

The Strategic Financial Reporting: Evidence from Directors' and Officers' Liability Insurance

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전략적 재무보고: 임원배상책임보험제도를 이용한 연구

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Abstract This study investigates the association between financial reporting strategy and the directors' and officers' liability insurance. Since D&O insurance protects officers and directors against the risks of shareholder litigation, it is possible that, because of moral hazard, managers will be more willing to participate in opportunistic financial reporting such as earnings manipulation when they are covered by a generous D&O insurance policy. This paper examines the association between D&O insurance and financial reporting, specifically whether the purchase of D&O insurance affects earnings manipulation. On the other side, the firms engage earnings management are willing to purchase D&O insurance, this study tests whether earnings manipulation affects D&O purchases using listed firms in Korean stock market from 2006 to 2008. This paper finds that firms with higher discretionary accruals are less likely to purchase D&O insurance implies that managers who are participating in earnings manipulation are not willing to purchase D&O insurance. The relation between discretionary accruals and D&O is significantly negative which indicate D&O insurance purchase does not trigger earnings manipulation rather it alleviates opportunistic reporting behavior.

Key Words : Earnings manipulation, D&O insurance, Strategic financial reporting, Reporting quality, Litigation risk

요 약 본 연구는 임원배상책임보험제도와 전략적 재무보고간의 관계를 분석하였다. 임원배상책임보험제도는 경영자들을 소송위험으로부터 보호하기 때문에, 경영자들로 하여금 도덕적 해이를 발생시켜 재무보고에 있어서 이익조정과 같은 기회주의적인 행동을 유발시킬 가능성이 존재한다. 이에 본 연구는 2006년부터 2008년까지 상장기업을 대상으로 임원배상책임보험과 재무보고의 관계를 분석하였다. 구체적으로 임원배상책임보험 가입여부가 이익조정에 영향을 미치는지, 반대로 이익조정을 많이 하는 기업이 소송위험을 완화하기 위해 임원배상책임보험에 가입하는지를 살펴보았다. 연구결과 재량적발생액이 높은 기업일수록 임원배상책임보험제도를 구매하지 않는 것으로 나타났다. 이는 이익조정에 참여한 경영자 또는 기업일수록 임원배상책임보험제도에 가입하지 않는 것을 의미한다. 임원배상책임보험제도 가입 기업의 이익조정행태를 분석한 결과 유의한 음의 결과를 보였는데, 이는 임원배상책임보험가입제도가 이익조정을 유발시키지 않고, 오히려 기회주의적인 재무보고 활동을 제한하는 것으로 해석된다.

주제어 : 이익조정, 임원배상책임보험, 전략적 재무보고, 재무보고의 질, 소송위험

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1. Introduction

This study examines the association between financial reporting strategy and the directors' and officers' liability insurance. The recent accounting and financial fraud scandals—mainly caused by earnings manipulation—that struck the likes of Enron, Health South and Worldcom in the United States not only changed financial market dynamics, but also eroded investor confidence. These scandals strengthen the general awareness that managers engage in earnings manipulation generally to maximize their private wealth.

Earnings manipulation is often associated with misleading activities that occurs for purpose of hiding poor performances. In particular, Healy and Wahlen (1999) present that:

“Earnings management may occur when managers use judgement in financial reporting in structuring transactions to alter financial reports, to either mislead some stakeholders about the underlying economic performance of the economy, or to influence contractual outcomes that depends on reported accounting numbers.”

Earnings manipulation can be very costly to the management, since the risk of litigation increases when managers engage in earnings manipulation [11, 13, 19]. According to the Tillinghast-Towers Perrin (2002) survey, unsuitable or incorrect financial disclosure is responsible for about 46% of claims filed against directors and officers of U.S. firms in 2002, while only 20% in 1990. Moreover, litigation trials brought by inaccurate or unsuitable financial reportings are much more costly than any other. It is therefore that managers may have strong incentives to defend themselves against litigations related with inaccurate or unsuitable financial reporting [12]. This is where D&O insurance becomes valuable to directors and officers.

This paper tests whether D&O insurance is associated with earnings manipulation activities done by managers. If managers behave opportunistically and engage in boosting earnings, they will be more unprotected to risks related to litigation, which can be accused by discontented shareholders [5, 10]. Since D&O insurance protects officers and directors against the risks of shareholder litigation, it is possible that, because of moral hazard, managers will be more intending to boost reporting earnings when they are insured by a generous D&O insurance policy. This paper tests for specifically managerial opportunistic behaviors by testing whether D&O insurance is related with more aggressive financial reporting. This paper also investigates whether insurers enable to price the risk of opportunistic financial reporting. As D&O insurance transfers litigation risk from managers to insurers, they have a strong incentive to accurately assess shareholder litigation risk. The D&O insurance premium should therefore be higher for managers that opportunistically manipulate earnings.

This paper finds that firms with higher discretionary accruals are less likely to purchase D&O insurance implies that those who are participating in earnings manipulation are not willing to purchase D&O insurance. The relation between discretionary accruals and D&O is significantly negative which indicate D&O insurance purchase does not trigger earnings management rather it alleviates financial reporting and D&O insurance. This study differs from prior studies in some ways. This study directly tests the relation between D&O insurance purchase and earnings manipulation. To empirically examine this issue, we hand collect D&O insurance data for Korean firms from Financial Supervisory Service's Data Analysis, Retrieval and Transfer System (DART). At the same time, this paper examines the moral hazard problem in purchasing D&O insurance purchases.

Using D&O insurance data, it is able to link earnings manipulation with D&O insurance. This paper thus

sheds lights on related literatures by providing empirical relations between opportunistic financial reporting and D&O insurance and evidence for controversial role of D&O insurance alleviating the conflicts of interests between shareholders and managers. Secondly, this paper extends the prior researches about earnings manipulation by providing more evidence on when earnings manipulation occur [1, 14]. Finally, testing managerial opportunism using D&O insurance information instead of stock price information is more proper because it is independent of the potential biases caused by the risk of collusion between directors and managers [16].

The rest of the paper is organized as follows. Section 2 presents related literature and explains main hypothesis. Section 3 describes the data, method and relevant variables. Section 4 reports empirical results. Finally, section 5 concludes the paper.

2. Related Literature and Hypotheses Development

Tillinghast (2002) states that “approximately 19% of U. S. survey respondents reported one or more claims against their directors or officers over a 10-year experience period.” Most of the corporates like to reimburse their directors and officers for defense costs and settlements arising from successful claims that target their actions (or inactions) with respect to the firms. Typically, they do so by purchasing D&O liability insurance, which provides coverage if a claim is settled with no admission of bad faith by director/officer or there is no finding of bad faith by the court. Besides protecting the directors and officers for decisions they make in good intention *ex post*, from an *ex ante* perspective, the D&O policies are useful in attracting competent directors and officers to the firms.

A D&O insurance policy generally combines up to following types of insurance coverage:

1. Personal coverage, that provides direct payment to directors and officers when a firm is not able or willing to recompensate them;
2. Corporate reimbursement coverage, that reimburses the firm when it indemnifies directors and officers for the costs of defending the lawsuits; and
3. Entity coverage, available for many years to nonprofits and in recent years to for-profit companies, encompassing at least some claims against the organization directly, including those that name no individual insured.

The existing D&O insurance literature is not as developed as that of earnings management. Looking at the demand for D&O insurance, Core (1997) pioneered this field of research by representing that litigation and distress risks are the critical determinants of D&O insurance purchases in Canada. Kaltchev (2004) finds that market capitalization is the main predictor for the D&O insurance coverage purchased by U. S firms. In terms of the impact of D&O insurance on stock value, Bhagat, Brickely, and Coles (1987) found no evidence that shareholder wealth was at all affected by announcing D&O insurance purchase.

More related to this study, Chalmers, Dann, and Harford (2002) analyze the D&O insurance purchase decision for managers when they are preparing the firms' initial public offering. They find a significant negative relation between D&O insurance purchase and long-term future performance, implicating that there are managerial opportunism. The authors also investigate the association between insurance premiums and future performance. They find that insurers do not differentiate between purchasers with private information about the firms' prospects and those that purchase extra coverage for other reasons.

The literatures on opportunistic financial reporting such as earnings manipulation are extensive as several potential motivations have been examined in the literature. Due to the importance of accounting

information for valuing firm value, managers may have an incentive to manipulate earnings to affect market expectations and the stock prices in short-term. DeAngelo (1988) hypothesized that because information of earnings is important for management buyouts valuations, managers have an incentive to participating earnings manipulation. This hypothesis found supports in the work of Perry and William (1994) on management buyouts, of Easterwood (1998) on hostile takeovers.

Schipper (1989) defines earnings manipulation as a purposeful intervention in the financial reporting process with the intent of obtaining some private benefits. Recent accounting scandals have generated an awareness that earnings manipulation is a misleading activity that artificially boosts performance as an incorrect or inadequate reporting has been responsible for the most of D&O insurance claims field to the companies in the recent period. As a result, opportunistic managers, who will actively manage earnings, should have an incentive to protect themselves against litigation risk. Because of moral hazard, I therefore expect that managers who are covered by a generous D&O insurance policy should be more likely to adopt an aggressive earnings management strategy. The reverse could also be true so that D&O insurance coverage is purchased in anticipation of opportunistic financial reporting.

Thus, hypothesis of this paper is as follows.

H: There will be a significant relationship between D&O insurance purchase and earnings manipulation.

3. Sample and Research Design

3.1 Sample Selection

Financial data are collected from Kis-value for publicly traded firms in Korea. D&O insurance information are collected manually from annual reports.

Firm-year observations with the missing financial information in Kis-value are deleted. I winsorize all continuous variables at the 1% and 99% level to reduce the impact of extreme observations. After applying these sample selection criteria, we obtain 3,587 firm-year observations from 2006-2008. Specifically, sample of this study is constrained with respect to the following criterion.

- 1) Listed in Korean stock market (KSE and KOSDAQ)
- 2) Fiscal years end is December.
- 3) Observations are excluded when there are missing variables which are necessary for empirical analysis.
- 4) All continuous variables are winsorized the highest 1% and the lowest 1% of the samples based on each variable to reduce the effect of outliers.

3.2 Research Design

The following regression is used to test out hypothesis that examines the association between earnings management and the D&O insurance:

$$D\&O_t = \alpha_0 + \alpha_1 EM + \alpha_2 Controls + \alpha_3 INDUSTRY + e_t$$

$$EM_t = \alpha_0 + \alpha_1 D\&O + \alpha_2 Controls + \alpha_3 INDUSTRY + e_t$$

DA: discretionary accruals calculated by modified Jones model(1995)

D&O: dummy variable is equal to 1 if a firm is insured and 0 otherwise.

Contols: SIZE, ROA, MTB, MK, BIG

SIZE: log(total assets)

ROA: net income divided by total assets

MTB: market to book ratio

MK: dummy variable is equal to 1 if a firm is listed in KOSPI and 0 otherwise

BIG: dummy variable is equal to 1 if a firm is classified as major firm and 0 otherwise

INDUSTRY: industry dummy variable

Where EM stands for the measure of earnings manipulation calculated by modified Jones model (1995), Coverage is the D&O insurance coverage and Premium is the D&O insurance premium. To control firm's profitability, ROA is included. MTB is included to control firm's growth perspective and SIZE and BIG are included to control firm's size. MKT is included to control firm's listing status. Industry dummy are included to control possible and industry effects.

4. Empirical Results

4.1 Descriptive Statistics

<Table 1> presents the descriptive statistics for the samples.

<Table 1> Descriptive Statistics (N=3,587)

Variables	Mean	Std. Dev.	Median	25%	75%
DA	-0.006	0.149	0.003	-0.056	0.060
D&O	0.264	0.441	0.000	0.000	1.000
SIZE	25.516	1.393	25.204	24.590	26.124
ROA	0.011	0.136	0.033	-0.003	0.075
MTB	1.597	1.890	1.005	0.614	1.750
MK	0.435	0.496	0.000	0.000	1.000
BIG	0.596	0.491	1.000	0.000	1.000

- 1) DA: discretionary accruals calculated by modified Jones model(1995)
- D&O: dummy variable is equal to 1 if a firm is insured and 0 otherwise.
- SIZE: log(total assets)
- ROA: net income divided by total assets
- MTB: market to book ratio
- MK: dummy variable is equal to 1 if a firm is listed in KOSPI and 0 otherwise
- BIG: dummy variable is equal to 1 if a firm is classified as major firm and 0 otherwise

The number of observations are 3,587 firm-years. The mean (median) value of DA is -0.0060 (0.0031). The average of D&O is 0.2640 which means about 26

percent of firms are insured in the window 2006-2008. The mean of SIZE is 35.5164 and the average ROA is 0.0133. The mean (median) value of MTB is 1.5973 (1.0049). 43 percent of samples are listed in KOSPI market and about 60 percent of samples are classified big companies.

4.2 Main Results

<Table 2> shows the result of univariate test of D&O insurance and DA.

<Table 2> Univariate test of D&O and DA

Panel A	D&O insured	D&O uninsured	difference	t-value
DA	-0.0076	-0.0055	-0.0021	-0.40

Panel B	High DA	LOW DA	difference	t-value
D&O	0.2447	0.2833	-0.0386	-2.63***

1) The definitions of all the variables in Table 1.

In panel A, the mean of DA for insured firms and uninsured firms are -0.0076 and -0.0055 respectively. The difference of mean is not significant. It indicated that D&O insurance purchase does not affect earnings management. Meanwhile, in panel B, about 25 percent of high DA group purchases D&O insurance and 28 percent of low DA group purchases D&O insurance. It suggests that firms those who are not engaged in earnings management purchase D&O insurance.

<Table 3> Logit Analysis of D&O insurance on DA

dependent var.	D&O	
	Coeff	p-value
Intercept	-23.5261***	<.0001
DA	-1.4327***	0.0001
SIZE	0.8624***	<.0001
ROA	0.3618	0.4134
MTB	0.1165***	<.0001
MK	-0.2699**	0.0109
BIG	0.3275***	0.0073
Industry effect	Included	
Prob. > Chi-	<.0001	
N. of Obs.	3,587	

- 1) ***, **, and * indicate significance level at less than 1 percent, 5 percent ,and 10 percent ,respectively.
- 2) The definitions of all the variables in Table 1.

<Table 3> presents the result of logit regressions of D&O insurance on DA to test the effect of opportunistic financial reporting on D&O insurance.

D&O is a dummy variable, which is equal to 1 if a firm is insured and 0 otherwise. The coefficient on DA is negative and statistically significant (p-value < 0.0001). The coefficient is -1.4327, suggesting that firms with higher discretionary accruals are less likely to purchase D&O insurance. This implies that managers those who engage earnings management are not willing to purchase D&O insurance.

The coefficient on SIZE and BIG are positive and statistically significant, implying that bigger firms purchase D&O insurance more than smaller firms. The coefficient on MTB is significantly positive, suggesting that firms with higher growth perspective are more likely to purchase D&O insurance.

Since D&O insurance purchase decision and opportunistic financial reporting could be endogenous. To control for this eventual endogenous relation, multiple regressions is done to test the association between earnings management and D&O insurance. <Table 4> presents the results.

<Table 4> Multiple Regressions of DA on D&O insurance

<i>dependent var.</i>	<i>EM</i>	
	<i>Coeff</i>	<i>t-value</i>
<i>Variables</i>		
Intercept	-0.0599	-1.18
D&O	-0.0192***	-3.74
SIZE	0.0021	1.00
ROA	0.6589***	43.57
MTB	-0.0039***	-3.62
MK	0.0183***	3.70
BIG	-0.0060	-1.17
Industry effect	Included	
Adj. R ²	0.3766	
F-value	362.00	
N. of Obs.	3,587	

1) ***, **, and * indicate significance level at less than 1 percent, 5 percent, and 10 percent, respectively.
 2) The definitions of all the variables in Table 1.

The dependent variable is DA calculated by modified Jones model (1995). The coefficient on D&O is negative

and statistically significant (t-value =-3.74). The coefficient is -0.0192, suggesting that firms covered by D&O insurance do not manipulate their earnings using discretionary accruals. It indicates that D&O insurance purchase decision does not seem to trigger the earnings management rather it prevent opportunistic financial reporting.

The coefficient on ROA and MK are positive and statistically significant, implying that profitable firms and KOSPI listed firms engage earnings management more. The coefficient on MTB is significantly negative, suggesting that firms with lower growth perspective engage earnings management.

5. Conclusion

This study investigates the association between financial reporting strategy and the directors' and officers' liability insurance. This paper finds that firms with higher discretionary accruals are less likely to purchase D&O insurance implies that managers who participating earnings manipulation are not willing to purchase D&O insurance. The relation between discretionary accruals and D&O is significantly negative which indicate D&O insurance purchase does not trigger earnings manipulation rather it alleviates opportunistic reporting behavior.

This study contributes to the literatures on D&O insurance and opportunistic financial reporting such as earnings manipulation. First, using D&O insurance data, it is able to link earnings manipulation with D&O insurance. This paper thus contributes to the mounting and ongoing debate over the role of D&O insurance alleviating the conflict of interests between shareholders and managers.

Findings of this paper have significant implications for investors, and regulators. Disclosed D&O insurance information can convey an important signal on the quality of accounting information. For regulators, this

evidence suggests that D&O insurance alleviate opportunistic reporting behavior, thus they need to encourage firms to purchase D&O insurance to protect investors.

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