

## Does risk disclosure increase firms' value?

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Document Type: Original Article

2020, Vol. 4, No. 2. 67-76

Received: 2020/05/22

Accepted: 2020/09/13

Published: 2020/10/13

### Abstract

Investors pay special attention to risk criteria in assessing the status of companies. So companies can help attract investment by disclosing important risks. So, it is expected that risk disclosure through decreasing information asymmetric between managers and investors can reduce uncertainty and lead to an increase in the companies' value. This paper studies the impact of risk disclosure on firm value in listed companies on the Tehran Stock Exchange. We used Miihkinen (2012) model to calculate our risk disclosure index. Firm Value is calculated through Tobin's Q variable. The statistical population of this study is all companies listed on the Tehran Stock Exchange from 2010 to 2016. The final selected companies are 59. We find that corporate risk disclosure has significantly and positively impact on firm value. That is, as the disclosure of risk increases, so does the value of the company.

**Keywords:** Firm value, Information asymmetric, Risk disclosure.

## Introduction

The recent global crises made risk management implementation a top priority for most companies. The mainstream literature on risk management and risk disclosure suggests that various users are demanding more risk disclosure. So, academics, accountancy bodies, and regulatory agencies call for enhanced risk disclosure. Researchers have argued that risk disclosure is likely to have a positive effect on firm value. Risk disclosure through decreasing information asymmetric (Cheung et al., 2010; Miihkinen, 2013) Lead to decreasing opacity and increasing transparency. So, consequently, investors by receiving more information about the company's risk and uncertainty enable to assess the firm risk profile. Previous studies Examine the economic consequence of risk disclosure including the cost of corporate capital (Nahar et al., 2016), companies' investment efficiency (Li et al., 2018), firm value (Bravo, 2017; Campbell et al., 2017).

In Iran, there is little research on risk disclosure and need to extend. The study aims to investigate the effect of risk disclosure on firm value. Research on the impact of risk disclosure on the value of Iranian companies has been conducted by Mahroumi and Baradaran (2016). Mahroumi and Baradaran have used the number of risk disclosure sentences between 2010 and 2013. This study has chosen a longer time interval and also the method of calculating the risk disclosure index is different.

In this study, to measure the quality of disclosure of companies' risk, the model provided by Miihkinen (2012) is used, which is based on the number of words of disclosure of risk in the section of the key risk in MD&A. In this model, manual counting method has been used according to Linsley and Shrives (2006) and to count the number of risk exposure words. This research has used the number of risk words to calculate the risk index, while Mahroumi and Baradaran research have used the number of sentences. Also, calculating the index of the firm value of two research is different.

The paper proceeds as follows. The next section contains a review of the literature on the effect of risk disclosure on firm value. The research hypothesis is presented in section 3. The Research method is presented in section 4, followed by the methodology in section 5, models and variables. In section 6, and research findings in section 7. The main results are provided and discussed in section 6. A summary and concluding remarks are provided in the last section.

## Literature Review

In different works of literature, the word risk has been considered as a general term but with several meanings. The Oxford Dictionary defines risk as a "risk situation." From Young's point of view (2011), risk means uncertainty about what will happen in the future. The higher the uncertainty, the greater the risk. Risk is the likelihood of an adverse event occurring that may have a negative impact on the organization. From Hopkin's (2012) perspective, a risk is also an event that is able to influence a mission, strategy, project, normal operation, goal, key processes, key dependencies, or meet the expectations of stakeholders.

Risk recording and reporting are done in two ways: internal and external reporting. In internal reporting, the identified risks are prepared in the form of a risk profile table. The table is then reported to the Risk Committee and the firm's Board of the directors. In external reporting, the issue of risk disclosure is discussed. Risk management is an important component of corporate governance that has a significant impact on financial reporting and accounting. Risk disclosure can indicate the extent to which risk management involves identifying risk factors, risk analysis, decision making about risk behavior, and controlling their impact (Dobler, 2008). The Institute of Chartered Accountants in England and Wales (2002) states that companies should report on the risk management measures they face.

Previous research has shown that risk disclosure has important economic consequences. Disclosure of risk affects the company's performance and increases investment efficiency (Li et al., 2018). For example, Li et al. (2018) looked at a sample of 18651 observations and examined the effect of companies' risk disclosure on companies' investment efficiency listed on the Chinese Stock Exchange. Researchers assert that companies with higher risk disclosure increase information transparency, so risk disclosure has a significant impact on investors' perceptions and behavior, which in turn increase the investment efficiency of companies by reducing information asymmetry. Also, disclosing risk by reducing investment uncertainty reduces the cost of corporate capital (Nahar et al., 2016).

One of the important considerations in examining the economic consequences of companies' risk disclosure has been the impact of risk disclosure on the value of companies. The effect of risk disclosure on company value can be explained in terms of agency theory. Companies increase information transparency by disclosing more risk (Akhigbe & Martin, 2008). Increasing information transparency leads to a reduction in the issue of

information asymmetry (Zeghal, 2005). When a company provides quality risk information, the risk of adverse selection is reduced (Scott, 2009). As a result, increasing the quality of risk disclosure by reducing information asymmetry between management and investors and solving agency problems increases the quality of financial reporting, so it is expected to increase information transparency and increase investors' understanding of corporate risks. The value of the company also increases. Francisco Bravo (2017) tested the effect of risk disclosures on firm value of the companies included in the Standard & Poor's 500 Index in 2009 belonging to the manufacturing industry. The researcher finds the positive relationship between the risk disclosure with the value of a firm. So, the aim of the study is to address this question by examining the association between Form risk factor disclosures and firm value in Iranian companies.

Research in the field of risk disclosure and the study of its economic consequences in Iran is limited. The researches that have been done include the research of Fasihi et al (2018), Namazi and Ebrahimi Meymand (2016), Baradaran and Mahrumi (1396). The results of Hassanzadeh and Mahroumi 'research (2017) in examining the effect of risk disclosure on the value of companies did not find a significant relationship. The researchers said that the irrelevance of the disclosed information and the inability of investors to interpret the disclosed information could be one of the main reasons for this conclusion. Considering the different time period and the different risk disclosure index, this study seeks to answer the question of whether the value of the company has increased in companies that have a higher quality of risk disclosure.

### **Research Hypothesis**

As stated in the theoretical foundations' section, risk disclosure is expected to have a significant impact on the value of companies. Therefore, the research hypothesis is as follows:

Hypothesis: The quality of risk disclosure has a significant relationship with the value of companies.

### **Research Method**

This research is in the field of positive accounting research. The information of the companies has been studied in a combined manner and by multiple regression. This information was extracted from the software of Rahvard Novin and adapted with financial statement information. To prepare the

information, the Excel spreadsheet was used to analyze the main research model, version 10 of EVIEWS software was used.

### The Sample Selection

The statistical population of this study is all companies listed on the Tehran Stock Exchange from 2010 to 2016. Due to the fact that the guidelines for companies' risk disclosure have been announced by the Stock Exchange Organization since 2009, the financial period under review for this research is from 2010 to 2016. The final selected companies were 59. The sample is selected for this research by the elimination method and considering the following criteria:

- 1- Companies should be members of the stock exchange from the beginning of 2010 to the end of 2016.
- 2- Companies should not be other than banks, investment, insurance and financial intermediaries.
- 3- In order to observe the possibility of comparability, the financial year of the companies should end on March 20.
4. Participants in the research course should disclose the relevant risk in the report of the board of directors.

### Models and variables

The main research model using theoretical foundations is the relation (1):

$$\text{Firm Value} = \alpha_0 + \alpha_1 \text{risk disclosure} + \alpha_2 \text{Size} + \alpha_3 \text{Leverage} + \alpha_4 \text{Capex} + \alpha_5 \text{Prof} + \alpha_6 \text{Growt} + \epsilon \quad (1)$$

If  $\alpha_1$  becomes significant, it indicates that the disclosure of corporate risk affects the value of the company.

#### 1. Dependent variable; company value

Firm Value is calculated through Tobin's Q variable. Tobin's Q variable is calculated as follows:

$$\text{Tobin's Q} = \frac{(\text{EMV} + \text{LBV})}{\text{TABV}} \quad (2)$$

wherein:

EMV is the total market value of equity. LBV is the book value of debt and TABV is the book value of total assets.

## 2. Independent variable; Risk disclosure index (Risk Dis Coverage)

The risk quality index of this research has been calculated using the model of Miihkinen model (2012). Fasihi et al. (2019) also used the Miihkinen model (2012).

## 3. Control variables

The research control variables are given in Table 1.

Table 1. Control Variables

SIZE	the natural logarithm of total assets for firm i in year t
Growth	sales growth
Leverage	Total book value of debt to total assets ratio
Capex	The ratio of capital expenditures to total assets
Prof	Net profit/average book equity

## Research findings

### 1. Descriptive statistics

Descriptive statistics related to research variables are presented in Table 2.

Table 2. Descriptive statistics

Variable	Average	median	Maximum	minimum	Standard deviation
Tobin's Q	1.793	1.528	7.658	.463	.917
Risk Index	.368	.336	1	0	.166
SIZE	14.24	13.95	19.14	11.678	1.549
LEV	.606	.615	2.315	.0140	.203
Capex	.264	.218	.857	0	.179
GROWTH	.0906	.131	.732	-.517	.260
Prof	.187	.167	1.167	-.939	.240

The company's value index (Tobin's Q) has an average of 1/793.

### 2. Regression Analysis

According to the hypothesis, risk disclosure was expected to have a significant effect on the value of companies. As shown in Table 3, the Chow test was used to select the data analysis model and to use compound or panel data. The Limer statistic confirms the use of fixed-data panel data for the research model.

Table 3. The Chow test

Result	Hausman test		F limer	
Fixed- effect panel data method was selected.	000	33.97	000	4.623

Table 4 shows the results of fitting the research model. The Tobin's Q is used as a dependent variable in the model.

Table 4. Regressions of firm value on risk disclosure (empirical Results)

Dependent variable		Coefficient	T	p-value	VIF
constant	C	3.081	1.608	.108	
Risk Disclosure Index	Risk Index	.196	1.985	.047	1.090
firm size	SIZE	-.116	-.838	.402	1.104
leverage	LEV	.719	5.511	.000	1.706
age	GROWTH	.267	2.031	.0430	1.082
growth	Capex	-.582	-2.766	.006	1.050
Profitability	Prof	-.020	-.107	.914	1.785
F Statistic			67.63		
Sig.			.000		
$R^2$			.551		
$R^2$ Adjusted			.468		
Durbin Watson			1.896		

Note: This Table reports the result from the panel data fixed effect regression on the relationship between risk disclosure and firm value. The depended variable is Firm Value. The number of observations is 405.

In Table 4, the statistical value of F (67.63) at the significance level (zero) indicates the significance of the research model. In addition, the value of the Durbin Watson (DW) statistic is 1.896, which indicates that there is no autocorrelation detected in the sample. The VIF statistic also indicates that there is no correlation between the variables.

The risk disclosure quality index (significance level of .04) has a significant and positive relationship with the company's value index, this suggests that the value of the company also increases with the increase of risk disclosure in the annual financial reports. The finding is in line with the research of Francisco Bravo (2017). Also, the finding is not consistent with Mahroumi and Baradaran (2016).

## Conclusion and Discussion

This study examines the effect of companies' risk disclosure on the value of listed manufacturing companies on the Tehran Stock Exchange. After examining 59 companies listed on the Tehran Stock Exchange during the years 2010 to 2016, the results indicate that the disclosure of companies' risk has a significant and direct relationship with the value of the company. That is, as the disclosure of risk increases, so does the value of the company. This result is consistent with agency theory. This means that with increasing information, companies' risk disclosure, agency costs, and the problem of information asymmetry are reduced, so investors have more and more transparent information, which increases the value of companies.

Therefore, based on the results of this research, potential and actual investors are recommended to pay attention to the quality of the information provided by companies, especially risk disclosure information, in their investment decisions. Future researchers are also advised to consider the impact of risk disclosure on other related management decisions related to the company's performance and value. Future researchers could do this research over a longer period of time, with examples from various industries such as banking and insurance. Considering that disclosure of risk has a significant effect on the value of companies, regulators are advised to pay special attention to disclosing the risk of companies in setting the regulations related to disclosure of companies and ranking companies from the perspective of their quality disclosure. Companies are also advised to pay attention to increasing the quality of their financial statements by increasing the quality of the company's risk report so that they can attract investors.

**Funding:** This research received no external funding.

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**Bibliographic information of this paper for citing:**

Fasihi, Soghra & Hosseini, Seyed Ali (2020). Do risk disclosure increase firms' value?. *Iranian Journal of Finance*, 4(2), 67-76.