

## **RISK DISCLOSURE, CORPORATE GOVERNANCE AND FIRM CHARACTERISTICS**

Chien-Jen Wang

International Trade Department, Takming University of Science and Technology, Taipei, Taiwan

### **ABSTRACT**

Risk disclosure is defined as timely and transparent flow of information to a firm's shareholders on a regular and frequent basis, thereby reducing information asymmetry. This paper focuses on risk information disclosure and explores the impacts on a firm's risk disclosure of corporate governance mechanisms and firm characteristics. Taking the Taiwan 50 Index companies as the study samples, we found that a firm's corporate governance mechanism is significantly positively related to its frequency of releasing documents to the stock market. These results were notable with respect to an increase in the numbers of board directors, who have stronger motives and incentives to perform their responsibilities, and thus to disclose more information. Additionally, larger numbers of independent directors, who provide more objective opinions and suggestions to the public, also increase the frequency of risk disclosure.

**Keywords:** risk disclosure, corporate governance, firm characteristics, numbers of board directors, numbers of independent directors

*JEL* Classification: G1, G3

### **1. INTRODUCTION**

Corporate governance mechanisms are primarily used to solve the agency problem as it emerges in a company. The agency problem is characterized by separation and opposition in the positions of the company's owner and controller. Usually, the company's agents are viewed as self-interested, and they act opportunistically, so as to consume firm owners' profits. Recently, numerous countries worldwide have noted and emphasized disclosure theory. Disclosure theory is defined as timely and transparent flow of information to a firm's shareholders on a regular and frequent basis, thereby reducing information asymmetry (Bushman, Piotroski and Smith, 2004). Similarly, risk disclosure improves the ability of shareholders to monitor the activities of management levels and indicates the firm's quality to current and potential investors. It may also

provide reassurance for the investors and through this process reduce the firm's agency costs and obtain benefits. Therefore, firms must have incentives to voluntarily disclose their risk information.

In corporate governance, a better-governed firm is generally viewed as willing to disclose more information to external parties, and as more transparent due to greater monitoring. Thus, better-governed firms are predicted to disclose more frequent and timely risk information. However, up to the present, few studies have examined the relationship of risk information disclosure and corporate governance. If a company tends to provide sufficient risk information, this may be useful in preventing risk information uncertainty. Meanwhile, investors may incorporate risk information into their price valuation models to reduce information asymmetry, and thus accurately evaluate the firm's equity value and improve its market liquidity.

Jorgensen and Kirschenheiter (2003) noted that if a firm chooses not to disclose risk information, it will have a higher risk premium than the firms that provide risk information. Further, Jorgensen and Kirschenheiter (2012) emphasized that risk disclosure is beneficial for investors, allowing them to forecast the uncertainty of a specific company, and additionally affecting the forecast of its stock prices. La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998) noted that countries with a strong system of legal mechanisms are better able to offer investor protection. That is, corporate governance frameworks in countries with strong laws are more effective in encouraging firms to disclose risk information to the public: If firms do not disclose information to shareholders, they will likely be detected and penalized, and this may damage their reputation. Therefore, countries with higher standards for and requirements concerning timeliness of risk information disclosure may provide an environment of greater investor protection.

In this study, we explore the relationship between risk information disclosure, corporate governance, and firm characteristics, utilizing the Taiwan 50 Index, companies most frequently traded in the Taiwan Security Exchange Corporation (TSEC), as the study sample. This estimation considers not only corporate governance factors, such as numbers of board directors, numbers of independent directors, and directors stockholding rate, but also firm characteristic factors, such as firm size, return on equity (ROE), and Tobin's q ratio.

Taking the Taiwan 50 Index companies as the study samples, we found that a firm's corporate governance mechanism is significantly positively related to its frequency of releasing documents to the stock market. Better-governed companies are inclined to disclose more risk information. Additionally, companies with better-governed aggregate structures have strong motivation to voluntarily disclose risk information. These results were notable with respect to an increase in the numbers of board directors, who have stronger motives and incentives to perform their

responsibilities, and thus to disclose more information. Larger numbers of independent directors, who provide more objective opinions and suggestions to the public, also increase the frequency of risk disclosure and reduce information asymmetry.

The paper is organized as follows: Section 2 describes the empirical model. Section 3 discusses the methodology and data. Section 4 presents the study's results. Section 5 draws conclusions from the study and its results.

## 2. EMPIRICAL MODEL

This study adopts the levels of firm risk disclosure as the dependent variable. Richardson and Welker (2001) examined the relationship between firms' information disclosure and debt ratios and found a significantly positive correlation between the two. That is, higher debt ratios are usually accompanied by a higher frequency of risk disclosure. When debt ratios are higher, a firm's stakeholders will ask for more risk information, to assure their investing equity value. Thus, this paper examines the relationship between risk disclosure, corporate governance, and firm characteristics. Dummy variables are used to construct the firm's risk disclosure: dummy variable "1" indicates firms in which debt ratios are greater than or equal to 50%; dummy variable "0" indicates firms in which debt ratios are less than 50%. Two independent variables - corporate governance and firm characteristics - are considered to perform empirical estimations. Given the relevant variables, the empirical model is formulated as in Equation (1) as follows:

$$RISKDSC_{i,t} = \alpha_1 + \beta_1 DIRP_{i,t} + \beta_2 INDBP_{i,t} + \beta_3 DIRHD_{i,t} + \beta_4 FMSZ_{i,t} + \beta_5 TOBINQ_{i,t} + \beta_6 ROE_{i,t} + \varepsilon_{i,t} \quad (1)$$

where the dependent variable—  $RISKDSC_{i,t}$  represents the risk disclosure frequency of firm  $i$  at period  $t$ . The firm's total debt ratios (i.e., total debt divided by total assets) was taken as a proxy variable for risk disclosure, as it is closely related to a firm's risk disclosure information.

The independent variables include corporate governance factors and firm characteristic factors.  $DIRP_{i,t}$  represents the number of directors on the board of company  $i$  in quarter  $t$ . A larger board size indicates that board directors will generally be much more prudent in business decisions, and their considerations will tend to be more consistent with those of the stockholders.  $INDBP_{i,t}$  is the number of independent directors on the board of company  $i$  in quarter  $t$ . Because independent board directors are generally experts in financial or legal fields, they can provide counterviews and objective opinions on the decisions of the directors. Dechow, Sloan and

Sweency (1996) noted that an increase in the numbers of independent outside directors can promote monitoring by a firm's commission board to increase the release of risk information to the public. A better-governed company discloses more risk information. Therefore, a higher proportion of independent directors in a firm will probably strengthen the quality of financial disclosure monitoring.  $DIRHD_{i,t}$  represents the stockholding rate of the directors. In firms with a higher director stockholding rate, the commission board typically strengthens their monitoring to reduce information asymmetry.

We also consider firm characteristic variables in the estimation: firm size, Tobin's q ratio, and ROE. Some UK literature has emphasized investigation of the impacts of firm characteristics on aggregate risk disclosure, with respect not to quality but also to quantity (Abraham and Cox, 2007). For firm size  $FMSZ_{i,t}$ , we use the firm's capital amount after standardization for estimation. Richardson and Welker (2001) stated that as the firm scale grows, the importance of social disclosure to the firm's stakeholders increases. Al-Tuwaijri, Christensen and Hughes (2004) also found that as the firm size grows, so does the attention from the social public; to reduce derived political costs, the management level must provide more voluntary risk disclosure. Therefore, large-scale companies usually disclose more risk information.  $TOBINQ_{i,t}$  is the Tobin's q ratio. This represents the growth and investment potential of company  $i$ , estimated as its market value divided by its book value ( $MV/BV$ ), and should exceed unity ( $>1$ ).  $ROE_{i,t}$  is the ROE of firm  $i$  in quarter  $t$ , representing the firm's profit performance;  $\varepsilon_{i,t}$  is the disturbance term.

This study employs pooled estimation regression, which combines cross-sectional and longitudinal data. Its methodology includes the fixed effects model (FEM) and random effects model (REM), as well as the Hausman test to judge the suitability of the models. This method yields reliable coefficient estimates when unobservable individual fixed or random effects exist.

### **3. METHODOLOGY AND DATA**

We sampled the component stocks of Taiwanese listed companies frequently traded in TSEC. The study period ranged from Q1 of 2003 to Q2 of 2017. After removing incomplete and outlier data, 326 observations remained. The data were extracted from the Taiwan Economic Journal (TEJ) databank. Table 1 illustrates the definition and measurement of the data. We estimated the impacts of corporate governance and firm characteristics on risk disclosure information, using panel analysis including the FEM and the REM to estimate the related variables. The estimation results revealed that the FEM is significant.

**Table 1: Data Definition and Measurement – Taiwan 50 Index**

<b>Notation</b>	<b>Variable</b>	<b>Measurement</b>	<b>Source</b>
$RISKDSC_{i,t}$	The Level of Firm Risk Disclosure	Dummy variable “1” if firms debt ratios greater than or equal to 50%; dummy variable “0” if less than 50%	TEJ
$DIRP_{i,t}$	Director Size	Number of directors on the board	TEJ
$INDBP_{i,t}$	Independent Directors Size	Number of Independent directors	TEJ
$DIRHD_{i,t}$	Stockholding Rate of the Directors	Fraction of the Firm owned by the Directors	TEJ
$TOBINQ_{i,t}$	Tobin’s q Ratio	The market value divided by the book value (MV/BV) of company, which represents a firm’s growth and investment potential	TEJ
$FMSZ_{i,t}$	Company Size	The firm’s capital amount after standardization	TEJ
$ROE_{i,t}$	Return on Equity	The Return on Equity of Firm	TEJ

#### 4. EMPIRICAL RESULTS

In this section, we present and discuss the estimation results of the regression equation shown in Eq. (1). We began our analysis by testing the association of risk disclosure scores for Taiwanese listed companies with two variable groups: (1) corporate governance (board size, number of independent directors, director stockholding rate), and (2) company specific characteristics (firm size, Tobin’s q ratio, ROE). Table 2 summarizes the panel regression estimation results. The Hausman test showed that the FEM provides the greatest explanatory power.

**Table 2 Estimation Results of Panel Regression – Taiwan 50 Index**

<i>Explanatory Variable</i>	<i>Dependent Variable - RISKDSC<sub>i,t</sub></i>	
	<i>Fixed-Effects Model</i>	<i>Random-Effects Model</i>
	<i>Coefficient</i>	<i>Coefficient</i>
<i>Constant</i>	25.044* (1.33)	27.748* (1.43)
<i>DIRP<sub>i,t</sub></i>	0.777*** (4.19)	0.737*** (3.93)
<i>INDBP<sub>i,t</sub></i>	0.510** (1.65)	0.446** (1.41)
<i>DIRHD<sub>i,t</sub></i>	0.137* (1.52)	0.133* (1.45)
<i>TOBINQ<sub>i,t</sub></i>	-0.511 (-0.68)	-0.569 (-0.75)
<i>FMSZ<sub>i,t</sub></i>	4.543*** (1.95)	4.069*** (1.72)
<i>ROE<sub>i,t</sub></i>	0.071* (0.81)	0.078* (0.88)
<i>Observations</i>	326	326
<i>AdjustedR<sup>2</sup></i>	0.286	0.257
<i>F-statistic</i>	6.05***(0.000)	32.28***(0.000)
<i>Hausman test x<sup>2</sup>(6)</i>	41.31(0.000)	

*Notes:*Dependent variable is risk disclosure levels of Taiwan 50 Index. The testing results show that Fixed Effects Model (FEM) has the largest explanatory power. The figures in parentheses are *t*-statistics. \*significant at 10% level; \*\*significant at 5% level; \*\*\*significant at 1% level.

This paper primarily studied the correlation of risk disclosure and corporate governance. Risk disclosure provides assurance to investors, and thereby lowering a firm's debt costs and obtaining benefits. Each firm must have incentive for voluntary risk information disclosure. Most existing studies of risk disclosure levels have not quantified risk disclosure directly. Our study uses total debt ratios as a proxy variable for risk disclosure, since it is highly correlated with risk disclosure.

With respect to the board size of component stock companies, the literature notes that an employee's moral hazard will induce an increase in the internal controlling costs of an enterprise.

Thus, strengthening the monitoring incentive of the commission board can reduce existing internal information asymmetry and internal agency costs (Ettredge and Reed, 2000). When the board size is larger, board directors generally have stronger motivation to perform their duty, exert the power of commission board, and monitor management's behavior, which can further lower agency costs and promote the firm's operating performance and equity value (Morck, Shleifer, and Vishny, 1988). This study, which took the Taiwan 50 Index companies as its sample, obtained similar empirical results: as board size grows, internal controlling mechanisms intensify, promoting transparency in information disclosure. Therefore, investors are given clear and confident information so that they input more capitals to support the company's future prospects. This study also examined the influence of independent directors (*INDBP*) on firms' risk disclosure, and found that the effect of the number of independent directors on firms' risk disclosure is also significantly positive. This suggests that independent directors represent their specialty, professionalism, and independent expertise. They provide suggestions and specialized opinions, especially regarding unreasonable firm performance. These empirical results are consistent with prediction of a positive influence, that is, an increase in the number of independent directors will increase risk disclosure levels.

In examining the impact of director stockholding rate (*DIRHD*) on risk disclosure, we also found a significantly positive result. This indicates that when companies have higher director stockholding rates, board directors typically strive to strengthen monitoring and promote equity values, resulting in greater risk disclosure.

Additionally, some UK literature has emphasized investigation of the impacts of firm characteristics on the firm's aggregate risk disclosure (Abraham and Cox, 2007). The study found that firm size indeed had an impact on both quality and quantity of risk disclosure. Furthermore, Cormier and Gordon (2001) noted that large-scaled companies disclosed more information. Consistent with the research of Cormier and Gordon, this study obtained a significantly positive result for correlation between firm size and risk disclosure. This is likely due to the higher visibility of large-scaled firms own higher notability and their need to protect their reputation, which leads them to disclose more risk information to the public.

*TOBINQ* (a firm's market value divided by its book value) indicates the growth and investment potential of a firm. Our empirical results show that the coefficient of *TOBINQ* has a non-significant relationship with risk disclosure. This is probably because the component stock companies of the sample represent diversified industries, and thus the estimation result is not significant. *ROE* represents operating income divided by total equity, which measures the net profits per unit of equity. The estimation results for *ROE* showed a significantly positive effect on risk disclosure, indicating that as firms' *ROE* increases, risk disclosure will increase as well.

Because the sampled companies are listed companies, which possess large capital amounts, their management level and main shareholders generally have strong motivation and willingness to earn profit. Thus, increase in ROE will be accompanied by increased risk disclosure.

## **5. CONCLUSION**

To operate more effectively in a country's capital market, a firm's stakeholders must not only focus on financial performance but also disclose related risk information widely and transparently, which benefits investment decisions. La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998) concluded that countries with strong legal systems are better able to provide investor protection, and thus their corporate governance mechanisms are expected to more effectively encourage companies to disclose risks to the equity market – if the companies do not, they will likely be detected and penalized. This paper focuses primarily on risk information disclosure and explores the impacts on a firm's risk disclosure of corporate governance mechanisms and firm characteristics. According to the Taiwan Financial Supervisory Commission, which modified the rules for financial reporting in 2004, companies must increase their disclosure of related risk information to the public to reduce opportunistic behavior at the management level. Meanwhile, a higher frequency of risk disclosure has an important correlation with financial reporting transparency and corporate governance structure.

The major findings of our study were as follows. Taking the Taiwan 50 Index companies as the study samples, we found that a firm's corporate governance mechanism is significantly positively related to its frequency of releasing documents to the stock market. Better-governed companies are inclined to disclose more risk information. Additionally, companies with better-governed aggregate structures have strong motivation to voluntarily disclose risk information. These results were notable with respect to an increase in the numbers of board directors, who have stronger motives and incentives to perform their responsibilities, and thus to disclose more information. Additionally, larger numbers of independent directors, who provide more objective opinions and suggestions to the public, also increase the frequency of risk disclosure, and reduce information asymmetry. The empirical results presented here can serve as important references for practitioners and investment institutions, providing a clearer perspective on voluntary risk disclosure behaviors at the management level and promoting a company's quality to current and potential investors.



**REFERENCES**

- [1] Abraham, S. and P. Cox, 2007. "Analyzing the Determinants of Narrative Risk Information in UK FTSE 100 Annual Reports", *The British Accounting Review* 39(3), pp. 227–248.
- [2] Al-Tuwaijri, S. A., T. E. Christensen, and K. E. Hughes, 2004. "The Relations among Environmental Disclosure, Environmental Performance, and Economic Performance: A Simultaneous Equations Approach", *Accounting, Organizations and Society* 29, pp. 447-471.
- [3] Bushman, R. M., J. D. Piotroski and A. J. Smith, 2004. "What Determines Corporate Transparency?", *Journal of Accounting Research* 42(2), pp. 207–252.
- [4] Cormier, D., and I. M. Gordon, 2001. "An Examination of Social and Environmental Reporting Strategies", *Accounting, Auditing and Accountability Journal* 14, pp. 587-616.
- [5] Dechow, P. M., R. G. Sloan, and A. P. Sweeney, 1996. "Causes and Consequences of Earnings Manipulation: An Analysis of Firms subject to Enforcement Actions by the SEC", *Contemporary Accounting Research* 13, pp. 1-36.
- [6] Ettredge, M. and M. Reed, 2000. "An Examination of Substitution among Monitoring Devices: the Case of Internal and External Audit", *Review of Quantitative Finance and Accounting* 15, pp. 57-80.
- [6] Jorgensen, B. N. and M. T. Kirschenheiter, 2003. "Discretionary Risk Disclosures", *The Accounting Review* 78(2), pp. 449–469.
- [7] Jorgensen, B. N. and M. T. Kirschenheiter, 2012. "Interactive Discretionary Disclosures", *Contemporary Accounting Research* 29(2), pp. 382–397.
- [8] La Porta, R., Lopez-de-Silanes, F., Shleifer, A., and R. Vishny, 1998. "Law and Finance", *Journal of Political Economy* 106(6), pp. 1113–1155.
- [9] Morck, R., A. Shleifer, and R. W. Vishny, 1988. "Management Ownership and Market Valuation: an Empirical Analysis". *Journal of Financial Economics* 20, pp. 295-315
- [10] Richardson, A. J., and M. Welker. 2001. "Social Disclosure, Financial Disclosure and the Cost of Equity Capital", *Accounting, Organizations and Society* 26, pp. 597-616.