

# The Effect of XBRL on Improving Quality of Financial Reporting

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**Abstract:** The movement toward eXtensible Business Reporting Language (XBRL), as a standard global framework to support the more effective production, consumption, and exchange of financial and business information is rapidly gaining acceptance throughout the world. The purpose of this study is to investigate the effect of XBRL on improving quality of financial reporting in Tehran stock exchange. The research population was managers, accountants and auditors. The research period was spring 2015 and the research data was gathered through a questionnaire. In order to test validity and reliability of questionnaire, factor analysis and cornbach's alpha were used respectively. One-sample binomial, binomial test and Friedman test were used to test hypothesis. According to the research findings XBRL can improve the quality of financial reporting, financial transparency, financing and efficiency of accounting executive processes.

**Keywords:** XBRL, Quality of Financial Reporting, Financial Transparency, Financing, Accounting Executive Processes, Tehran Stock Exchange

## 1. INTRODUCTION

The reporting system of XBRL is regarded as a revolution in financial reporting which leads to reduction of production cost and provide access to information for manufacturers and users from financial statements datas. Of other benefits of this reporting system could be pointed as quality feature increase related information, reduction of error in information and faster and cheaper access to information.

Due to importance and benefits of thissystem considerable reporting this is known as the cooperative datas reporting by stock exchange commission in USA and introduce it as the future financial reporting system. And because of this kind of reporting importance and benefits, many countries in the world use (XBRL) recently, china, Spain, Belgium, Netherlands, India, Japan, England, and USA are ofthese countries. In addition to this matter, other countries like Australia, French, Swedish, Finland, UAE, are trying to establish related workshops to build the foundations of their application. The increasing process of XBRL application and utility in the world shows this method regarded as the future financial reporting system and maybe it will lead to obsolescence of present financial reporting method. On the other hand, the Iranian government policy is based on the investment market development through the administration of constitution principal no. 44 and attempts toattract foreigninvestments in the country market, needs a practical market with fast and accurate and reliable information reporting system. The XBRL reporting system as a practical providing, exchange and financial information analysis tool, in the world investment important market is applied optionally or mandatory. This reporting system could fulfill the government policies in cooperation with global investment market issue and attracting foreignerinvestors. (Ghadir Investment Co).

Almost many research have been performed in Iran about the financial reporting, in many of performed researches without attention to accounting numbers relation with financial reporting other accepts are emphasized. The growth and upheavals in economical relations leads to high competition in commercial,

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industry and investment field. Therefore many companies for existence and expansion of their activities need proper and on time investments.

Companies' financial reports should provide information which is beneficial for potential and active investors, creditors and other users in logical investing reports, presenting credits and similar decisions. The financial reports should provide the necessary information for financial status evaluation and the organization economical power, the beneficiary performance and capability evaluation, the monetary consumption and financial supplementation evaluation, management consultant responsibility performance evaluation and legal duties administration and provide complete information and prediction of future condition. As the result these reports have significant importance in fulfillment of mentioned goals and improvement of their quality could leads to more practicality of companies' investment and protection of their sources. Recent studies declare that increase of financial reporting could have important economical outcomes like investment practicality enhancement. By using XBRL financial system the company directly will connect to internet and users of accounting information in every point of the world could refer to the company website and observe the financial statements by latest changes and analyze them as well. Companies could use XBRL to save the costs and gather information and financial information reporting with higher practicality. Hence it is necessary first that Iranian auditory and accounting community be familiar with this importance, so in next steps it will lead to recognition of effective factors in making and expansion of them. The main role of financial reporting is the transference of information effectiveness to people outside of organization by valid method and on due time. Manager could use their understanding about company commercial activities to improve financial statements effectiveness as a tool to transfer the information to investors and potential creditors, regardless of this fact, if managers have motivation to confuse the users of financial statements through applying their authority in accounting selection field in financial reporting; it is possible that the profit management occurs. In present literature, hypothesis and theories are used to describe the management profit by managers and their outcomes which are; mechanical theory, the job market theory, the stability theory and managers' opportunist behavior theory. The mechanical theory in 1960 decades presented and declared that users of financial statements don't use other information sources except companies financial reports and investors only decide based on the reflected apparent values in companies financial information.

## 2. REVIEW OF LITERATURE

What has been mostly examined in foreign countries has been the role of "IT" in the quality features of reporting. In a collaborated study, "Ashbakh, Johnson and Varfil" (2006) have achieved significant changes in the audited business statements on the Internet, particularly in in the quality of punctuality. They stated that the relative balance between features of reliability and information relatedness are the most important points to the rise of the Internet.

"Graham and Baldwin" in (2003) stated that using the information in the business statements could affect the judgment process, or in better words, "relatedness" is influenced. In an article entitled "The implications of the accounting information value", "Theodor J. Mack" (2006) has stressed the need to recognize the value of information and stated that the value of information require the proper application of accounting information systems. Of those who have researched in the field of XBRL were W.G.No-J.E.Brortz (2005) in various articles under the title:

Business reporting with coded language (Marking) of extensible XML,

The extensible business reporting language XBRL -2003,

Reporting of XARL Services Accreditation for extensible business reporting language (XBRL) -2003

Reporting of Services Accreditation for business services based on Extensible Markup Language XML

Structure required for Reporting of Services Accreditation with extensible accreditation language XARL-2004 audit, a sample document of XBRL: United Technologies Company 4 -2007.

In this set of articles, the authors addressed the introduction and definition of XML markup language and extensible business reporting language XBRL as well as validation language XARL in detail and how to create XBRL documents and the implementation of audit and validate XBRL documents with the help of XARL using an audit firm and the use of methods and safety on the Internet for reporting and audit report are explained. Finally, a company that uses XBRL for business reporting has been audited (Freewer Leylan, 2007, p. 88).

Extensible business reporting language for professional accountants, business analysts and corporate executives by Richard Oppenheim. In this article, the author will describe the evolution of the technology used in accounting and give reasons for the emergence of XBRL and then express the benefits and how to use XBRL with a scientific-practical vision. In addition, this article also referred to the concept of metadata with XBRL titles (Oppenheim, 2008, p. 110). The future audit and the impacts of extensible on Audit and Accreditation in 2005 by Soren Heitmann & Annica Ohling. In this thesis, opinions of shareholders on the business information when XBRL is widely used as well as how it affects audit when companies' reporting is done using XBRL is studied. The results of this study generally suggest that the adoption of XBRL will not change audit at least in a short period of time. However, it certainly will impact on the work of auditors. However, in terms of the change created by the XBRL, it is a slow and steady movement and currently profession auditing should be prepared to educate people who are master in XBRL to meet their future needs in the long-term (Heitmann & Ohling, 2005, p. 26).

In other research, Chang, C & Jarvenpaa (2005) reviewed XBRL standards development from the perspective of institutional change within and between interest groups of business reporting supply chain. Studying the time of key events in the development of XBRL shows that the various stakeholders are involved in a different time (Chang & Jarvenpaa, 2005). Troshani & Roa, Studied drivers and inhibitors of XBRL adoption using convergent interviews and linked three environment, organizational and innovative factors. The research findings show that there are no efforts needed to comprehensively use XBRL whether in user organizations or its suppliers (Troshani & Roa, Drivers and Inhibitors to XBRL Adoption: A Qualitative Approach to Build a Theory in Un-der-Researched Areas, 2007, p. 103). Troshani & Doolin focused on the organizational use of XBRL using the model of environment, organization and technology. The purpose of this study was to evaluate issues related to the influence and development of XBRL using network theory and the stakeholders. And findings argue that interested parties still have not understood the necessity of using XBRL (Troshani & Doolin, 2007).

Premuroso & Bhattacharya Presented features the pioneering companies in the implementation of XBRL in a study. This study specifically examines whether pioneering companies that have presented their reports in the form of XBRL have higher penetration or better operational performance or not (Premuroso & Bhattacharya, 2008). In a study conducted by Beattie & Pratt characteristics and preferences of different groups in relation to Internet reporting was evaluated. The views of these groups were asked on three topics: 1. Attitude towards the area, structure, and abundance of commercial Web-based reports, 2. usefulness and the contribution in the search, 3. the ability to convert various formats of data files (Beattie & Pratt, 2003, p. 161). Bager & Lefrell Compared current and traditional business reporting with the changes resulted from XBRL. Respondents acknowledged that XBRL will facilitate and more effective control of annual reports, improving reporting presented to customers and the ability to control the computer. At the time of research, Swedish law does not allow the use of electronic signatures in electronic reports. For this reason, the interviewees knew that this case as the main obstacle to the adoption of XBRL (Bager & Lefrell, 2005). A study was conducted in 2007 Freewer Leylan entitled the factors contributing to the audit of the extensible business reporting language of XBRL in Islamic Azad University Central Tehran Branch. Research findings

show that using extensible reporting language XBRL reduces costs and time of the audit, and on the other hand increases the accuracy and completeness of the information (Freewer Leylan, 2007).

Other research was conducted as an introduction to XBRL by Richards, Smith & Saeedi on December 7<sup>th</sup>, 2004. In this article, the authors first defined XBRL and considered it as a subset of XML and defined XBRL as a language for business reporting and finally stated that XBRL is not a new standard for accounting and described XBRL. This article is co-authored between an Iranian author and two other writers from Australia and Ireland, respectively (Richards, Smith, & Saeedi, 2006).

The prerequisites for the implementation of XBRL business reporting extensible language is another study conducted by Sohrabi & Khanlari. It has been tried in this article to present a comprehensive model to be able to assess the organizations' readiness for the actions and implementations for such a plan or reduce the risks caused by this plan by appropriate measures. The model presented includes 4 factors and 16 indicators and the results of findings showed that the proposed model includes 4 factors and 16 indicators, the pressure of the external environment, including legislators' environments and business professional bodies has a major impact on awareness and commitment to implement this technology. In addition, the knowledge of the directors and staff of the technology and organizational achievements can serve as a basic prerequisite for the implementation which can be promoted through information and education (Sohrabi & Khanlari, 2010). Security in business reporting services based on XML in the Internet was an article by Arab Mazar Yazdi and Elham Hassani Azar Dariani in 2006 which was written in 2006. This article is mainly a translated article by Brotiz and No (2005). In this article, the authors introduced and reviewed XML, XBRL and XARL and examined the insurance and security in the XML-based Web services (Arab Mazar Yazdi & Hassani Azar Dariani, 2006) Another study entitled the effects of Web-based business reporting on the quality characteristics of accounting information by Assadian Ooghani in spring 2008 in Islamic Azad University Central Tehran Branch. In this thesis, the researcher concluded, by the studies done before, that web-based reporting influence quality features of data, but business managers of Iranian companies are not familiar with web-based reporting (Assadian Ooghani, 2008).

Business Reporting on the Internet and its situation in Iran is an article written by doctor Ali Saghafi, doctor Arab Mazar Yazdi and Rafik Baghumian in 2005 (Saghafi, Arab Mazar Yazdi, & Baghoomian, 2005).

A research was conducted entitled surveying lack of distributing business reporting of the companies listed in Tehran Stock Exchange in the websites of these companies by Ateri Naderpour at the university of Alzahra in 2005 (Naderpour, 2005). Web-based accounting and its impacts on internal business reporting and decision making is the name of another article conducted by Hamid Mirmojrebian in 2004 at the Teacher Training University. In this study, the researcher seeks to survey web-based accounting and the test of web-based accounting impacts on the managers of economic firms' economic decisions and finally concluded that the promotion of quality features of relatedness and easy availability to information in web-based accounting has a positive impact on economic decisions of internal managers of companies (Mir Mojrebian, 2004).

### 3. HYPOTHESES

In the present study, the following hypotheses are designed according to the theoretical literature on the effect of extensible business reporting language (XBRL) to improve the quality of business reporting by foreign firms listed in the Tehran Stock Exchange and these hypotheses will be put at test during the working procedures.

**3.1. Hypothesis one:** there is a significant relationship between the familiarity with the business reporting language and improving the quality of extensible business reporting.

**3.2. Hypothesis two:** there is a significant relationship between extensible business reporting language and explaining the transparency of business statements.

**3.3. Hypothesis three:** there is a significant relationship between the familiarity with the extensible business reporting language and financing the companies.

**3.4. Hypothesis four:** there is a significant relationship between the familiarity with the extensible business reporting language and the efficiency of accounting administrative processes.

#### 4. METHODOLOGY

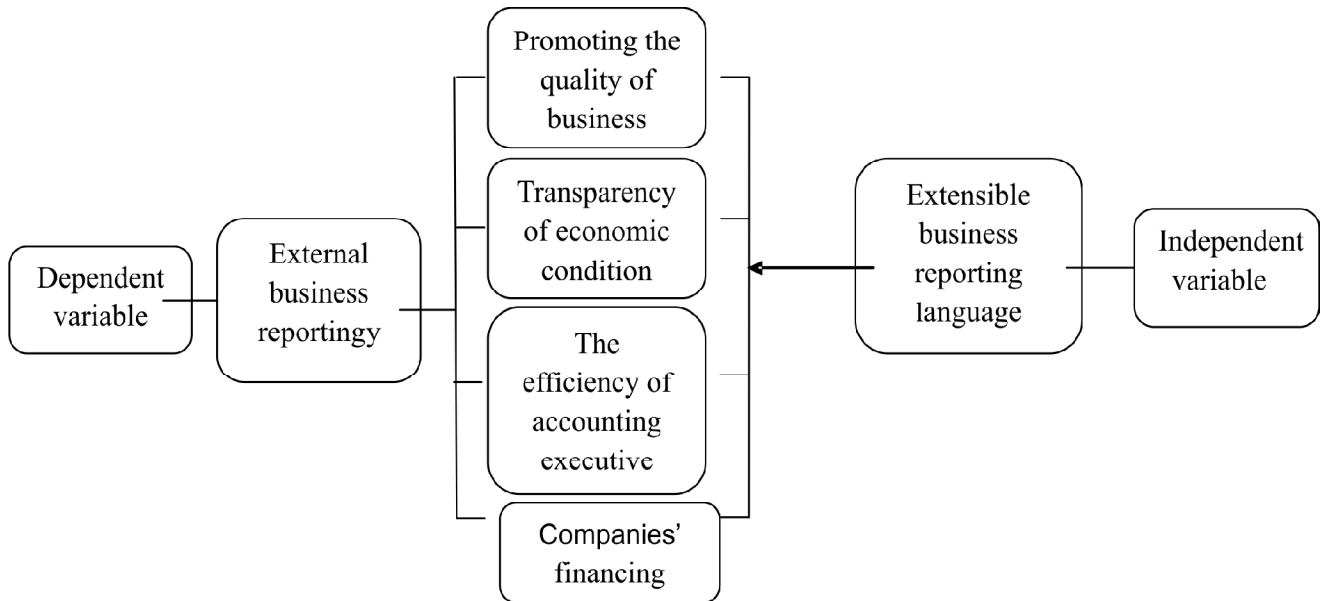


Figure 1: Research conceptual framework

This study investigated various sources on the subject and express the problem. Then the indicators of extensible business reporting language is introduced and then the criteria concerned for assessing the quality of external business reporting has been stated and some of them have been considered for this study. Influential variables as control variables (business leverage and firm size whose data are taken from the business statements of companies) to present research conceptual data have been considered with the introduction of different models for extensible business reporting. The statistical population consists of managers and experts of the companies listed in the Tehran Stock Exchange. To collect data, a questionnaire with 23 questions was formed for each hypothesis and the research independent variable was designed separately. To evaluate the research reliability, 25 questionnaires were provided to managers and experts of the companies listed in the Tehran Stock Exchange and research reliability was calculated using SPSS software and Cronbach's alpha. Different statistical methods include "Kolmogorov-Smirnov" test, "One sample T-test" and "binomial" is intended to test hypotheses.

#### 4.1. Statistical Population

The statistical population consists of the companies mentioned above that includes 488 listed companies. In this study, the companies are the ones listed in Tehran Stock Exchange membered in Kadal mail service, which will be calculated by the following formula. Also, in order that statistical sample be unbiased i.e. representative of the statistical population, simple sampling method is used.

##### 4.1.1. Sample Size and Sampling Method

Sampling method in this study is simple random sampling. After reviewing and interview, 488 companies for this purpose through the Krjy - Morgan sampling table were chosen. The number of sample companies

for the 488 population companies were determined 150 companies. At the stage of questionnaire distribution, to avoid from losing the sample, approximately 10% were added to the number of questionnaires in order that this number is increased to 165 questionnaires. Also at the stage of collecting the questionnaires, 165 questionnaires distrusted among managers and experts, 140 ones were collected which were compatible with the number determined in Morgan Table. Therefore, to select the sample, 488 companies were randomly selected as the sample group and the data required have been collected. The chosen sample is 140 out of 488 companies which have been selected at random.

Thus, the number of total samples with the assumption of a limited statistical population at the level of 95% is calculated as follows:

$$n = \frac{N \cdot \left( Z \frac{\alpha}{2} \right)^2 \cdot pq}{N \cdot (e)^2 + \left( z \frac{\alpha}{2} \right)^2 \cdot pq}$$

Z: confidence coefficients to the sample coefficients

P: the ratio of success in the community (a percentage of people in the society that have the required features)

Q: a percentage of people in the society that lack the required features (p-1)

E: assessment accuracy or the maximum acceptable error

N: the number of people existing in the sample

#### 4.2. Research Variables

Research variables include independent, dependent, control and mediator variables.

Extensible business reporting language

The quality of business statements

Explaining the transparency of business situation

Financing companies

The efficiency of administrative processes

#### 4.3. Data Collection Tool

The tool used in this research is “questionnaire”.

#### 4.4. Data Analysis Method

To test the theory, methods of descriptive and inferential statistics are used. To describe the findings of the study, the data collected were first categorized and then orientation to the center and dispersion parameters such as mean, standard deviation and variance are calculated. Using inferential analysis based on data obtained from the sample group, research hypotheses have been tested and conclusions derived and has been extended to the population.

#### 4.5. Descriptive Analysis

In this analysis, the researchers investigated the collected demographic data of the statistical sample using appropriate descriptive analysis tools. Also, the results of the analysis are as follows:

#### 4.5.1. Familiarity with Extensible Business Reporting Language (XBRL)

**Table 1**  
Table of frequency of familiarity with XBRL

<i>Cumulative percentage</i>	<i>Frequency percentage</i>	<i>Frequency</i>	<i>Familiarity with XBRL</i>
0.06	0.06	8	Very low
0.16	0.10	14	low
0.35	0.19	27	Moderate
0.79	0.44	62	High
0.21	0.21	29	Very high
—	0.100	140	Total

The above table shows the familiarity of respondents with extensible business reporting language (XBRL), that out of 140 respondents, 6% i.e. 8 responses are related to very low familiarity, 10% (14 people) have low familiarity and 19 percent (27 responses) have average familiarity, 44% have high familiarity and 21% of respondents have a very high familiarity with extensible business reporting language (XBRL).

#### 4.5.2. Education Level

**Table 2**  
Table of frequency of education level

<i>Education level</i>	<i>Cumulative percentage</i>	<i>Frequency percentage</i>	<i>Frequency</i>
Ph. D	0.24	0.24	34
MA	0.54	0.3	42
BA	0.94	0.4	55
DIPLOMA OR UPPER DIPLOMA	1	0.06	9
Total	-	100%	140

The above table shows that most respondents are highly educated so that 24% of them have a doctoral degree and 30 percent have a master's degree (MSc). Also, 40 percent of respondents have a bachelor's degree and only 6 percent have diploma and upper diploma degree.

### 4.6. Statistical Analysis

In this part, to investigate whether the data are normal, Kolmogorov-Smirnov test is used and then to test each hypothesis, statistical population through a sample t-test was analyzed.

#### 4.6.1. Surveying Data Normality Assumption

In this section, the data to make decisions about using parametric or non-parametric tests are examined. For this purpose, the normal data are considered. Hypotheses relevant to this section include:

H0: the data are normally distributed

H1: the data are not normally distributed

The above hypothesis for research variables was examined by doing the Kolmogorov-Smirnov test which the results were analyzed in Table (4-6). As can be seen, the significance level (divided by two) in all

variables is greater than  $2 / \alpha$  (0.025), on the other hand, the Z statistics is less than 1.96. Therefore, in the significant level of 95%, there are no strong and enough evidence to reject the null hypothesis and hypothesis 1 is accepted. Therefore, the data of all seven variables have a normal distribution.

**Table 3**  
**Kolmogorov-Smirnov test for studying data normality**

		<i>Extensible Business Reporting Language</i>	<i>The Quality of Buisness Reporting</i>	<i>Financial Transparency</i>	<i>Financing Companies</i>	
	<i>Number</i>	140	140	140	140	140
Normal parameters	4659/3 54599/0	1126/3 72386/0	3132/3 66076/0	3269/3 48116/0	3134/3 66076/0	2390/3 52914/0
Absolute differences	320/0 320	163/0 125/0	180/0 104/0	334/0 334/0	180/0 105/0	249/0 246/0
	265/0-	163/0-	180/0-	226/0-	180/0-	249/0-
Kolmogorov-Smirnov Z		050/3	186/3	721/1	374/1	443/2
Significance level (mutual)		008/0	021/0	009/0	017/0	036/0

### 4.7. Testing Research Hypotheses

Since the statistical data were not normally distributed, parametric statistical tests for data analysis was used. In this study, to investigate any of the hypotheses, a sample t-test was used. When a sample is large, parametric tests can be used even if the society is not normal. But how big should be an example is the place of difference among the statisticians. If the variable studied is not so unusual, it can be used in parametric tests in a sample of  $n = 30$  and above. The only difference between the two types of tests is that non-parametric tests have less ability for recognition. So in large samples, applying each of the two tests makes no difference (Jandaghi, 2004).

#### 4.7.1. Testing Hypothesis One

**Hypothesis one:** there is a significant relationship between the familiarity with the business reporting language and improving the quality of extensible business reporting.

$$\begin{cases} H_0 : \mu \leq 3 \\ H_1 : \mu > 3 \end{cases}$$

Given that the percentage of error is  $\alpha = 0.05$  and confidence level is 0.95 ( $1 - \alpha$ ) and given that the sample size for this hypothesis is 140 companies, degrees of freedom is equal to:  $df = n - 1 = 139$ . So, the amount of the test at the error level is equal to:

$$t_{\frac{\alpha}{2}} = 1/96$$

$$t = \frac{\bar{X} - 3}{S / \sqrt{n}} = 8/141$$

Also, to see the observed test, the following formula is used:



**Table 4**  
**Results of sample t-test for hypothesis one**

Feature	T	Degree of freedom	Two-sided significance level	Mean difference	Confidence interval	
					Minimum	Maximum
extensible business reporting language	8.141	139	0.018	0.26837	0.2074	0.3293

According to the results achieved in the table 4 test statistics (8.141) is greater than the table statistics (1.96). Thus, because the statistics calculated at 0.05 error level and 139 degrees of freedom is larger than the amount of table (8.141>1.96), so it can be said that the value achieved has not been located at the critical area and null hypothesis is rejected and hypothesis 1 is accepted. That is, there is a significant positive relationship between extensible business reporting language and improving the quality of extensible business reporting.

To ensure the result achieved, binomial has also been used to see whether the hypothesis one is confirmed through this way or not. Statistical hypotheses in the binomial test are as follows:

$$\begin{cases} H_0 : p \leq 0/6 \\ H_1 : p > 0/6 \end{cases}$$

According to the following table, the result of binomial test regarding hypothesis one at the error level of  $\alpha = 0.05$  is as follows:

As can be seen, since the test statistic is  $p = 0.06$  and analysis results show that the statistics observed for hypothesis one is 0.82, since the statistic observed is greater than test statistics, ( $0.6 < 0.82$ )  $H_1$  hypothesis is approved, i.e. 0.82 companies believe that extensible business reporting language is effective on improving the quality of business reporting. Therefore, it can be said that the result achieved is confirmed by t test.

**Table 5**  
**Results of binomial test of hypothesis one**

Features	Classification	Number	Percentage	Test Prop
Group 1: improving the quality of business reporting	$3 \geq$	26	18%	0.6
Group 2: extensible business reporting language	$3 <$	114	82%	

#### 4.7.2. Second Hypothesis Testing

**The second hypothesis:** there is a significant relationship between the extensible business reporting language and explaining transparency of business situation.

$$\begin{cases} H_0 : \mu \leq 3 \\ H_1 : \mu > 3 \end{cases}$$

Given that error percentage is  $\alpha = 0.05$  and confidence level is  $(1-\alpha) 0.95$  and given that the number of samples for this hypothesis is 140, the degree of freedom is equal to  $df = n-1=139$ . Therefore, test value at the error level is equal to:

$$t_{\frac{\alpha}{2}} = 1/96$$

Also, the amount of the test is achieved from the following formula:

**Table 6**  
**The results of sample T-one for the second hypothesis**

Feature	T	Degree of freedom	Two-sided significance level	Mean difference	Confidence interval	
					Minimum	Maximum
Extensible business reporting language	6.91	139	0.008	0.31319	0.1756	0.4508

Given the results achieved in the Table 6, test statistics (6.91) is larger than table statistics (1.96), thus because the statistics calculated at the error level of 0.05 and degree of freedom of 139 is larger than table amount ( $6.91 > 1.96$ ), so it can be said that the amount achieved is not located at the critical area and the null hypothesis is rejected and assumption 1 is confirmed i.e. there is a significant positive relationship between extensible business reporting language and explaining the transparency of business situation. To ensure the results achieved, the binomial test is used to see if the second hypothesis is confirmed through this method or not. Statistical hypotheses in the binomial test is as follows:

$$\begin{cases} H_0 : p \leq 0/6 \\ H_1 : p > 0/6 \end{cases}$$

According to Table (4-10), the binomial test results at the error level of  $\alpha = 0.05$  on the second hypothesis is as follows:

As can be seen, since the test statistic is  $p=0.06$ , and the analysis results show that the statistics observed for the second hypothesis is 0.67, because the statistics observed is greater than the test statistics ( $0.67 > 0.6$ )  $H_1$  hypothesis is confirmed, i.e. 0.67% of companies believe that extensible business reporting language is effective on explaining the transparency of business situation. So it can be said that the result achieved is confirmed through t test.

**Table 7**  
**Results of second hypothesis binomial test**

Features	Classification	Number	Percentage	Test Prop
Group one: explaining the transparency of business situation	$\geq 3$	31	23%	6%
Group 2: extensible business reporting language	$>3$	109	77%	

#### 4.7.3. Testing the Hypothesis Three

**Hypothesis three:** there is a significant relationship between the familiarity with the extensible business reporting language and financing the companies.

$$\begin{cases} H_0 : \mu \leq 3 \\ H_1 : \mu > 3 \end{cases}$$

Given that error percentage is  $\alpha = 0.05$  and confidence level is  $(1 - \alpha) 0.95$  and given that the number of samples for this hypothesis is 140, the degree of freedom is equal to  $df = n - 1 = 139$ . Therefore, test value at the error level is equal to:

$$t_{\frac{\alpha}{2}} = 1/96$$

Also, the amount of the test is achieved from the following formula:

$$t = \frac{\bar{X} - 3}{S / \sqrt{n}} = 2/53$$

**Table 8**  
The results of sample T-one for the third hypothesis

*Test value=3*

Feature	T	Degree of freedom	Two-sided significance level	Mean difference	Confidence interval	
					Minimum	Maximum
Extensible business reporting language	2.537	139	0.018	0.19493	0.0410	0.3489

Given the results achieved in the Table 8, test statistics (2.537) is larger than table statistics (1.96), thus because the statistics calculated at the error level of 0.05 and degree of freedom of 139 is larger than table amount (2.537>1.96), so it can be said that the amount achieved is not located at the critical area and the null hypothesis is rejected and assumption 1 is confirmed i.e. there is a significant positive relationship between extensible business reporting language and financing the companies.

To ensure the results achieved, the binomial test is used to see if the third hypothesis is confirmed through this method or not. Statistical hypotheses in the binomial test is as follows:

$$\begin{cases} H_0 : p \leq 0/6 \\ H_1 : p > 0/6 \end{cases}$$

According to Table 7 the binomial test results at the error level of  $\alpha = 0.05$  on the second hypothesis is as follows:

As can be seen, since the test statistic is  $p = 0.06$ , and the analysis results show that the statistics observed for the third hypothesis is 0.64, because the statistics observed is greater than the test statistics (0.64>0.6), H1 hypothesis is confirmed, i.e. 0.64% of companies believe that extensible business reporting language is effective on financing the companies. So it can be said that the result achieved is confirmed through t test.

**Table 9**  
Results of third hypothesis binomial test

Features	Classification	Number	Percentage	Test Prop
Group one: explaining the transparency of business situation	$\geq 3$	34	25%	6%
Group 2: extensible business reporting language	$>3$	106	65%	

#### 4.7.4. Testing the Hypothesis Four

**Hypothesis four:** there is a significant relationship between the familiarity with the extensible business reporting language and the efficiency of administrative processes accounting.

$$H_0: \mu \leq 3$$

$$H_1: \mu > 3$$

Given that error percentage is  $\alpha = 0.05$  and confidence level is  $(1 - \alpha) 0.95$  and given that the number of samples for this hypothesis is 140, the degree of freedom is equal to  $df = n - 1 = 139$ . Therefore, test value at the error level is equal to:

$$t_{\frac{\alpha}{2}} = 1/96$$

Also, the amount of the test is achieved from the following formula:

$$t = \frac{\bar{X} - 3}{S/\sqrt{n}} = 6/481$$

**Table 10**  
The results of sample T-one for the third hypothesis

Feature	T	Degree of freedom	Two-sided significance level	Mean difference	Confidence interval	
					Minimum	Maximum
Extensible business reporting language	6.481	139	0.021	0.32692	0.2267	0.4271

Given the results achieved in the Table 10, test statistics (6.481) is larger than table statistics (1.96), thus because the statistics calculated at the error level of 0.05 and degree of freedom of 139 is larger than table amount ( $6.481 > 1.96$ ), so it can be said that the amount achieved is not located at the critical area and the null hypothesis is rejected and assumption 1 is confirmed i.e. there is a significant positive relationship between extensible business reporting language and efficiency of administrative processes accounting.

To ensure the results achieved, the binomial test is used to see if the fourth hypothesis is confirmed through this method or not. Statistical hypotheses in the binomial test is as follows:

$$\begin{cases} H_0: p \leq 0/6 \\ H_1: p > 0/6 \end{cases}$$

According to Table 11, the binomial test results at the error level of  $\alpha = 0.05$  on the fourth hypothesis is as follows:

As can be seen, since the test statistic is  $p = 0.06$ , and the analysis results show that the statistics observed for the fourth hypothesis is 0.87, because the statistics observed is greater than the test statistics ( $0.87 > 0.6$ ),  $H_1$  hypothesis is confirmed, i.e. 0.87% of companies believe that extensible business reporting language is effective on efficiency of administrative processes accounting. So it can be said that the result achieved is confirmed through t test.

**Table 11**  
Results of third hypothesis binomial test

Features	Classification	Number	Percentage	Test Prop
Group 1: explaining the transparency of business situation	$\geq 3$	28	20%	6%
Group 2: extensible business reporting language	$> 3$	112	80%	

#### 4.8. Friedman Rankings Test

In this test:

H0: the difference between the components of factors is not significant.

H1: the difference between the components of factors is significant.

According to the Friedman test in the table above, the significance level (Sig=0.00) is first less than 0.05, meaning that mean responses for all questions is not the same.

**Table 12**  
**Results of Friedman test**

<i>Explanation</i>	<i>Results</i>
The number of Samples	140
Freedman test	204.003
Degree of freedom	4
Significance level	0.002

**Table 13**  
**Rankings Test**

<i>Explanation</i>	<i>Mean ranking</i>
X1	6.46
X2	4.13
X3	3.45
X4	5.22

## 5. RESULTS

The outcomes of research show that there is meaningful relation between the developing financial reporting language and financial reporting quality development. The results also showed that there is meaningful relation between the developing financial reporting language and financial condition transparency. Also the results show that the dominance between the recognition of developing financial reporting language and companies' financial supplementation has the meaningful relation and finally there is meaningful relation between financial reporting language and performance processes practicality of accounting. The result of this research are somehow similar to the previous researches made by GERAHMAN and BALEDWIN (2003) by the use of information about the financial statements it is possible to effect the judgment process and in better description the (relativeness), TEODER J. MAK (2006) mentioned that the information value is on its necessity in accounting information system proper application, ASADIYAN AUQHANI (2008) concluded that the reporting under web affects the information quality but financial managers of Iranian companies are not familiar with under web reporting, HMID MIR MOJREBIAN (2004) concluded that the quality feature augmentation of relativeness and easy access to information in under web accounting has positive effect on managers economical decision making and finally the result of this research are in contract with Arab MAZAR YAZDY and coworkers (2006) and CHANG & JARVENPAA (2005) researches.

## 6. DISCUSSION AND CONCLUSION

The rapid presentation of information published through internet global network, made a great information gap for companies, managers and other applicants of financial information who don't have enough knowledge of mentioned information implementation. To solve this problem and filling the gap, it seems necessary to learn worldly up to date science and to be parallel with global information technology. In Iran because

information system upheavals is at primary levels and the information solid and united system application is not established in financial and economical fields yet, so it is necessary to provide the appropriate foundation to program for intermediate and long run to perform such systems so that in globalization purposes direction and joining to global commercial organization to remove limitation and obstacles available after the preparation and transference of information in under web systems. This research in addition to introducing the XBRL and its application benefits for users and producers of financial statements tries to show that whether the XBRL could be effective on financial statements transparency and companies' financial supplementation and accounting performance processes practicality. In similar researches of XBRL, the information processing simplified and commercial information are provide faster to the users and by reduction of preparation time give the opportunity to the financial analysts to give more time to analyze the information and also increase the information searching speed in this language and the most important issue is that in addition to reduction of costs and time, it increase the transparency of information exchange levels and financial reporting impressively (Shafae & Kazemi, 2009).

### **6.1. The Research Limitations and Problems**

The limitations which exist in this research performance and could be expanded in explanation and interpretation of research results should be considered as below:

In this research it is attempted to recognize the control variables and intermediate which are provided by investigations and studies to be used for the vectorial regression model. But according to other interfering factors like stock holder behavior factors, inflation factor, other minor and major economical factors in companies and society level which are not used due to lack of access to information in Regression vectorial model, could be assumed as the research limitation

This research has limitations which affect the research results like;

The space needed for companies participation and institution presence in application and acceptance of knowledge degree and experts profession due to lack of experience in application of this reporting language in Iran, has been limited.

Knowledge resource deficiency and research backgrounds in the country related to the research subject.

Because information gathering in this research is through answer sheet, hence the obtained results have intrinsic limitations like it is possible that during responding to questions factors like conservativeness, lack of attention and accuracy and etc. effect the responding. Therefore to determine the outcomes we should consider all these factors

XBRL reporting

Using the factors analysis to change nominal variables to qualitative could be presented as other limitation for this research

Lack of balance in financial statements items due to inflation presence and having financial period end differentiation in commercial unites

### **6.2. The Research Suggestions**

#### **6.2.1. Practical Suggestions**

According to obtained results and review of research literature, suggestions are presented as below to managers, companies, organizations and stock holders in Tehran stock center

- 1- Holding sessions with companies and organizations to justify the XBRL features and its benefits to them

- 2- Holding seminars and congress in different aspects about application of XBRL by inviting expert and internal and external opinion owners
- 3- Having national XBRL in international XBRL organization provide this possibility to invite famous opinion owners from different countries to Iran to present XBRL
- 4- Providing conditions and space needed for companies participation in XBRL reporting application and acceptance
- 5- Encourage and pursue of companies to use XBRL reporting
- 6- Supporting the lexicon edition project, maintenance and updating them
- 7- Providing the public understanding enhancement about all beneficiary groups in financial reporting and also XBRL continuous ordered training
- 8- XBRL reporting trains in Iran
- 9- Edition of taxonomy lexicon in Iran based on international standards or accounting international standards
- 10- Edition of necessary software to apply XBRL reporting
- 11- XBRL reporting application and performance

### **6.2.2. Suggestion for Future Research**

- 1- It is suggested that present research about each industry evaluated separately and the obtained results are compared about the different industries.
- 2- Performing present research by the use of companies intermediate financial information.
- 3- It is suggested that a research about the benefits and disadvantages of XBRL compared to other competitors of this reporting language provided.
- 4- It is suggested that a research performed about the XBRL fulfillment in governmental organization.
- 5- It is suggested that a research performed about the solid reporting effectiveness based on the XBRL to related cooperation between companies and government.

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**Appendix 1: Questionnaire**

A) profile

1. Gender: Male  female
2. years of service: less than 5 years  5 to 12 years  13 to 20 years  more than 20 years
3. years of service: manager  Accountant  auditor
4. Education: Diploma and upper diploma  Bachelor’s Degree  MA  Ph. D
5. To what extent are you familiar with the extensible business reporting language?  
Very low  low  average  high  very high
- 6: type of activity and Company’s industry: .....

B) Questionnaire Guide

The questionnaire includes 23 questions which the questions are related to each other, which is based on 5 levels and mark your score with \*.

<i>Row</i>	<i>Questions</i>	<i>Very low</i>	<i>low</i>	<i>Average</i>	<i>high</i>	<i>Very high</i>
1	To what extent is the use of extensible business reporting language led to increase the predictive value of accounting information?					
2	To what extent is the use of extensible business reporting language led to increase the confirmation value (feedback) of accounting information?					
3	To what extent is the use of extensible business reporting language led to increase the punctuality of accounting information?					
4	To what extent is the use of extensible business reporting language led to increase the ability to handle accounting information?					
5	To what extent is the use of extensible business reporting language led to increase the honest expression of accounting information?					
6	To what extent is the use of extensible business reporting language led to increase the impartiality of accounting information?					
7	To what extent is the use of extensible business reporting language led to increase the easy understanding of accounting information?					
8	To what extent is the use of extensible business reporting language led to facilitate the accessibility of accounting information?					
9	To what extent is the use of extensible business reporting language led to increase the amount of transparency and clarity of accounting information?					
10	To what extent is the use of extensible business reporting language led to improve the business and economic decisions?					
11	To what extent is the use of extensible business reporting language led to shareholders participating in the financing of the company?					
12	To what extent is the use of extensible business reporting language led to facilitate process of getting a bank loan?					
13	To what extent is the use of extensible business reporting language led to improve cost management in the company?					
14	To what extent is the use of extensible business reporting language led to develop earning opportunities?					
15	To what extent is the use of extensible business reporting language led to active participation of staff in the tasks assigned					
16	To what extent is the use of extensible business reporting language led to the development of appropriate accounting methods					
17	To what extent is the use of extensible business reporting language led to the improvement of internal controls					

- 18 To what extent is the use of extensible business reporting language led to the highlighting the importance of enterprise IT infrastructure
  - 19 To what extent is the use of extensible business reporting language led to more flexibility in the presentation and content diversity of information
  - 20 To what extent is the use of extensible business reporting language led to establishing an interaction (Q & A) between users of financial statements and the company
  - 21 To what extent is the use of extensible business reporting language led to facilitate the access to financial analysts to the company videos (managers' records)
  - 22 To what extent is the use of extensible business reporting language led to presenting the information more than the time when traditional reporting method is used
  - 23 To what extent is the use of extensible business reporting language led to strengthening the accountability role of managers to shareholders
-