

Investigating The Relationship Between Transparency and Liquidity Risk of The Banks Listed in Tehran Stock Exchange

Davoud Tarverdizadeh, Nasrin Ekhtiari Bilehsovar, Nazanin Majd

Abstract— The purpose of the present research is to investigate the relationship between the transparency and liquidity risk of the banks listed in Tehran Stock Exchange. Considering the aim, this is an applied research and considering methodology it is a scientific research (after occurrence). research samples are the banks listed in Tehran Stock Exchange that 13 banks were selected as the samples and were under study during 4 years on the basis of their financial statements of the years from 2009 to 2012. In order to examine the hypotheses, multivariable linear regression analysis was applied. This research includes one major hypothesis (there is relationship between the transparency and liquidity risk of the banks listed in Tehran stock exchange) which is divided into six secondary hypotheses. Results of the research showed that there is a direct significant relationship between the transparency of financial information and liquidity risk of the banks which implies the importance of the financial information transparency.

Index Terms — Transparency, liquidity risk, timeliness of accounting information, reliability of accounting information

I. INTRODUCTION

Nowadays, transparency of financial information and liquidity risk of the firms (corporations) is one of the concerns of capital market participants in different countries. In Iran's capital market, financial transparency of the firms listed in stock exchange has been noticed by stockholders since the beginning of financial crisis in early 2004. In this regard, in addition to convergence creation between national and international accounting standards, stock exchange organization has made attempts to improve other disclosures. Preparation of administrative instructions for information disclosure and establishing disclosure ranking system are instances of these efforts.

Information transparency is an indicator for the management performance in providing the essential information in a correct, explicit, timely and accessible form.

Davoud Tarverdizadeh Department of Management, Payame Noor University (PNU) (IRAN)

Nasrin Ekhtiari Bilehsovar Department of Management, Payame Noor University (IRAN)

Nazanin Majd Department of Management, Payame Noor University (IRAN)

This indicator reflects that whether stockholders have a real conceptualization of what really happens in the firm or not. Transparency of the financial information can be defined as the widespread access to the reliable information related to financial performance, financial status, investment opportunities, value rule and firms' risk taking in economy. Transparency of the financial information ensures retail stockholders that they will receive reliable information about the firm value and that the major stockholders and managers won't try to spoil their rights and on the other hand, encourages the managers to attempt to increase the firm value instead of pursuing short-term personal interests [1].

Some of the stock market researchers have studied transparency of financial information and liquidity risk of the banks listed in stock exchange and their relationship with the characteristics of commercial units and their effective factors and impact on different variables, which the most important ones among them are the studies assessed the information transparency in terms of its impact on the usefulness of accounting information for decision making about liquidity risk [2,3].

Theories in this area indicate that financial transparency levels and different characteristics of the economic environment play an important role on how the market reacts to the financial information and have made the research results distinct from one environment to the other. considering Iran's economic environment characteristics, the main idea of this research is to assess the relationship between transparency levels of financial information and liquidity risk of the banks listed in Tehran stock exchange.

II. RESEARCH LITERATURE REVIEWING

In a study entitled "liquidity, transparency and risk management of banks", reviewing the existing literature he could prepare a model for measuring liquidity risk and he came to the conclusion that if the banks don't have sufficient liquidity and transparency, the optimal responses will be confined by the fact that the bank's transparency is not provable [4]. He also showed that focus on liquidity should be settled on the measures which lead to the bank's transparency improvement and access to letters of credit, because without such measures liquidity will not achieve the full potential and won't improve social welfare and in some circumstances it may impose unwanted effects.

Leen et al (2009) studied the relationship between information transparency and liquidity risk of the banks. Information transparency was assessed using two criteria: disclosure ranking system and ratio of long-term investments in shares [5]. Their findings represent the fact that transparency of financial information causes the liquidity risk of the banks and usefulness of the accounting numbers between investors to increase.

Chang et al. (2011) assessed the transparency in the firms listed in China stock market. They examined 100 firms during 2005 to 2009 and using indicators developed by the economic corporation and development organization they showed that there is a significant relationship between transparency and the firm's stock value and this implies the transparency existence in China stock market [6].

4. In their study entitled "designing a model for measuring liquidity risk in interest-free banking system (case study: Mellat bank)", aimed at designing a desirable model for measuring liquidity risk in Iran's interest-free banking system and determined the effective variables on liquidity risk, goals and structural and ideological constraints of the model and applied idealistic planning approach. Predicting the liquidity of the year 2010, to measure the liquidity risk they compared the liquidity resulted from the model and the real liquidity during 2007 to 2010. Their comparison can show lack or excess of liquidity of the bank [7]. Results indicate that all priorities and goals defined by the bank's managers have been achieved entirely. In other words, objectives of the bank managers can be fulfilled according to the bank's structural constraints, if resource allocation in the bank is on the basis of the suggested model.

In their study entitled "the relationship between transparency of accounting information and cash balance", Gaemi and Alvari (2012) examined the information transparency calculated by the transparency accounting profit on the amount of cash holdings during the years 2004 to 2010 in Tehran stock exchange. Their findings show that there is a negative significant relationship between the information transparency and the amount of cash holding. In other words, firms that have higher information transparency keep less cash [8].

III. METHODS

Purpose of the research: applied Inference methods: descriptive-analytic Research design: the present study is a co relational study that uses post-hoc approach (the past events). In order to examine the research hypotheses, correlation coefficient will be used in case there is correlation between two variables, regression model will be presented to explain the dependant variable amount by the independent variable.

In this research transparency of the accounting information (timeliness of the accounting information and reliability of accounting information) is considered as the independent variable and the liquidity risk (ratio of current liabilities divided by total assets, ratio of current liabilities divided by total liabilities, and ratio of current liabilities divided by total capital) is considered as the dependent variable and

ROA (return of assets) and bank size are considered as the control variables.

Research variables calculation method is as follows:

Timeliness of accounting information: to measure the timeliness of accounting information the scores provided by the stock exchange are being used.

Reliability of accounting information: to measure the reliability of accounting information the scores provided by the stock exchange are being used.

The ratio of current liabilities divided by total assets: this variable is obtained by the following relation: $CLTA = CL/TA$

The ratio of current liabilities divided by total liabilities: this variable is obtained by the following relation: $CLTL = CL/TL$

The ratio of current liabilities divided by total capital: this variable is obtained by the following relation: $CLC = CL/C$

In the above relations: CL represents the current liabilities, TA represents total assets, TL represents total liabilities and C is the capital.

Return of assets (ROA): ROA is achieved by the following relation: $ROA = \text{net profit} / \text{total assets}$

Bank size: in this research firm size means natural logarithms of assets.

$FSIZE_{j,t} = \log(\text{assets}_{j,t})$

A. POPULATION

The research population includes the banks listed in stock exchange during the years 2009 to 2012. For coordination between the community members the following conditions are set for selecting samples, therefore, samples are selected through systematic elimination method. Conditions are as follows:

1. The banks have to be listed in Tehran stock exchange before 2009
2. The banks financial year have to be finished in end of last month of year
3. The banks shouldn't change their financial year during this period
4. Data and information of the banks have to be available
5. Banks stock transactions have to be done constantly in Tehran stock exchange and they shouldn't have trading stop on the mentioned stock for more than 3 month.

B. Data gathering method

The required information for processing the research hypotheses is acquired through:

1. Journals and yearbooks published by Tehran stock exchange
2. Annual reports of the banks
3. Information available at Novin Rahavard and Tadbirpardaz softwares, and
4. Examining the financial statements of banks listed in Tehran stock exchange is achieved by referring to the library of the organization. Data for this research were extracted from databases and the information obtained from stock exchange, theses, articles of inside and outside the country and authoritative online sources.

C. Research findings

First hypothesis testing

There is a relationship between the timeliness of accounting information and the ratio of current liabilities divided by total assets of the banks listed in Tehran stock exchange.

Multivariable regression coefficient results

Multivariable regression coefficient results

Predictive variables	Non-standard coefficients		Standard coefficients	T	Significance level
	B	SE	BETA		
constant	11.477	17.017		0.674	0.503
Timeliness of the accounting information	0.590	0.250	0.362	2.361	.022
ROA	0.104	0.266	0.118	0.390	0.699
FSIZE	0.295	0.295	0.321	0.999	0.323

According to the results of the table and considering the significance level of regression test error for the confidence interval 0.99, we can say that by involving control variables in the relation between timeliness of accounting information and ratio of current liabilities divided by total assets, the relationship between the two variables is confirmed. Results show that timeliness of accounting information, ROA, and FSIZE anticipate respectively 0.36, 0.11 and 0.32 of the ratio changes of current liabilities divided by the bank total assets.

Second hypothesis testing

There is a relationship between the timeliness of accounting information and the ratio of current liabilities divided by total liabilities of the banks listed in Tehran stock exchange.

Multivariable regression coefficient results

Predictive variables	Non-standard variables		Standard variables	T	Significance level
	B	SE	BETA		
Constant	-3.114	16.339		-0.191	0.850
Timeliness of accounting information	0.724	0.240	0.426	3.015	0.004
ROA	0.064	0.255	0.070	0.252	0.802
FSIZE	0.309	0.283	0.323	1.092	0.280

According to the results of the table and considering the significance level of regression test error for the confidence interval 0.99, we can say that by involving control variables in the relation between timeliness of accounting information and ratio of current liabilities divided by total liabilities, the relationship between the two variables is confirmed. Results show that timeliness of accounting information, ROA, and FSIZE anticipate respectively 0.42, 0.07 and 0.32 of the ratio changes of current liabilities divided by the bank total assets.

Third hypothesis testing

There is a relationship between the timeliness of accounting information and the ratio of current liabilities divided by capital of the banks listed in Tehran stock exchange.

Multivariable regression coefficient results

Predictive variables	Non-standard coefficients		Standard coefficients	T	Significance level
	B	SE	BETA		
Constant	3.928	14.991		0.262	0.794
Timeliness of accounting information	0.597	0.254	0.346	2.353	0.023
ROA	0.354	0.087	0.485	4.062	0.000
FSIZE	0.005	0.123	0.005	0.040	0.968

According to the results of the table and considering the significance level of regression test error for the confidence interval 0.99, we can say that by involving control variables in the relation between timeliness of accounting information and ratio of current liabilities divided by capital, the relationship between the two variables is confirmed. Results show that timeliness of accounting information, ROA, and FSIZE anticipate respectively 0.34, 0.48 and 0.005 of the ratio changes of current liabilities divided by the bank total assets.

Fourth hypothesis testing

There is a relationship between the reliability of accounting information and ratio of current liabilities divided by total assets of the banks listed in Tehran stock exchange.

Multivariable regression coefficient results

Predictive variables	Non-standard coefficients		Standard coefficients	T	Significance level
	B	SE	BETA		
Constant	5.014	13.938		0.360	0.721
Reliability of accounting information	0.489	0.201	0.334	2.438	0.019
ROA	0.403	0.138	0.378	2.913	0.005
FSIZE	0.083	0.164	0.071	0.507	0.615

According to the results of the table and considering the significance level of regression test error for the confidence interval 0.99, we can say that by involving control variables in the relation between reliability of accounting information and ratio of current liabilities divided by total assets, the relationship between the two variables is confirmed. Results show that reliability of accounting information, ROA, and FSIZE anticipate respectively 0.33, 0.37 and 0.007 of the ratio changes of current liabilities divided by the bank total assets.

Fifth hypothesis testing

There is a relationship between the reliability of accounting information and ratio of current liabilities divided by total liabilities of the banks listed in Tehran stock exchange.

Multivariable regression coefficient results

Predictive variables	Non-standard coefficients		Standard coefficients	T	Significance level
	B	SE	BETA		
Constant	-6.025	12.118		-0.497	0.621
Reliability of accounting information	0.339	0.174	0.232	1.947	0.57
ROA	0.641	0.125	0.564	5.120	0.000
FSIZE	0.083	0.141	0.071	0.587	0.560

According to the results of the table and considering the significance level of regression test error for the confidence interval 0.99, we can say that by involving control variables in the relation between reliability of accounting information and ratio of current liabilities divided by total liabilities, the relationship between the two variables is confirmed. Results show that reliability of accounting information, ROA, and FSIZE anticipate respectively 0.23, 0.56 and 0.007 of the ratio changes of current liabilities divided by the bank total assets.

Sixth hypothesis testing

There is a relationship between the reliability of accounting information and ratio of current liabilities divided by capital of the banks listed in Tehran stock exchange.

Multivariable regression coefficient results

Predictive variables	non-standard coefficients		Standard coefficients	T	Significance level
	B	SE	BETA		
Constant	3.9	12.89		0.309	0.759
Reliability of accounting information	0.52	0.174	0.397	2.993	0.004
ROA	0.222	0.136	0.206	1.626	0.110
FSIZE	0.110	0.148	0.100	0.744	0.460

According to the results of the table and considering the significance level of regression test error for the confidence interval 0.99, we can say that by involving control variables in the relation between reliability of accounting information and ratio of current liabilities divided by the capital, the relationship between the two variables is confirmed. Results show that reliability of accounting information, ROA, and FSIZE anticipate respectively 0.39, 0.20 and 0.10 of the ratio changes of current liabilities divided by the bank total assets.

IV. RESEARCH RESULTS

Based on the results of this study and according to the tests of research hypotheses, this viewpoint confirms that transparency of financial information has direct impact on liquidity risk, so that liquidity risk decreases by the financial information disclosure. The overall results obtained from this research hypotheses testing indicate that in general there is a significant relationship between financial information transparency and realized liquidity risk which is evident in each hypothesis results. Banks listed in Tehran stock exchange will progress only through establishing a transparent information environment. In this environment the transparency of financial information has a critical role; in fact the banks incapable of realizing transparency standards are exposed to high risks which overshadow their managers' credit. In this case, banks will face a loss of confidence of stockholders and investors leading to bank losses and degradation of its credit standing and liquidity reduction in the market.

Practical suggestions

1. Results from the research showed that transparency of financial information has a direct significant relationship with the banks' liquidity risk, indication the importance of financial information transparency. Therefore, it is recommended the audit office as the legislative body; more clarify the financial reports through legislative act.

2. It is recommended stockholders and investors pay special attention to financial information transparency in order to reduce the losses incurred on investments in the

stocks of commercial units especially banks and make informed decisions.

3. More emphasize of the stock exchange and audit office as the reference of accounting information is on the quality and disclosure of accounting information.

4. With respect to the fact that determining the adequacy rate in the banking industry is essential, it is recommended to determine the native favorable rate by a committee of the banks to provide a better comparative basis with regard to the facts, capabilities, facilities and banking features in the country.

5. It is recommended that potential investors identify return on assets and especially return on equity of bank stockholders in the recent years and consider it as one of the items in buying shares of banks.

Suggestions for future research

1. Designing a model for determining the transparency of financial information of banks listed in Tehran stock exchange regarding bank risks in different time circumstances and scenarios.

2. Examining the relationship between the combination of banks' assets-liabilities with other risks in the banking industry.

3. Measuring the liquidity risk using other methods and establishing its relationship the combination of liabilities-assets.

4. Comparative study of liquidity risk with other banking risks and assessing the relationship between different financial statements and risks of banks listed in Tehran stock exchange and banks listed in other countries stock exchange.

REFERENCES

- [1] Nofarasti Mohammad (2008), "statistics in economy and business", volume II, Rasa cultural services institute publication Mehraban, R, "Application of advanced product quality planning (APQP)", 1998, Tehran: Publication Pykan H. Poor, *An Introduction to Signal Detection and Estimation*. New York: Springer-Verlag, 1985, ch. 4.
- [2] Assaf, Albert, Barros, Carlos Pestana and Josiassen, Alexander (2010) Hotel efficiency: a bootstrapped metafrontier approach. *International Journal of Hospitality Management*, 29 (3). pp. 468-475. ISSN 0278-4319
- [3] 23-Crouhy, M., D. Galai, and R. Mark, 2000, "A comparative analysis of current credit models", *Journal of Banking and Finance*, Vol. 24, No. 1-2, P 59-117. riskHamidzadeh, M., Jazani, N., Hajikarimi, A., & Ebrahimi, "A. Designing a multidimensional model for measuring customer satisfaction in the banking industry in Iran". 2012, *Outlook Business administration*, 9, 99-116.
- [4] Ratnovski, L. (2013). Liquidity and transparency in bank risk Management, *J. Finan. Intermediation* 22 (2013): 422–439. Kotler, P., & Armstrong, G. "Principles of Marketing". Translated by parsiyan, Ali. Eighth Edition. 1999, New World Press, 23.
- [5] Leen, Mukesh, Charles, Vincent, (2009), Evaluating the performance of Indian banking sector using data envelopment analysis during post-reform and global financial crisis, CENTRUM Católica's Working Paper Series, No. 2012-09-0007.
- [6] Chang, E. C. and Wong, S. M. L. (2009), 'Governance with Multiple Objectives: Evidence from Top Executive Turnover in China', *Journal of Corporate Finance* 15 (2): 230-244..
- [7] Mehrabi Laleh (2010), "risk management in interest-free banking system emphasizing on credit risk", *economy news journal* 8(30):70-77
- [8] Gaemi Morteza, Alavi Mahmood (2012), "the relationship between transparency of accounting information and cash balance", *management accounting*, 5(12): 67-78