



The Investigation of Effective Factors on Extensible Business Reporting Language in Tehran Stock Exchange (TSE)

RasoulYari¹, Mehdi rostamzadeh^{*2}

¹Department of Accounting, Miyandoab Branch, Islamic Azad University, Miyandoab, Iran

²Department of Accounting, Salmas Branch, Islamic Azad University, Salmas, Iran

ABSTRACT

XBRL is a language based on XML for the electronic communication of business information. This language for many companies means uniformity in reporting process, reducing costs and time of data combining performance from different sources. Therefore, this study investigated factors affecting on willingness of this language and XBRL barriers. In this regard, this paper studied the effects of various factors on the use of (XBRL) using Ordinary Least Squares (OLS) and for 81 samples in the Tehran Stock Market. The results show that factors including size, profitability, Shares in circulation, Internet security, technical facilities and professional workforce have significant and positive effect on using of (XBRL), and also corporate risk beta have a negative effect on dependent variable. The results were confirmed using the stability tests.

KEY WORDS: Extensible Business Reporting Language (XBRL), Ordinary Least Squares (OLS), Stability Tests.

1. INTRODUCTION

Extensible Business Reporting Language is used in financial and commercial report. Owing to its prompt, accurate, highly effective advantage and economically memorizing, processing and refitting the financial and commercial report data, at present, many countries are positively exploring and applying the XBRL project. Concluding the domestic and foreign literature, they mainly research the XBRL question related from the basic content of XBRL, the applied superiority of XBRL, the applied pattern of XBRL, the applied scope of XBRL and so on. From the research scope and the depth, the overseas research, especially US, is wide and deep; on the other hand, it is a little late for our country to contact, study and apply the XBRL relatively, therefore, although we have obtained the great achievements, it is still not sufficiently widespread and deeply, the research is in the groping stage (Wang and Zhang, 2008). The Tehran Stock Exchange (TSE) is Iran's largest stock exchange, which first opened in 1967. The TSE is based in Tehran. As of July 2010, 337 companies with a market capitalization of US\$72 billion were listed on TSE. TSE, which is a full member of the World Federation of Exchanges and a founding member of the Federation of Euro-Asian Stock Exchanges, has been one of the world's best performing stock exchanges in the years 2002 through 2010. TSE is an emerging or "frontier" market. The most important advantage that Iran's capital market has in comparison with other regional markets is that there are 40 industries directly involved in it. Industries such as the automotive, telecommunications, agriculture, petrochemical, mining, steel iron, copper, banking and insurance, financial mediation and others trade shares at the stock market, which makes it unique in the Middle East (Financial Times, 2010). The rest of the paper proceeds in the following steps: Section 2 will introduce our XBRL Background. Section 3 introduces benefits of XBRL. Section 4 gives methodology and model. Section 5 presents results. Finally, section 6 is this paper's conclusion.

2. XBRL Background

Over the last decade, the Internet and the World Wide Web has become a primary vehicle for communication between corporations and stakeholders. XBRL is an Internet-based language derived from XML that has become increasingly important in several information value chains around the world. The primary business case for XBRL is to facilitate the automated production and consumption of large volumes of business performance information with high degrees of data quality. It combines the immediacy and reach of the Web with the ability of information consumers to incorporate corporate information directly into their

*Corresponding Author: Mehdi Rostamzadeh, Department of Accounting, Salmas Branch, Islamic Azad University, Salmas, Iran

data warehouses and decision models. XBRL is seen as a key element in improving the transparency of corporations and market efficiency (Stantial, 2007).

XBRL is a standard XML reporting language to enhance the efficiency, reliability and accuracy of financial reporting. Data in XBRL format does not need to be converted from one application to another because data are independent of applications by using standard tags for data items (Farewell, 2006). XBRL can support both financial and non-financial data contexts, which distinguishes XBRL from traditional financial documents (Debreceeny et al., 2005). The use of standard tags in XBRL documents allows for the specific identification, automatic exchange, and reliable extraction of financial information across different software applications.

Many businesses, regulators, and investors can benefit from XBRL. XBRL helps integrate disparate business reporting procedures across business reporting jurisdictions; reduces the costs of compliance with reporting regulations and data-quality assurance services; and facilitates the communication between businesses and financial markets. XBRL facilitates continuous reporting for investors on companies' operations by enabling the capture, integration, processing, and reporting of disparate information in common formats. XBRL reduces the cost associated with obtaining and assimilating information from businesses and the cost associated with international business reporting standards (Weber, 2003).

With the adoption of XBRL, financial information can be optimized for machine creation, publication, discovery, consumption, and reuse, and XBRL enables supply chains of information for business reporting to communicate among players more efficiently (Debreceeny et al., 2005). For example, the use of financial data in XBRL format can help enhance the effectiveness and efficiency of post-merger integration. In addition, the information flow between material providers and logistic companies can be streamlined, and this contributes to the increase of efficiencies in supply chains.

XBRL supports the decision-making process for investments by enabling a powerful search capability for various financial data. Novice through expert investors are able to easily search and compare data items which have similar or the same tags. Hodge et al. (2004) argues that although the information in the footnote of financial statements is important, novice investors have a difficult time thoroughly analyzing the data due to their lack of experience and the relative position of the data. XBRL-enabled searching technology resolves this problem. The tags of XBRL provide additional information to investors because these metadata describe the meaning of data items. Russo (1977) reports that information should be presented in a usable display format, illustrated through an experimental study finding that information organized in a single list format enhances the decision-making capabilities of users. Hodge et al. (2004) applies those results to a comparative analysis of alternative accounting choices across companies and found that users could easily identify the differences of discretionary accounting choices so search-facilitating technology like XBRL can improve the transparency of financial reporting. A recent survey indicates that additional XBRL benefits include cost savings due to an increased data processing capability, decreased data redundancy, increased efficiency, and decreased cost of bookkeeping (Pinsker and Li, 2008).

3. Benefits of XBRL

According to Weber (2003), XBRL reduces the costs associated with obtaining and analyzing information from businesses by addressing and eliminating incompatible reporting formats. Hodge et al. (2004), for instance, concluded that using XBRL helps nonprofessional financial statement users acquire and integrate related financial statement and footnote information when making investment decisions. XBRL also allows regulators to further the standardization and harmonization of international business reporting standards. For instance, as of January 2005, European stock exchanges required all registrants to prepare consolidated financial statements in accordance with International Financial Reporting Standards (IFRS). The use of IFRS is also expected to improve the transparency, comparability, and quality of financial reporting across the European Union (EU) and lead to a deepening of the EU's capital markets. Japanese firms are also embracing IFRS; however, Japanese firms must also reconcile differences in local financial statements to U.S. Generally Accepted Accounting Principles (GAAP) in filings with the SEC. Several South American countries are also either in the process of or have already adopted International Accounting Standards and/or IFRS to take advantage of the European capital markets (Catacora and Hannon 2005). The adoption and use of XBRL is expected to help avoid the extra effort and complications associated with such multiple reconciliations (Duangploy and Gray, 2005).

XBRL International also claims that firms experience a reduction in their cost of capital due to improved, transparent and real-time financial reporting (via the Internet) and disclosure of data in the XBRL format. Based upon this, capital markets should reward firms that are early and voluntary filers of key

financial statement information in the XBRL format. Prior studies suggest that firms seeking specific advantages in the capital markets would be expected to voluntarily opt for such XBRL tagged financial reporting disclosure. Furthermore, in a more recent context, the addition of the XBRL infrastructure by firms is expected to reinforce and make it easier to implement and comply with the various provisions (Botosan 1997; Trabelsi et al., 2004; Gibbons et al., 1990).

There are several reasons for the growing popularity of XBRL including:

- The intrinsic attractiveness of the XBRL standard itself due its strong design principles
- The standard provides users with high flexibility.
- Wide spread global adoption of the XBRL standard - it is embraced by international standard setting and governmental bodies.
- The cost saving potential of XBRL - companies that use XBRL in their reporting process can save costs and streamline their processes of collecting and reporting financial information. Consumers of financial data, including investors, analysts, financial institutions and regulators, can receive, find, compare and analyze data much more rapidly and efficiently when the XBRL format is used.
- The potential for universal application of XBRL, as XBRL can handle data in different languages and accounting standards. XBRL is extensible to meet different requirements and usages in a variety of environments. Data can be transformed easily into XBRL by suitable mapping tools or it can be generated in XBRL using appropriate software.
- The proven XBRL track record. Major XBRL projects are already in practical and successful use for specific purposes in several countries and the initiative for projects in other countries.

4. MODEL AND METHODOLOGY

Considering that one of the objectives of this study is to describe the earnings quality of the companies listed in Tehran Stock Exchange from the independent auditors and explain or clarify their status, so a part of the study is a survey research. The study is reasonably deductive – inductive and from the data collection view is descriptive and is based on real data in the company’s financial statements. Also this research is developing in perspective of goal. The study will use various statistical methods for testing hypotheses.

In this study, below model has been estimated:

$$XBRL = \beta_0 + \beta_1 Size + \beta_2 R + \beta_3 V + \beta_4 Beta + \beta_5 Foreign + \beta_6 Tech + \beta_7 Security + \beta_8 Skill$$

Which in this model size is enterprise’s size, R is enterprise’s Profitability, V is shares in flow, Beta is systematic risk, foreign is presence of enterprise in foreign stock exchange, Tech is Technical features, Security is Web environment security and so Skill is human labor skill.

5. RESULT

In this step, model has been estimated. As we seen earlier, this model include dependent variable (tendency of XBRL) and independent variables (enterprise’s size, enterprise’s Profitability, shares in flow, systematic risk, presence of enterprise in foreign stock exchange, Technical features, Web environment security and human labor skill. Results present in table 1.

Table 1. Result of Regression

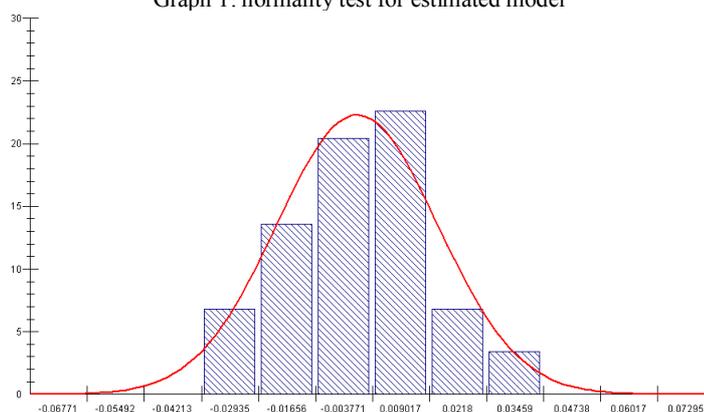
Variable	Coefficient	Std. Error	t-Statistic	Prob.
SIZE	0.615955	0.103704	5.939558	0.0000
R	0.110477	0.062507	1.767424	0.0813
V	0.117234	0.064365	1.821398	0.0726
BETA	-1.546369	0.214307	-7.215663	0.0000
FOREIGN	0.112307	0.049652	2.261902	0.0267
TECH	0.249585	0.113628	2.196514	0.0312
SECURITY	0.105620	0.048314	2.186128	0.0320
SKILL	0.199025	0.074564	2.669183	0.0094
R-squared	0.852293	Durbin-Watson stat		2.051405

Source: Own calculations by using Eviews software

As table 1 indicates, size, profitability, Shares in circulation, Internet security, technical facilities and professional workforce have significant and positive effect on using of (XBRL), and also corporate risk beta have a negative effect on dependent variable. In this regard, size has effect on dependent variable larger than other explanatory variables with amount (0.61). Adjusted R^2 obtained 0.85 that means model is well estimated. Also dorbin – Watson statistics is calculated 2.05 that indicate absence of auto correlation in model.

In next step, normality is tested using histogram of residuals of models. Results have been presented as below:

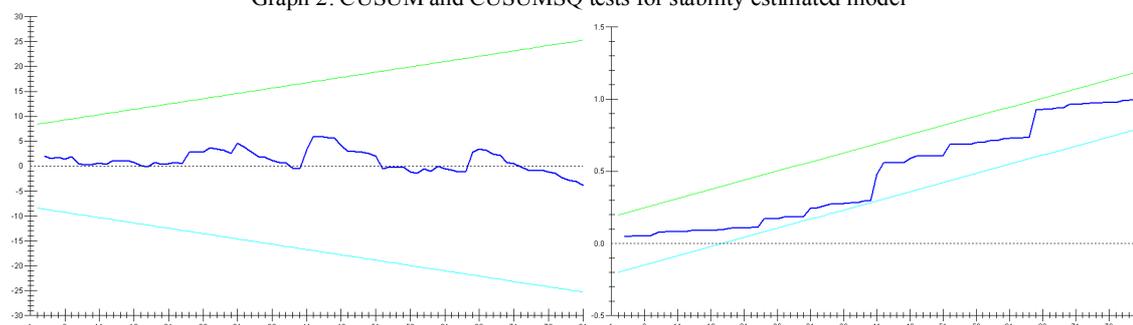
Graph 1: normality test for estimated model



Source: Own calculations by using Eviews software

Also CUSUM and CUSUMSQ tests for stability of model are presented as follow:

Graph 2: CUSUM and CUSUMSQ tests for stability estimated model



Source: Own calculations by using Eviews software

6. Conclusion

Considering that security in the Internet environment is a positive effect on reporting language using, so the policy makers need to think Strategies in cyberspace Web and try to Strengthening the security environment in the country's Internet. Companies also must complete consciousness to be aware of Internet security issues. Considering the relatively low rate of Internet in Iran against other countries, If using the Internet be more quickly, active companies in the stock exchange can maintain and increase their competitive power in international and financial matters. Also the use of these languages can lead to prosperity and financial activities more quickly.

7. REFERENCES

1. Botosan CA. (1997): “Disclosure level and the cost of equity capital”. *Account Review*; 20(3): 421–39.
2. Catacora F, Hannon N. (2005): “XBRL and IFRS in Latin America”. *Strategy Finance* 12(1): 59–60 [February].

3. Debreceeny RS, Chandra A, Cheh JJ, Guithues-Amrhein D, Hannon N, Hutchinson PD (2005): "Financial reporting in XBRL on the SEC's EDGAR system: a critique and evaluation". *J InfSyst*; 19(2): 191–210.
4. Duangploy O, Gray D. (2005): "International harmonization impact compared: illustration of United States and Japan Financial Statement Ratio Analysis." *Journal of American Academy of Business*, 13(4): 225–30 [March].
5. Farewell SM. (2006): "An introduction to XBRL through the use of research and technical assignments". *J InfSyst*; 20(1): 161–85.
6. Financial Times (2010): "Tehran exchange extends advance". Retrieved November, 8
7. Gibbons M, Richardson A, Waterhouse J. (1990): "The management of corporate financial disclosures: opportunism, realism, policies, and procedures". *Journal of Accounting*; 28(1): 121–43.
8. Hodge FD, Kennedy JJ, Maines LA. (2004): "Does search-facilitating technology improve the transparency of financial reporting?". *Account Review*; 79(3): 687–703.
9. Pinsker R, Li S. (2008): "Costs and benefits of XBRL adoption: early evidence". *Commun ACM*; 51(3): 47–50.
10. Russo JE. (1977): "The value of unit price information". *J Mark Res*; 14(2): 193–201.
11. Stantial, J. (2007): "ROI on XBRL". *Journal of Accountancy*; 203 (6): 32–35.
12. Trabelsi SR, Labelle R, Laurin C. (2004): "The management of financial disclosure on corporate websites: a conceptual model. *Can Account Perspective*; 13(2). 124-131.
13. Wang Xin li and Zhang Pei (2008): "Analysis of the Applicability of Performance Measurement Method for XBRL Implementation in the Enterprises", *Account Review*; 84 (2): 106-117.
14. Weber RA. (2003): "XML, XBRL, and the future of business and business reporting". In: Roohani SJ, editor. "Trust and data assurances in capital markets: the role of technology solutions", Price water house Coopers LLP, March; 3–6.