
26 </xbrli:unit>
27 <in-gaap:ShareCapital id="TAB10" decimals="-5" contextRef="I2009" unitRef="INR">1978600000</in-gaap:ShareCapital>
28 <in-gaap:ShareCapital id="TAB20" decimals="-5" contextRef="I2008" unitRef="INR">1978600000</in-gaap:ShareCapital>
29 <in-gaap:ShareholdersFunds id="TAB50" decimals="-5" contextRef="I2009" unitRef="INR">157000100000</in-gaap:Shareb
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32 <tcs:ElectricalInstallationsNet id="TAB5490" decimals="-5" contextRef="I2009" unitRef="INR">2659700000</tcs:Elect
33 <in-gaap:MinorityInterestsNet id="TAB70" decimals="-5" contextRef="I2009" unitRef="INR">2771600000</in-gaap:Minor
34 <in-gaap:MinorityInterestsNet id="TAB80" decimals="-5" contextRef="I2008" unitRef="INR">2127300000</in-gaap:Minor
```

# XBRL - An Overview

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To create an XBRL file one need to have Software/Tools, using which each piece of business data is matched with the XBRL concept describing that data in the Taxonomy. The instance documents created should be valid as per XBRL specifications. While validating the instance documents following are considered –

- Checking the instance document with the taxonomy it refers to
  - The values reported are as per the data properties as defined in taxonomy
  - The data in reported conforms to the relationships defined in the taxonomy
  - Mandatory items are necessarily reported etc.
- Checking the instance as per FRIS (Financial Reporting Instance Standard)

## Dimensions in XBRL

Dimensions are each of the different aspects by which a fact may be characterized. The dimensions specifications released in 2008 enable storing additional attributes about facts.

Need for dimensions:

- ✓ Makes the taxonomies Modular
- ✓ Increases flexibility
- ✓ Enhanced validations
- ✓ Easier to maintain
- ✓ Easy Usability and extensibility

## Taxonomy extensions

The national taxonomies, like Indian GAAP, IFRS Taxonomy, US-GAAP taxonomy etc define elements and the relationships between them according to particular legislation or standards. However, if companies need to include in their business reports additional concepts (usually related to the area of their activity or the reporting purpose), XBRL, as its name indicates, allows for such extensions.

One can create taxonomy extensions by:

- Adding one's own data elements
- Creating one's own relationships
- Or both

There are several rules to be followed while extending taxonomy, the most important being the extensions should be as per the base taxonomy style and architecture. Taxonomy is extended to accommodate items/relationship specific to the owner of the information.



# XBRL - An Overview

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## XBRL around the world

XBRL is quickly spreading across the world, by way of increasing participation from individual countries and international organizations. It is now preferred as a standard for business and financial reporting worldwide. XBRL is managed and promoted by XBRL International, a not-for-profit consortium. XBRL International is comprised of jurisdictions, which represent countries, regions or international bodies and which focus on the progress of XBRL in their area. There are about 28 jurisdictions representing different countries and regions.

The US Securities and Exchange Commission has played a vital role in accelerating adoption of XBRL in the US. In December 2008, SEC made it mandatory for companies in a phased manner to file the returns in XBRL format, starting with companies having above USD 5 billion as global float, to file their returns from June 2009 quarter onwards in XBRL format. All companies would come under this mandate by 2011. Japan also is one of the early adopters of XBRL and had started voluntary XBRL reporting program for financial services institutions gradually expanding the range of reports since 2005. Netherlands Taxonomy Project (NTP) and Standard Business Reporting (SBR) are large scale projects for developing a single national taxonomy with the aim of decreasing the regulatory reporting burden on the entities. The IFRS and XBRL also go hand-in-hand.

Many countries around the world are slowly and steadily implementing XBRL in their reporting frameworks. Taxonomy projects, designing XBRL compliant filing platforms and systems are usually the initial steps for implementing the XBRL standard in countries.

## XBRL in India

The Institute of Chartered Accounts of India (ICAI) is spearheading the XBRL initiative in the country and India is now a provisional jurisdiction of XBRL International. Members of XBRL India are 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 a few private companies.

The ICAI has developed the taxonomy based on Indian GAAP for general purpose financial statements for manufacturing and services sector and banking sector. Both the taxonomies are accredited by XBRL international. The taxonomy for NBFC is under development.

In order to enhance the quality and reusability of data and to build the flexibility to easily accommodate future regulatory data needs, the monetary authority of India, RBI, was keen to implement the use of XBRL services in their reporting framework. IRIS' XBRL enabled workflow solution, IRIS iFile, was implemented as the solution for the requirements of the RBI in October 2008, for the capital adequacy



## XBRL - An Overview

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returns. All the scheduled commercial banks which fall under the purview of Basel II use this platform. Returns for fortnightly liquidity position, foreign exchange balances, Form X, and the annual financial statements are in pipeline

The Securities Exchange Board of India (SEBI) has mandated the top 100 companies listed on the two major exchanges viz. the Bombay Stock Exchange and the National Stock Exchange, to file their disclosures through XBRL-based Corpfilings. In addition to the mandated companies, many companies are filing voluntarily their financial in XBRL.

The Ministry of Company Affairs (MCA) is also looking at mandating XBRL filings for all registered companies from 2011.

There is no wonder that the XBRL data standard is setting its foothold around the world since XBRL address the problem of data integrity, timeliness and reusability.

# XBRL - An Overview

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## Glossary

1. **Abstract Elements** – Elements with attribute “abstract = TRUE” are called as Abstract Elements and are used to group a set of elements together.
2. **Arc role** – The function of the arc which is joining the two locators
3. **Dimensions** – Structure that allow data to be organized and presented according to different criteria (such as in a pivot table).
4. **Domain** – The set of different components or criteria of a dimension.
5. **Element** – The financial concepts that are defined in the Schema. Elements and concepts can be used interchangeably
6. **Extended link** – Logical grouping of elements within a linkbase.
7. **Extension taxonomy** – Is Addition to the base taxonomy by creating new elements or customizing content.
8. **FRTA** – Financial Reporting Taxonomies Architecture
9. **FRIS** – Financial Reporting Taxonomies Architecture
10. **Fact** – Usually a value or other information of a financial or a business report, which is mapped to a taxonomy element
11. **Hierarchy** – Tree like structure used to express relationships and make navigation within the taxonomy easier.
12. **Hypercube** – Header and place holder in the case of dimensions
13. **Instance document** – XML file containing business reporting information.
14. **Label** – Human-readable name for an element
15. **Linkbase** – Relationship defining taxonomy elements which are defined in the schema
16. **Locator** – Used to point the elements which are to be related.
17. **Primary item** – A measure which can be broken down into dimensions
18. **Schema** – Part of the taxonomy that consists of set of XBRL elements and their attributes.
19. **Specification** – Detailed description of XML syntax, semantics, and structures, etc. that prescribe how XBRL is constructed.
20. The specifications referred over here are:
  - a) XBRL 2.1 Specification
  - b) XBRL Dimensions 1.0
  - c) Financial Reporting Taxonomy Architecture
  - d) Financial Reporting Instance Standards
21. **Tag** – Markup information describing a unit of data i.e. Individual elements within taxonomy, e.g., net income.
22. **Taxonomy** – Electronic dictionary of business reporting concepts and is composed of an XML schema (.xsd file) and linkbase files.
23. **Validation** – Process of checking and ensuring consistency in the taxonomy documents based on the XBRL Specifications

Source: [Www. Xbrl.org](http://www.Xbrl.org)

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