

# XBRL new thinking in financial reporting

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## Abstract

The financial report is the final result of an informational accounting system of economic bodies, which is of a high importance in terms of presenting financial statement and responding and consulting to management. On the other hand, investors as major users of these data are always looking for comprehensive and clear information to make their final decision. Therefore, companies need a uniform and clear reporting language, to be intelligible for all its users. This new thinking resulted in the emergence of new methods of financial reporting named XBRL. Several economic enterprises all around the world are using XBRL as a standard reporting method. XBRL stands for extensible Business Reporting Language is a corresponding to HTML in web language. In simple words, it is a tool to be used by information providers to enter information in the system. Hence, XBRL can be considered as a bar coding system that allows companies to use some common national or international labels for determining specific reporting concept in a company. The study provides a comprehensive definition for XBRL system and attempts to recognize the benefits of using such a system, and also, categorizes the effects of system in details. Then, the research attempts to find a relationship between this system and, accounting and auditing systems, and analyses the benefits and necessities of applying this system by describing its terms of application.

**Keywords:** XBRL System, accounting and auditing informational system, economic enterprises.

## Introduction

Traditional financial reporting has failed in meeting needs of its users to provide them with up-

dated information, due to lack of on-time information providing, limitation in mass data processing and high cost of information providing. Extensible business reporting language or XBRL, is an international standard approach that has evolved information transaction especially financial reporting all around the world. Using business reporting language as an independent language has originally been common based on markup extensible language and in order to formulate the commercial information in an applicable way to different requests (Davis, et al, 2002). XBRL can be used as a novel method to prepare and distribute commercial reports to financial information users (Penle, et al, 2002).

XBRL is a corresponding to HTML in web language but in the financial area, simply, it is a tool to enter the informational system by information providers, moreover, it enables them to classify the information entered in the system.

That is, this language is a nature indicator of every piece of entered information in as expenses, assets or credits, in a wide range of details.

The method is that as soon as data formatting users are able to retrieve them, transfer them in spreadsheet software to analyse and control them in whatever way they require. It is also possible for users to design several if-questions based on information about present, past, and the needs of future compare them with similar companies based on determining methods. Moreover, it is possible to analyse information in terms of any languages, currencies, and even under any accounting rule (e.g. International financial reporting, or Accepted accounting principles of the United States of America) and get immediate virtual responses from the PC.

For an efficient capital market, it is essential

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to have an efficient and flexible system for monitoring the financial reporting process. Information plays an important role in the decision making process. Consequently, authentic and timely information is very important in protecting investors. This can be achieved through XBRL. Possibility to access information in XBRL format, brings benefit to many users such as, investors, analysts, governments, limited liability companies (For internal and external purposes), consumers, non-governmental organizations and of course accountants. In fact, XBRL, will emerge a glorious new low-cost world of equal access to information for both users and providers of information. However, accounting networks believe that companies that accept XBRL will benefit from significant savings in internal and independent audits(Mansouri, 2006).

Most of companies are attempting to increase their ability in distributing financial information through company's website and providing such information to staff, investors, and financial analysts. XBRL has been created to provide users with an effective and efficient tool for information transition through internet(Arabmazar Yazdi, 2006).

Accepting and Implementation XBRL, is increasing rapidly by both different countries and international organizations. This acceptance trend is more significant in international organizations. Using XBRL supervisors will receive more correct and accurate reports and this way reduces the expenses of data processing and enhances their supervision duty. Implementation of XBRL is a comprehensive and extensive project that demands cooperation of business managers and IT experts. Understanding reporting process and influences of XBRL on it has an important and essential role in its successful implementation(Hoffman, et al, 2010).

There are several approaches in the implementation of XBRL, which may be different from one country to another one in terms of their laws, regulations, and effective factors in this regard.

Considering its influences on different reporting elements such as investors, analysts, financial institutes, auditors, and supervisors using an improper scenario for implementing XBRL may result in waste of time in a wide range(Abdollahi, et al, 2010).

Choosing a proper approach in implementing XBRL, in addition to determining required skills, software, and supporting tools, will also clear the

level of requirements for external help and employ consulting firms and external suppliers, and generally by determining required resources contributes to its successful implementation(Abdollahi, et al, 2011).

## Defining accounting information

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Accounting information system is responsible for collecting, processing, classifying and reporting financial events aiming to provide information regarding event and decision making records for internal and external users. To handle routine activities, preparation of future strategies, and evaluation of past operations, managers needs accounting information. Most of decisions in commercial-manufacturing sections are based on accounting information. The importance of direct and indirect expenses, marketing, wages and prime cost resulted in the managers ' need for comprehensive, associated, reliable, comparable and timely accounting information. Therefore, accounting information provided for managers should have the following characteristics:

1- Be comprehensible: provided information should be comprehensible to managers, financial knowledge and method of presentation shall affect this item.

2- Be associated: provided information should be related to the issues or decisions in the process. Information to be considered as associated should be presented timely, and be effective in the valuation of decision made or prediction of future issues.

3- Be reliable: for being reliable, information needs to be out of errors and advocacy. Comprehensive, accurate, non-advocacy, and approval.

4- Be Comparable: information must be presented in a way that manager can compare them over the time and also can compare them with financial statements of other companies, obeying accounting standards and preparing uniform reports will increase comparability characteristic(Iranian Standards, 2005).

5- Be timely: this characteristic refers to the propriety of the report.

## XBRL definition

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XBRL can be defined as a bar coding system that allows companies to use some common na-

tional or international labels for determining specific reporting concept in a company. Immediate exchange is possible for information that follow this coding system.

It can also describe as “a type of business reporting language that can be extended”.

XBRL framework is based on XML, which is used to create, transform, and analyse the business information in world information chain. It is a kind of technology that can increase accuracy, utility, and clarity in financial reports. In fact it is a reporting language based on XML that is solely designed for financial reporting in USA accounting association. It is a standard program to omit incompatible structure and terms, and it is a current method in technology that is used as a common business reporting language with extendibility characteristic. In XBRL all frameworks and standards are designed in the related software to process and present the information of the economic enterprise to be prepared for E-reporting.

As XBRL is designed based on XML principles, it has the advantage of self-description of data. Hence, XBRL just analyses data structure for reporting to be able to present business reporting steps and structures in the form of a chart. This way, it can swiftly review, transform, search, summarize and analyse commercial data and report it to the organization and users.

It is a system that can present commercial reports and the relationship existing between information and facts, in shorter time and lower costs. In fact, companies can gain many advantages of XBRL, by supporting financial and manufacturing decisions, obeying regulations, and making connections between investors, staff and commercial partners through it (Bozorg Asl, et al, 2006).

It enhances information processing, and provides users with commercial information at a higher rate, then reducing preparation time enables analysts to spend more time for data analysing, increases search speed, reduces time and costs and makes data transformation and financial reporting procedures more clarify.

## History of XBRL

Roots of XBRL refers to 1998. Charlie Hoffman from Knight vale & Gregory, a company in Washington, in 1998, examined the XML for financial information E-report, he started to create samples of financial statements and audit pro-

grams using XML. In 1998. He reported to the manager of the AICPA high-tech task force that XML has the capacity to be used in financial reporting. Finally, on 1998.Dec.31 Charlie Hoffman & Mark Jewett finalized their suggested model and presented it to AICPA on January.15. Then Halfman & Wayne Harding convinced AICPA about the importance of XML in the accounting profession. AICPA, then, asked for a business plan for financial reporting based on XML. The project was called XFRML. That business plan was prepared on June.15.1999, and on July.17 AICPA board of directions financed the XFRML project. In August 12 companies affiliated to the supporting committee of the project.

In 1999.July, Carlie Halfman created prototypes of trial prototype of XFRML. The model was completed on Oct.13 and the first meeting of its supporting committee held on Oct.14 then name of the organization changed from XFRML to XBRL on 06.April.2000([www.xbrleducation.com](http://www.xbrleducation.com)).

In 2000 the USA accounting association suggested constitution of a committee in order to supervise on utilization of reporting standards in companies. XBRL was revised in 2000 and some companies prepared information based on this system to determine its capacities. Since 2001 XBRL was propounded as a new proposal strategy, and practically came into use in companies` financial reporting. Volunteer companies for using this new reporting language presented their financial reports in this format and presented them through the EDGAR website for public use. The information is presented to users of financial information, some, free and the rest with a little charge. After initial acceptance of XBRL, many attempts made to classify financial information to be used in this language. The first version of proposed accounting international standards was published in April.2002, after several months of all group members striving. In December 2002, a resolution passed by the New York stock exchange for using a standard language in publishing exchange information, and using this standard in receiving reports from firms.

## Research background

Bakhtiari (1989), conducted a study on problems in the implementation of accounting systems in terms of organizational problems. The results of this study indicated that reaction and resistance of the executive staff and executive staff failure in pro-

fessional knowledge were some of the problems in implementing AIS (Bakhtiari, 1989).

Arya (1993), studied barriers to the development of computerized accounting in Iran and introduced main barriers as: insufficient knowledge of computer facilities, lack of specialists for the establishment and implementation of systems and non-standard accounting methods (Arya, 1993).

Arabmazar Yazdi (1994) studied limitations and barriers of lack of computers and software in preparing financial information in Iranian firms. He introduced the most major recognized barriers as following: managers' unawareness of the importance of the PC, managers' unawareness of the capacity of softwares, lack of short term and long term courses for managers regarding using a PC and softwares in preparing financial information. He also pointed out the importance of information systems, accounting informational systems, managers' unawareness of the role and capacities of informational systems and tax-orientedness of accounting information systems in Iran (Arabmazar Yazdi, 1994).

Namazi (1996), in a paper which its aim was studying characteristics of industrial management accounting systems, reviewed kinds of management accounting systems that exist in practice, information extracted from them, alternations in which financial statements and reports are prepared and users of the information (Namazi, 1996).

Bahramfar and Rasooli (2001) studied qualitative features of accounting information and their usage in decision-making, in a paper, and concluded that accounting information is considered as a management tool in decision-making and the aim of creating and controlling over it is to assist management (Bahramfar, et al, 2001).

Dastgir et al (2003), in a paper titled as "effects of characteristics of accounting information system for the improvement of managers' decision-making; study case: Bahman Group", concluded that characteristics of accounting information system are affecting managers' decision-making in Bahman Group (Dastghir, et al, 2003).

Etemadi, Elahi, and Aghaei (2004): effects of IT on accounting qualitative characteristics; logical system of IT effects on each of accounting's characteristics. IT increases accounting information association and in a little scale increases their comparability (Etemadi, et al, 2006).

Arabmazar Yazdi, Fatholahi, and Kamrani (2007) name the reasons of success and failure

in implementing information systems. The major problems in implementing that systems recognized were: users resistance, high costs, time consuming, and lack of right management (Arabmazar Yazdi, et al, 2007).

Peter Gochack (1999): if systems are not applied correctly, then: 1-will cause opportunities miss 2-organization will need re-planning 3-will result in no implementation which in turn will cause, dissatisfaction 4-will cause problems with maintenance of systems in the future. The more extensive range of coverage of strategy and implementation resources the more desirable implementation (Petter Gottschalk, 1990).

James E. Hanton, Wiki Arnold, Dana Gibson (2001) A-study of the effects of group correlation and conscious attention in implementing accounting information system. B-Comparing individual contribution and group contribution; Group contribution was recognized as more effective than individual contribution in implementing accounting information system (James, et al, 2001).

Ed, 2000, studied how characteristics of accounting information system affect users judgment and decisions the results indicated that, accounting information systems provide initial information for decision-making to users (Ed, et al, 2000).

Robert P. Marble, 2003, A-Management emphasize and attention towards an implementation procedure has an indirect effect on user satisfaction. B-using Swanson model; in this model 9 factors are involved: user engagement, management commitment, value basis, mutual understanding, design quality, operation level, project management, resource sufficiency, and position stability. If the project was not managed properly, active supports by managers will not be effective. In fact, the main commitment of managers towards the project is in proving utility and flexibility of the implementation project to users (Robert, et al, 2003).

Maldin and Rachel (2005), presented a fundamental theory in the development of information systems that recognizes the importance of functional and designing characteristics of the system (Mouldin, et al, 2005).

David and colleagues, 2005, proposed that accounting information system functions as a mediator and connection through which three different variables affect organizational behavior.

Mack, 2006, in a paper titled "Concepts of value of information and accounting" emphasize-

es on the necessity of understanding information value, and indicates that this necessarily implies the employment of a proper accounting information system and plays an efficient role in control, planning, and decision-making of managers (Mock Theodore, 2006).

### Advantages of using XBRL

The most important achievement of using XBRL can point out following (Arabmazar Yazdi, 2004):

- Possibility of transfer in an efficient way;
- Possibility of amendment of the data by user;
- Using the classification of unifying information and omitting information concept problems;
- Increasing financial report comparability;
- Swift access to different information in the defined classification;
- The possibility of local saving of data from users and making further calculations;
- Possibility of financial data exchange between different systems;
- The possibility of using intelligent analyst software based on direct information collected from firms.

One of the most important advantages of this new reporting language is providing a relatively safe environment and reducing expenses. Hence, accounting profession should accompany new E-reporting climate, and provides guidance, standards, tools necessary for providers and auditors related to these E-documents (Boritz, et al, 2008).

XBRL, reduces expenses of information analysis by omitting incompatible reporting formats and sending compatible reporting formats (Weber, 2003). For example, XBRL helps amateur users of financial statements to receive and integrate their required information (Hodge, 2004).

On the other hand, XBRL can assist users in right financial decision-making by providing appropriate descriptions. Other advantages of XBRL are enhancing and coordinating international commercial reporting standards. For example, in January 2005, European stock exchange, obliged all their members to present their financial statements according to International Financial Reporting Standards (IFRS), however, many of these companies have to follow their own country's financial reporting standards and this decision may cause problem for them. But if they were using XBRL, they could easily present their reports in different formats (Premuroso, et al, 2008).

**Table 1. Technical perspective and understanding of XBRL**

Recognition	Technical	
Power	Understanding	electronic submission of financial reports
	To develop	
	Reducing the time and cost of sending financial reports	
	Effective electronic procedure in a timely financial reports	
	Elimination of manual errors in data	
	Introduction to XBRL	
	Improve the financial reporting impact in attracting investments	
	Effective provision of service automatically translates the financial statements into English	
	Kodal site	
Tendency	Tend to use XBRL	To develop services based on XBRL



## Reason for creation of application of XBRL

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According to foster research in 2002, American companies have paid 404 billion dollars to their staff to collect important fundamental financial information in the form of appropriate reports. This amount was 11% of all wages paid in the USA. On the other hand, information and financial reporting review is full of errors and inefficiencies. And this may cause misuse, such as Anron Company.

Users of commercial information, do not need commercial information transformation if they use XBRL, and this results in an increase in reporting. XBRL is potentially able to connect financial models and new markets to commercial information and commercial reporting because XBRL, by providing a standard mechanism for naming (coding), classifying, manufacturing, consuming, publishing, and transforming financial information, can remove problems and barriers related to structural inefficiencies that result in producing programs that are not associated with data. Hence, by using XBRL commercial information can be categorized in packages with their prices which decrease time and expenses of producing information and also reduces access time for reaching information included in financial reports.

For example, in the years before 2004, it can be observed that commercial information were saved and transformed into projects of HTML formats in projects like manual document transform, separate entries, and other different forms and structures which were mostly designed as a single application with very limited purposes. Therefore, these structures would not increase the reliability of information provided in reports and are just used as an information transmitter tool.

XBRL, omits mono-application feature and additional steps of reporting, transmitting, and opening information on financial programs that make information to be readable by different type of software. Omitting this item, creates important advantages such as acceleration, quality, and reliability of data processing in different business levels. This advantage gives support to management decisions and other user decisions. Nowadays one of the weaknesses in commercial reporting is keeping them up-to-date. This is both time consuming and time taking. And even in some cases this is impossible. XBRL, clearly presents up-to-date information to make them available for executive man-

agers and external users(Bozorgh Asl, 2006).

Necessity of existence of XBRL and its effects on acceleration of the reports

By day to day increasing of users' familiarity with information E-analysing, number of people who choose the internet as their source of commercial information and also their informational needs is regularly increasing.

Reporting model has been transformed by the emergence of XBRL as the new standard, and an opportunity is provided in which financial and commercial information is being used in an integrated way in different applied software, and go through internet in a safe and swift way by owing a kind of digital label. However, some believe that using XBRL may make the content of all financial reports to be uniform(Saghafi, et al, 2005).

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In the other hand, XBRL clears commercial information that avoids some accounting gossips of the recent years. Clarity of commercial information does not mean changing or dissolve accounting principles or change implementing commercial facts that make financial decisions. But, it means by authorizing users enable them to make use of commercial information about the report.

However, XBRL enhances all commercial facts of a company and increases commercial facts of a company that can be processed by analysts(Bozorgh Asl, et al, 2006).

## Effects of XBRL on financial firms

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Some of the most important effects of the XBRL on financial firms is outlined as following:

- 1- Affecting internal management procedures:

- Providing more accurate and timely information for decision making
  - Increasing analysing facilities
  - Making a better governing environment
  - Swift adaptation and acceptance of reporting models
  - Reducing report providing costs
  - Increasing information flexibility for analysing
- 2- Affecting external management procedures
- Decreasing information providing costs in all formats
  - Be flexible in applying special features and terms of company in reporting
  - More supervision on reported information
  - Increase adaptability
  - Capacity for expressing company condition accurately and clearly

### 3- Affecting independent auditors

Auditors of constant method tend to use XBRL, because they believe that for auditing to abide in the internet and communication era, it is necessary to undergo some changes. Having a review in its history we will find that auditing has remained loyal to an especial style. While constant commercial deals are eventually increasing. Of course constant auditing is not sufficient by itself but for an independent auditing procedure to abide it is necessary. XBRL enables managers and auditors to access more commercial data in a shorter time. It enhances analysing of commercial information that increases auditing utilization. Because it enables auditors to spend more time analysing data and act more effectively regarding worthless data (Bozorg Asl, 2006).

XBRL affects can be outlined briefly as following:

- More timely, accurate and comprehensive data for analysing
  - Increasing the number and frequency of analysis
  - Making possibility of more efficient analysis
  - Providing a more effective method in recognizing reporting or other standards changes
- 4- Affecting legislation and supervision
- Increasing validity of reported information
  - Increasing flexibility towards changes in reporting necessities
  - Providing possibility of more comprehensive analysis
  - Meeting the legislators ' demand for more detailed and proportional reports
- 5- Affecting investors and creditor market

- Presenting more proportional information for more proportional analysis and decision-making
- Enhancing reported information and credit analysis
- Increasing clarity and rate of deals
- Presenting more useful information
- Quicker information collecting
- Reducing firms ' acceptance and adaptation costs

### 6- Other effects of XBRL

- More flexibility in representation method due to independence of PDF & EXCEL files through separation of data and representation method
- Possibility of transition and exchange of information between various systems
- Zero manual error degree
- Utility in receiving bills and inventory checking in the stock exchange
- Enhancing supervision on firm's reporting
- Possibility of immediate publishing and swift analysis and analysis and processing data
- Keep up with the world's largest stock exchange and increasing Iran score to be accepted by the other world's stock exchange by increasing quality and clarity of informing
- Practical use of internet for swift and accurate data transfer and publishing

2- What is the relationship between XBRL and accounting standards such as generally accepted accounting principles?

Many of providers and users of XBRL, are in ambiguity with the issue whether, it had accepted information defined by generally accepted accounting principles and used them in their programs or it had developed these principles. Worth to say that, XBRL is not considered as a development to generally accepted accounting principles, but it presents firms 'financial reports according to these standards. In general, XBRL has an essential effect on standard making procedure and in XBRL, standards are less than before are presented in a traditional structure and mostly commercial facts are discussed.

The fact that XBRL, is presenting and comparing financial information in a swift and lower-cost way dose not mean that is is changing basics and fundamentals and classifications of accounting. For example, if two companies are working in a same industry and are reporting their interest and lost in a similar way, it doesn't necessarily mean that their financial statement items be identical and comparable.

These items can be different in terms of their classification and the difference in accounting basis on which their income is identified and allocated.

Some believe that XBRL is figuring out new accounting standards, in fact it is not true.

XBRL, includes specific aspects of accounting standards, defined in the e-programming to be intelligible for individuals and computer programs. It doesn't define financial reporting or financial accounting concepts but it includes them electronically defined.

It is focused on reporting development by preparing Electronic financial statements. It will enhance financial reporting changes in a long term. Of course this change will be applied to the market not XBRL. It is not a standard chart of accounts using in an organization but it is a method of verification between of information used within the organization and items out of there, which is used to reach comparing capacity.

Worth to say, does not determine level of revelation of sufficient information and level of the sufficiency, but that is board of financial accounting standards, board of international financial accounting and other organization of standard making can decide or judge that an organization must reveal their financial statements in which scale.

In XBRL, just user determines the items to be re-

vealed. In fact XBRL is a framework for that financial information that are to be revealed. Since, it can be observed that XBRL in addition to compatibility with accounting principles and concepts is capable to compensate for much inefficiencies high mass of the nowadays reporting system(Bozorg Asl, 2006).

3- Meaning of classification and steps and method of XBRL

This language labels reporting data using specific titles. Its extensibility can be dangerous in some ways. Because it is possible, that companies use wrong titles or titles that are not meaningful to users, in their reports.

For example, consider two companies both intending to present the headline of cash and bank. One company may label the report as cash and another may name it Bank. This can make it impossible to compare these two reports. That is why XBRL uses standard labels. Of course determining standard labels doesn't violate its extensibility. Because if a new subject added and an industry intends to add new subject it will be needed to add a new label in the system. Adding new label is possible by a general agreement between accounting associations in the range of XBRL.

This standardized dictionary of XBRL that agreed labels are defined within it is called Classification(Arabmazar Yazdi, et al, 2009).

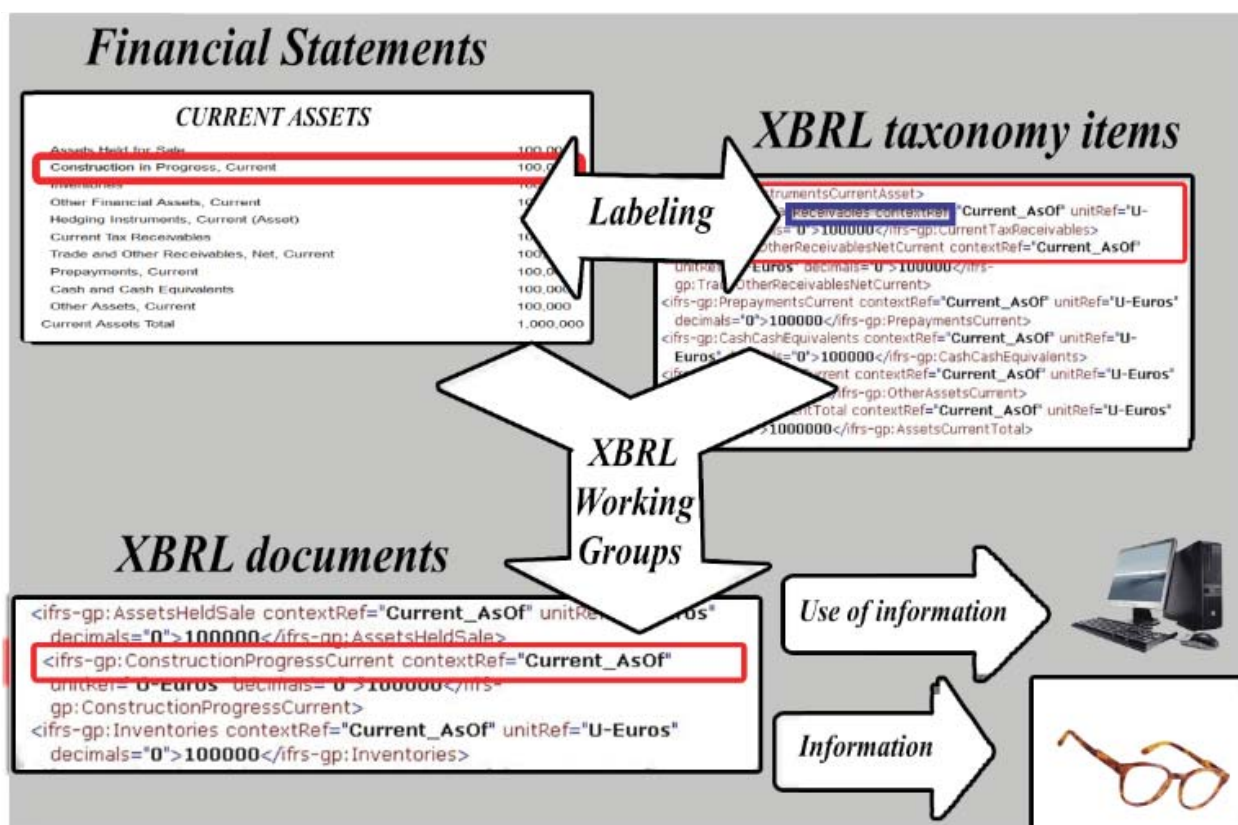


Figure 1. Procedures XBRL



## Terms of using XBRL

Some leading IT companies such as Microsoft have produced some special application software that firms can use to transfer data that presently is being prepared in the form of software like Word, Excel, or PDF into XBRL format to prepare and publish their financial statements. Similarly, users of financial information can use above mentioned programs to read XBRL format and analyse them. Some attempts are doing to make it possible for firms to be able to prepare their reports in XBRL format and no need to transform any more exist (Mokarami, 2004). XBRL preconditions can be outlined as follows:

- 1- To create uniform specifications for financial information according and compatible to firms financial statements.
- 2- A software that is capable to label financial statements items according to defined specifications.
- 3- Pages that can present information in various or specific ways.

## Success factors in implementing XBRL

Employing innovation is an effect of tension and stress (Warren, 2004). Wolf, 2004, argues that employing innovation is a complex issue depending on employment environmental condition. Organizational and environmental factors like technology play an important role (Elliot, et al, 2002).

In this regard. According to Tornatzki and Flasher (Tornatzky, et al, 1990) environmental background includes areas in which executive organizations are working in, and is consisting of rivals, regulations, and relationship with the government. The organizational environment consists of characteristics such as accessibility of human resources and management structures. Also some of the most important variables of technology are conceptual advantages and costs of employment and problems with innovation integrity in organization.

### *Environmental Factors*

Literatures of innovation have determined several factors affecting implementation decisions. According to professors and colleagues, vital factors in implementing innovation include organizations' capacity in predicting and responding to market and industry changes.

External tensions such as competition, global-

ization, and new customer value offers can affect innovation employment (Cragg, et al, 2001). By conducting a case research on employing E-banking among the customers of a company in Thailand, Rochna and Spisy (Rotchanakitumnuai, et al, 2003) have concluded that cultural aspects can have a major effect on employing innovation. Moreover, legal issues such as privacy, and validation is another major factor that emerged of internet related innovation.

Lawson and colleagues (Lawson, et al, 2003), in a review of small and medium Australian companies have found that relationships with state and industrial associations, by increasing the awareness level play a vital role in employing innovation. Moreover, Simpson and Docherty (Simpson, et al, 2004), in England, have achieved a relatively similar conclusion like Australian environment, but they also concluded that even if the role of the state and industrial association is vital though it is not enough for employing these innovations. Success stories and stories on the hero's life can also affect that innovation (Ghavari, et al, 2004).

### *Organizational factors*

Organizational factors lay an essential role in the implementation of an innovation. For example, there is a positive relationship between staff knowledge and they're tending to employ innovation (Warren, 2004). Knowledge includes the skills and attitudes required for successful implementation of innovative applied programs (Warren, 2004), (Fillis, et al, 2004). In addition, managers' attitudes towards innovation and conceptual advantages are of major importance in employing innovation (Rotchanakitumnuai. Et al, 2003). For example, managers with Risk aversion attitudes towards this innovations probably have negative attitudes towards its implementation. Some probable consequences of such attitudes can be neglected allocation of required resources (Rotchanakitumnuai, et al, 2003).

### *Technological factors*

Having an imagination of using an innovation can affect its application. Generally, different characteristics that may have major effects on applying innovation include proportional advantages for implementation costs, complexity and adaptation with executive organization, the tangibility of results (Russell, et al, 2004). Innovation can be competitive by increasing quality, services, applica-

tion and reliability (Warren, 2004).

Awareness towards a specific innovation is a precondition for using it (Elliot, et al, 2002). On the other hand, implementation costs, technical problems, and innovative complexity are some of unattractive inhibiting characteristics. Simpson and Docherty (2004) believe that, integrity between applicable program related to innovation and old systems will not be achieved easily and without resistance. Combination of positive and negative perceptions towards innovation, determines organization's readiness for employing a specific innovation, which also depends on the type of industry and extent of organizing (Simpson, et al, 2004).

4- Approaches in implementation of extensible business reporting language

Implementation and acceptance of XBRL in world scale are rapidly developing from different countries and international organizations. In some countries such as USA, Canada, Belgium, Japan and etc. some dictionaries or initial version of the project is project of financial reports. On the other hand, supervising institutions with differing areas such as capital market, money market, insurance companies and tax organizations will make it obligatory to use XBRL, because this way their supervision duty will be enhanced.

Reviews and studies of implementation projects in different countries have shown that there are two major approaches towards the application and acceptance of XBRL (Salvin, 2008).

1- Using a transformer

In this approach, procedure of report preparation is the same as traditional methods, and outcome usually are prepared in excel format, then are transformed into XBRL format using some transformer. This transformer can be provided either through internal or external resources.

An advantage of this approach can mention its promptness. But, since no change is made in reporting system but adding an additional stage to its end (transforming Excel file) no value added advantage of the new method will be reflected in organizational procedures.

For example, the FFIEC has taken the responsibility of filing of firm financial reports through XBRL and is doing that through its own automated system.

With respect to implementation costs we can say independent of transformer to different software using by publishers, caused a decrease in implementation costs.

Cost of preparing dictionary and transformer is major costs of this project. Also, as in this approach no changes have been made in reporting procedure and just a file transformation is applied there is no need for extensive investments in training and their relative acquisition with this program is adequate.

2- Filing

In this approach at first an XBRL software is installed on all PCs and reports are basically prepared in the same format. Its disadvantage is the highest level of risk and disorder, which can be avoided with a proper planning. Its costs mainly include the costs of developing dictionaries and training publishers.

Moreover, a major part of expensed such as preparing require software is on publisher cost. In this approach, publisher are initially entering data in the aminsoftwar so it worth to make considerable investment for increasing knowledge and awareness of key involved people especially publishers who are making filing job.

In terms of implementation required time with respect to experiences exist in this regard (such as Stock exchange and securities a USA) considering the time of development of dictionaries it is estimated to take 2 years.

## Users and beneficiaries of XBRL

Generally speaking, using this reporting language made presented information to be more reliable, applicable, and accessible. XBRL, represents a method to for to make information and information collecting more coherence and to enhance report analysis by using related software. Governments, regulators, stock exchange markets, and financial service companies are using information published through XBRL. Additionally, financial and management accountants, company managers, financial analysts, investors, and creditors are using that. However, IT companies can be related to this program by creating software related to it (Phillips, 2008).

### *Professional behaviour in extensible business reporting language*

Development of composing professional behaviour or inserting new concepts in professional behaviour may oblige another necessity for using XBRL in organizations. And this may be done by determining the range of responsibility and duties of company, auditors and users of financial in-

formation. This way several groups are responsible for financial and commercial reporting and professional behaviour. By course range of responsibility for each group on the web should be determined.

Companies accepted in the stock exchange : These companies are expected to completely adhere professional behaviour and in case of any deviation of these basics, they are seriously expected to express their reasons, they must design their websites in a way that clearly distinguish between commercial reporting for investors and other topics.

Auditors: Auditors should assure that business owners have distinguished audited and non-audited information and they are responsible for confirming of adhering professional behaviour by business owners, and report any deviation of its deadlines. They are also expected to constantly observe companies ' website for any major changes in the time between two audits, and if changes can deface their reports they are obliged to change their reports.

Users: Users must have enough knowledge and awareness towards commercial and accounting issues and at first have a review on the website. In case of observing any problem such as defective

or invalid data they should report it to the website manager.

Audit of XBRL financial information, is reliable, just when independent auditors review their adaptation with information creation procedure's standards and approve their validity. In E-reporting there is at least 2 ways of presenting unreliable information:

- 1- The company may put non-audited information on the website to make a connection between them and audited information,
- 2- Companies may publish invalid information regarding their operation and statements to put the risk on the users ' side.

### Classifying Auditing Risks

XBRL suggests many opportunities and choices but it has its own risks and dangers for users. Normally, both groups, senders and receivers of information about XBRL should use this technology timely and in a proper way to get advantage of it. All sorts of risks mentioned are related to IT, that are described as following:

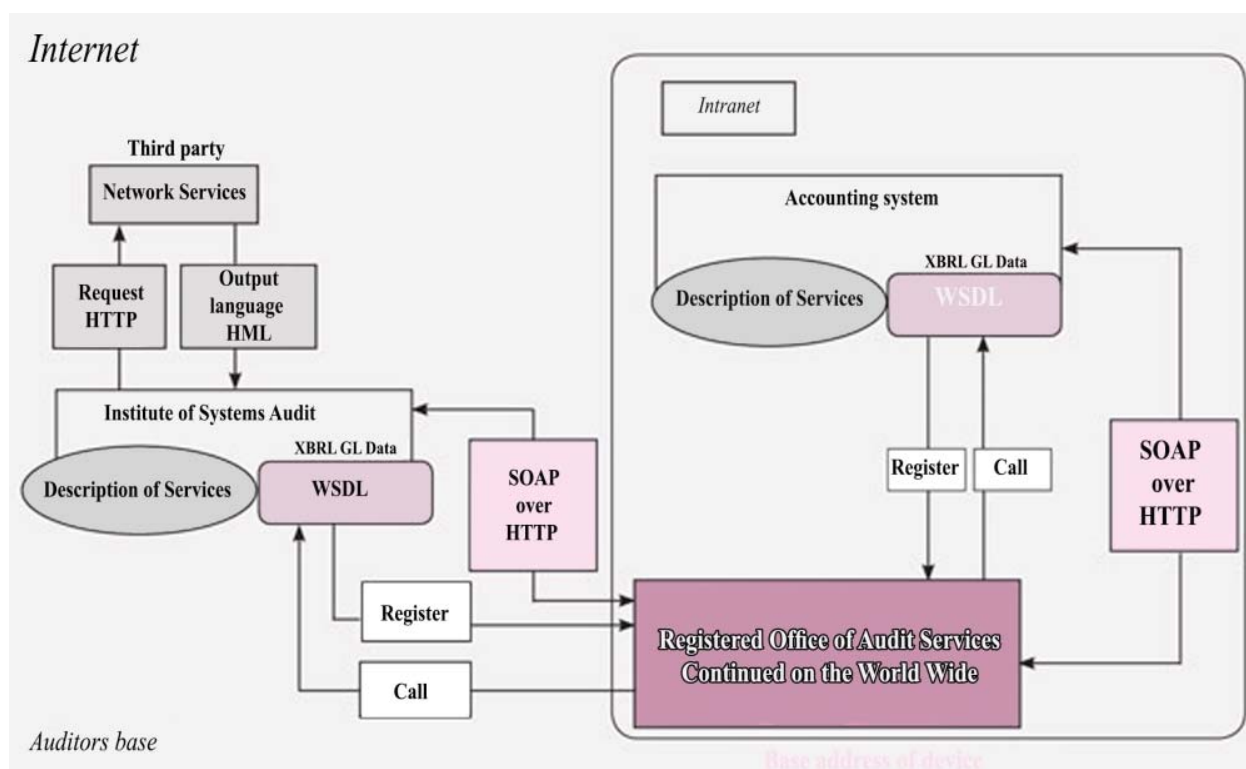


Figure 2. Global Network Service Model for Continuous Auditing

### Strategic Risk

It means that it is possible for companies that their commercial Models undergo some changes in

the long term.

It is also possible that at first the staff don't be capable to accept this technology.

### *Operational risk*

#### 1- The risk of misinterpreting information

Some risks in this area can be outlined as follows:

- Mistakes in classification and coding, which may lead to misinterpreting ,
- Possibility of misinterpreting by low-experienced users.
- Mistake in general ledger and consequently using invalid documents.
- Unfamiliarity of users with expressions of a country, industry or firm may lead to misinterpreting,.

#### 2- Risk of information request by receiver

Users may ask for some information that are unknown to sender, while user tends to use information according to their insight. It doesn't mean that sender is not informed, but indicated sender's unawareness on the transfer of sending the information scale.

#### 3- Risk of reduction of XBRL output validity

Most of users are using XBRL for the high quality of its information. To avoid losing validity of information companies need to constantly check them and use experienced staff for this purpose.

#### 4- Risk of insufficient internal supervision

Internal supervisors and auditors, must closely monitor outcomes of XBRL. Supervision must be done with the aim of observing development or failure.

#### 5- Risk of acceptance

Organizations that do not respond or respond by delay to new legal request and administration requests regarding XBRL, will be guilty of manufacturing, legal action, invalid tax recognition,... crimes.

#### 6- Risk of IT

IT risks include, reliability, accessibility, confidentiality of information.

Regarding reliability it can be said that, a third party enters system in a way none of senders and receivers be aware of. Hence, companies should try to improve security of the system to avoid losing validity if the system.

Regarding accessibility, in case of any software or hardware problem with computers, internet disconnection, etc. , this risk may happen.

To avoid this problem they may use different networks and servers. Also using spare PCs in case of hardware problem is useful. Regarding confidentiality, has provided an open network in which immediate transfer of information can easily happen.

Despite written information, or unstandardized information, documents and information in XBRL are published publicly, and it allows all individuals and organizations to freely copy the information, which may be problematic for the organizations. One solution to avoid this problem is providing passwords for main =users.

### *Recommendations based on research results*

XBRL, increases managers' ability in planning and presenting information timely that avoids their ambiguity and confusion in assessment of present and future events. This indicates the effectiveness of this language in presenting information with association characteristic. The language uses comprehensive and reliable knowledge and based on new technologies, provides information with the highest level of reliability. The information is highly stable and due to high clarity are comparable. Therefore, in this postmodern era and in concordant with the emergence of new technologies considering advantages of this language we are better not to miss it.

### *Recommendations for future studies*

It is recommended to review the role of XBRL in using accounting approaches, such as accounting information, human resources and accounting management techniques like timely manufacturing. Moreover, another new approach in accounting is a web-based accounting. It is recommended to make an evaluation of its relationship with qualitative features of accounting.

## **Conclusion**

Nowadays many companies tend to publish their information on a wide range with the help of internet. By connecting intranets to the internet and through company websites the information will be provided to beneficiaries. Users of financial information can receive required information easily and timely. However, the information should be again revised by users because there is no common and general format for explaining reported data. XBRL, was created in order to overcome limitations and providing a more effective and efficient tool to for information transfer through internet. Extensible assuring reporting language XARL, to audit and validate the credibility and validity of the reported information in XBRL was the next innovation. With the help of XARL we assure users and companies to trust XBRL information. These two



phenomena together can provide a standard method to prepare, publish, and transfer financial information in addition to granting their validity in the internet. Simply, XBRL can provide a standard method to prepare, publish, and transfer financial information.

Using an innovative technology like XBRL will follow high risks. Therefore, its implementation requires a very accurate planning and complete preparedness and understanding. Tensions of external environments including legislator and professional financial organizations have a major effect on the necessity of implementation of this technology. And managers and staffs 'awareness level of this technology and its organizational achievements is an initial prerequisite for implementing which can be improved by training. Organization readiness in terms of culture, accounting procedures and standards and financial and software professions required are of important variables affecting implementing this technology. And , adaptability and integrity with existing systems and software and possibility of initial testing by users may have affected its acceptance by users. Hence these are considered as prerequisite of this technology.

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