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Research Article

Effect of Outside Director's Quality on Firm Value and Earnings Quality

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Abstract

Background: Board independence is important factor to increase firm value and earnings quality by monitoring and evaluate management. In addition, firm value and earnings quality are differently related to the quality of board. **Materials and Methods:** This study tests how quality of outside directors affects firm value and earnings quality of Korean listed firms using panel data during the period 2000-2012. This study classifies quality of outside directors into three categories: (1) Non financial experts, (2) Financial experts and (3) Gray experts. **Results:** This study finds that outside directors on board positively affects firm value but not earnings quality. In the view of quality of outside directors, only finance experts increase firm value but do not affect earnings quality. **Conclusion:** The role of outside directors on board of Korean firms is limited. High firm value and earnings quality results from quality of outside directors rather independence. This study provides empirical evidence that board quality plays on important factor to increase firm value and earnings quality in selecting outside directors on board.

Key words: Earnings quality, firm value, quality of outside directors

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Data Availability: All relevant data are within the paper and its supporting information files.

INTRODUCTION

Since 156 years passed when Smith¹ first introduced the 'Agency problem', conflict of interests between managers (agents) and shareholders (principals), in his book, the 'Wealth of nations', agency problems in modern firms have been studied extensively in the economics, finance and accounting literatures. Prior researchers have proposed that corporate governance mechanisms alleviate agency problems; such as board of directors^{2,3}. Given the separation of ownership and management for a modern corporation, the board is created as an internal governance mechanism to represent and protect shareholders from managers who may pursue their personal interests or otherwise may not act in the best interests of shareholders.

After the Asian financial crisis in 1997, Korean government embarked on various corporate governance reforms as a result of demands made by the IMF and the world bank. One of the major corporate governance reforms, Korean government initially introduced outsider directors on board to improve corporate transparency. Thus, firms listed on the KSE are mandatory required to have 25% of independent outside directors on board. However, the IMD⁴ reports that auditing and accounting practice in Korea ranked 51 and board of director's effectiveness over management ranked 54 out of 55 sample countries.

This study investigation how board quality affects earnings quality as a proxy of financial reporting quality and firm value of Korean firms listed on the Korea Stock Exchange (KSE) during the period 2000-2012.

Outside directors (directors not involved in the direct operations of the firm) assume the role of monitoring management activities on behalf of shareholders. The code of best practice for corporate governance in Korea describes outside directors as that "An outside director should be a person who is in a position to make decisions independently from the management, controlling shareholders and corporation".

Outside directors have an incentive to monitor managers because their reputation as expert monitors is at stake^{2,3}. Kaplan and Reishus⁵ argue that a reputation as an expert monitor is one of the most important reasons for the appointment of outside directors. They also find that the manager from a firm with good performance is more likely to become an outside director of other firms since managers of firms with good performance are expected to function as expert monitors, if appointed as outside directors. Monitoring by independent directors suggests that corporate boards will become more responsive to investors and the inclusion of outside directors on boards will improve the firm's compliance

with the disclosure requirements, which in turn will enhance the comprehensiveness and quality of disclosure⁶. Beasley⁷ examines differences in board configurations between firms that are involved in accounting fraud and those that are not and finds a negative association between ratio of outside directors and accounting fraud. Klein⁸ and Xie *et al.*⁹ supports evidence that firms having a higher proportion of outside directors have lower earnings management.

Firms with an independent board of directors have lower cost of debt¹⁰. Skaife *et al.*¹¹ find board independence can affect the firms' credit rating. Creditors expect boards of directors to monitor the financial reporting process on behalf of creditors because lending agreements are based on accounting based covenants. Accordingly, firms with independent board tend to receive positive investment grade credit rating from the bondholders and thereby there is a positive relation between board independence and firm's cost of debt. This result suggests that independent board directors play an important role in increasing financial reporting transparency.

Corporate governance mechanism operates a firm's management to act in the best interests of shareholder¹². This governance system includes outside directors³. One important duty of the board of directors is to monitor and evaluate management's activities within the firm. Since, the careers of inside directors are closely tied to the CEO, the task of monitoring management is predicted to fall mainly to the outside directors. Therefore, the role of outside directors is important for the resolution of agency problems between managers and shareholders, to protect their reputation and to reduce litigation risk by monitoring managerial opportunistic behavior.

This study contributes to the literature and practice in several ways. First, this study extends prior study by comprehensively exploring the effects of outside directors on boards' characteristics on earnings quality. Rezaee¹³ argues that corporate governance is a monitoring mechanism for assessing corporate responsibility and accountability through boards of directors. Thus, this study provides the evidence the effectiveness of outside directors on board as an internal governance' role. Second, Bagnoli *et al.*¹⁴ suggest that accounting research focuses on the effect of family ownership on earnings management¹⁵, while finance research focuses on its effect on firm value¹⁶. This study comprehensively tests the effect of board quality using both accounting (accruals quality) and finance (Tobin's Q) proxy. Finally, this study tests the quality of outside directors on board. The positive effect of boards on firm value and earnings quality might be stronger for expertise than board independence. Thus, this study suggests good practical evidence to set up board members.

MATERIALS AND METHODS

Hypothesis development: Outside directors are expected to perform better monitoring than other directors because they are independent from management and have incentives to keep their reputation as experts³. Kaplan and Reishus⁵ support Fama and Jensen³ argument and find the manager from a firm with good performance is more likely to become an outside director of other firms. For managers, being appointed as outside directors of firms is a positive signal that their competency is acknowledged throughout the labor market of outside directors. Thus, managers appointed as outside directors are expected to receive good opportunity in the labor market and strive to maintain their reputation as expert monitors. Rosenstein and Wyatt¹⁷ find the share price positively react to the nomination of outside directors because appointment of outside directors is a positive signal for shareholders. Beasley⁷ finds that accounting fraud decreases with an increase in the percentage of outside directors on boards. Black *et al.*¹⁸ reported that firms whose outside directors account for more than half of the board's constitution have higher firm value. Klein⁸ and Xie *et al.*⁹ show that earnings management decreases with outside directors. These results prove that outside directors more faithfully perform the checks-and-balances function against managers and inside directors and more effectively monitor management's opportunistic behavior and the firm's financial accounting process, thereby enhancing earnings quality. Accordingly, the following hypothesis H₁ is to be tested:

H₁: Earnings quality of Korean firms is positively associated with the proportion of outside directors on the board

Besides board independence, earnings quality may differently be related to the backgrounds of outside directors on board. Xie *et al.*⁹ classify board memberships as four categories: (1) Finance directors, (2) Corporate directors, (3) Blockholders directors and (4) Legal directors. They show that board members with corporate background reduce earnings management because of their financial sophistication.

In Korean context, Choi *et al.*¹⁶ examine outside director's quality and firm value. They categorize background of outside directors into seven areas: (1) Former politicians or government officials, (2) Lawyers, (3) Executives of financial institutions, (4) Accountants, (5) Academics, (6) Executives of affiliated firms and (7) Executives of non-affiliated firms. Interestingly, they find that outside directors having

financial institution background negatively affect firm value, whereas outside directors with academic and executives of non-affiliated firms background positively influence firm value. Moon *et al.*¹⁹ test the effects of accounting experts as outside directors on firm value and accruals quality. They find that accounting experts as outside directors increase firm value and accruals quality. Thus, earnings quality depends on the backgrounds of outside directors on board. Based on previous research, the following hypothesis H₂ is to be proposed:

H₂: Earnings quality of Korean firms is differently associated with the backgrounds of outside directors on the board

Sample: This study uses Korean firms consecutively listed on the Korean Stock Exchange (KSE) for 13 years (2000-2012). All financial institutions (e.g., commercial banks, insurance firms, security brokerage firms) are excluded.

Corporate governance data are all manually collected from business reports of each firm on DART system (<http://dart.fss.or.kr>) provided by Korean Financial Supervisory Commission. Financial statements data and stock data are obtained from OSIRIS and KIS database, respectively. The final sample consists of a total of 8,051 firm-year observations over the 15 years period.

Measure of firm value and earnings quality: This study uses the Tobin's Q as a proxy of firm value. Tobin's Q is calculated by firm's market value of equity at the end of fiscal year divided by book value of equity at the end of fiscal year, following²⁰. Accruals quality is used as a proxy of earnings quality. Accruals quality is measured following²¹ in Eq. 1.

$$TCA_{i,t} = \alpha + \beta_1 CFO_{i,t-1} + \beta_2 CFO_{i,t} + \beta_3 CFO_{i,t+1} + \beta_4 \Delta REV_{i,t} + \beta_5 PPE_{i,t} + \varepsilon_{i,t} \quad (1)$$

where, for firm *i* and time *t* and TCA is total current accruals, CFO is cash flow from operations, scaled by average total assets, REV is change in revenue scaled by average total assets, PPE is gross property, plant and equipment. Since the magnitude of accruals' components varies with firm size, each component is scaled by average total assets.

Accruals quality for each firm is measured as the absolute value of firm-level residuals ($|\varepsilon_{i,t}|$) from industry level pooled cross-sectional regression of total current accruals on lagged current and future cash flows plus the change in revenue and gross property, plant and equipment. Therefore, large (small) values of the absolute value of the firm-level residuals ($|\varepsilon_{i,t}|$) correspond to poor (good) accrual quality.

Measure of board quality: The board variables are the ratio outside directors and backgrounds of outside directors. Outside directors are defined as independent directors that have no current or potential business ties, share ownership or an investment relationship with the firm, following the Korean Securities and Exchange Act. Outside directors on board (OUTBOD) are measured by the ratio of outside directors to the board size (total number of registered directors).

In order to investigate the association between backgrounds of outside directors on board and earnings quality, financial (or accounting) professional backgrounds of outside directors are decomposed into three categories: (1) Non-expert including politician or government official, (2) Expert including CPA (or equivalent license holder), banker or finance and accounting professor and (3) Gray experts including lawyer, former employee and foreigner. Three categories of outside directors on board are measured as dummies.

Control variables: Five control variables that may affect firm value and earnings quality are family ownership, size, leverage, sales growth ratio and loss firms. Family ownership (FAM) is percentage of equity shares held by all family shareholders as of the end of the year and calculated as the total number of shares held by family shareholders divided by the total number of shares outstanding. To control for size effects, the natural logarithm of the book value of total assets (SIZE) is included as a proxy for firm size. Leverage (LEV) is the ratio of total debts to total assets. Growth (GRW) is firm's sale growth ratio, measured by annual percentage change of sales. firm with negative earnings (LOSS) is a dummy variable if.

Empirical model: The following regression equation is formulated to examine the relationship between foreign investors and earnings quality:

$$(FV / EQ)_{i,t} = \left\{ \begin{array}{l} \alpha + \beta_1(OUTBOD)_{i,t} + \beta_2(NEXP)_{i,t} + \beta_3(EXP)_{i,t} + \beta_4(GEXP)_{i,t} + \zeta_1(FAM)_{i,t} + \zeta_2(SIZE)_{i,t} \\ + \zeta_3(LEV)_{i,t} + \zeta_4(GRW)_{i,t} + \zeta_5(LOSS)_{i,t} + \sum_{t=1}^{2001-2012} \psi_t(YEAR)_t + e_{i,t} \end{array} \right.$$

Subscripts i denotes individual firms, t time period. The dependent variable FV is Tobin's Q and EQ is the absolute value of firm-level residuals ($|e_{i,t}|$) from Eq. 1. The OUTBOD is the ratio of outside directors to board size. The NEPX is a dummy variable that indicates the presence (one) or absence (zero) if at least one member of the board has worked as a politician or government official on the board. The EXP is a dummy variable that indicates the presence (one) or absence (zero) if at least one member of the board has worked

as a CPA (or equivalent license holder) or finance and accounting professor. The GEX is a dummy variable that indicates the presence (one) or absence (zero) if at least one member of the board has worked as a lawyer, former employee or foreigner. The FAM is the percentage of equity shares held by family owner including affiliated firms. Firm size (SIZE) is the natural log of the total assets. Leverage (LEV) is total debt scaled by total assets. Growth prospects (GRW) is market to book ratio of equity. Firm with negative earnings (LOSS) is a dummy variable that takes the value of one if firm's previous year's net income was negative and zero otherwise. YEAR is a time dummy.

Due to the advantage of panel data set (cross-sectional time-series), there are more reliabilities to estimate regression. The primary estimation method of the regression will be employed with Generalized Least Square (GLS) random-effects estimation.

RESULTS

Descriptive statistics: Table 1 shows the descriptive statistics for variables. As for firm value, the mean (median) value Tobin's Q is 0.976 (0.953), while accruals quality has a mean (median) value of 0.082 (0.022), respectively. The mean of outside directors on board (OUTBOD) is 0.372, which means that 32.7% of the board is outside directors on the average. As for quality of outside directors, outside directors from non-financial experts (NEXP) have mean value of 0.166. The highest mean value is outside directors from financial experts the mean value of 0.563. Outside directors from gray experts (GEXP) have the mean value of 0.422, respectively.

As this study uses panel data set, panel data analysis should be applied. As a first step, I employ an F-test to examine an availability of panel data analysis, then I operate a Hausman test to select relevant panel data analysis model. A Hausman test is employed to select fixed effect estimation and random effect estimation so that random effect

Table 1: Descriptive statistics

Parameters	Mean	Median	Max	Min	Standard deviation
OUTBOD	0.372	0.361	0.857	0.000	0.148
NEXP	0.166	0.000	1.000	0.000	0.163
EXP	0.563	0.000	1.000	0.000	0.187
GEXP	0.422	0.000	1.000	0.000	0.144
FAMILY	0.387	0.368	0.970	0.000	0.216
SIZE	25.331	21.921	33.018	13.119	1.367
LEV	0.588	0.499	29.166	0.032	0.725
GRW	1.445	0.056	288.000	0.002	5.614
LOSS	0.327	0.000	1.000	0.001	0.414
Tobin's Q	0.976	0.953	5.663	-8.520	1.435
AQ	0.082	0.022	3.856	1.35E-05	0.213

Table 2: Random effect estimation results

Dependent variables		Firm value	Earnings quality
Proxy		Tobin's Q	Accruals quality
Independent variables	OUTBOD	3.935*** (3.772)	0.191*** (4.025)
	NEXP	-2.522 (-1.089)	0.136* (1.863)
	EXP	1.029** (2.140)	0.009 (0.495)
	GEXP	-3.342 (-1.083)	-0.128 (-0.985)
	FAM	-0.597 (-0.895)	-0.078*** (-2.816)
Control variables	SIZE	0.453*** (4.558)	0.064*** (13.427)
	LEV	0.611*** (3.487)	0.008 (1.545)
	GRW	0.007 (0.055)	0.001 (0.384)
	LOSS	-0.386 (-1.218)	0.025** (2.419)
	Constant	-7.496*** (-2.483)	-1.244*** (-13.647)
Model fits	Adj R ²	0.029	0.102
F-statistics		5.097***	21.813***
F-test		3.43***	5.29***
Hausman test		5.69	7.81

*****Statistical significance at 10, 5 and 1% levels, respectively (t-statistics)

estimation is utilized in this study as a main analysis method. To get the evidence on the condition under which outside directors on boards positively affect firm value and earnings quality, the first hypothesis (H_1) is tested. The results are shown in Table 2. The OUTBOD is negative (positively) related to firm value (earnings quality). The firm value of coefficients on OUTBOD is 3.935 ($p < 0.01$), whereas accruals quality of coefficients on OUTBOD is 0.191 ($p < 0.01$), respectively. Thus, the impact of outside directors on boards on firm value and earnings quality provides mixed results. This result suggests that impact of outside directors in Korea is limited. To summarize, the monitoring role of outside directors in Korea is weak, thus outside directors limit increase firm value and earnings quality. Accordingly H_1 is partially accepted.

As suggested above, the quality or backgrounds of outside directors might differently affect earnings quality. In Table 2, the impact of NEXP on earnings quality is negative at 0.10 levels, while the relationship between firm value and NEXP is statistically insignificant. Thus, outside directors having non-financial experts would not efficiently monitor firm's management as well as not positively impact firm value. The second category, outside directors from financial experts (EXP) positively affect firm value (1.029) at 0.05 level but not statistically significant with earnings quality. Similar to Bryan *et al.*²² and Moon *et al.*¹⁹, outside directors who are

financial expert increases firm value due to their strong accounting and finance skills. However, outsider directors from financial expert do not effectively monitor firm's management. The last category of outside director is gray experts (GEXP) from lawyer, former employee or foreigner. Outside directors from gray experts (GEXP) is negatively related to both firm value (-3.342) and earnings quality (-0.128) but statistically insignificant. Namely, gray outside directors do not affect both firm value and earnings quality. It means gray outside directors do not have sufficient knowledge of the firm's management or financial reporting quality. In summary, firm value and earnings quality depends on background of outside directors so that H_2 is accepted.

DISCUSSION

This study finds that board quality is the important factor to impact firm value and earnings quality. Von Meyerinck *et al.*²³ find outside directors having industry experiences are strongly associated with high returns. Francis *et al.*²⁴ provide document that the presence of academic directors is significantly associated with higher acquisition performance and stock price informativeness. Adams and Jiang²⁵ shows empirical results that proportion of outside directors on the board is not related to firm

performance whereas the existence of financial expertise outside directors is strongly associated with financial performance impact. Consequently, in order to increase firm value and earnings quality, the appointment of outside directors should be carefully consider their quality besides on board independence.

CONCLUSION

This study investigates how quality of outside directors on board affects both firm value and earnings quality using panel dataset over thirteen years period. Overall, this study finds that outside directors on board positively affect firm value but negatively related to earnings quality. In relation to outside directors' role, outside directors in Korea do not effectively monitor firm's management. This conflicting result implies that outside directors in Korea lack independence and controlling family shareholders (or ultimate owner) still dominate boards. Taken together, with regard to the quality (or background) of outside directors on boards, outside directors having non financial experts (e.g., politician and government officer) negatively affect earnings quality. Outside directors from finance experts (e.g., CPA, banker and accounting or finance professor) increase firm value because of their knowledge. However, finance experts do not affect earnings quality. Gray experts (e.g., lawyer, former employee and foreigner) have no impact of both firm value and earnings quality.

Overall, this study contributes to the literature on corporate governance providing evidence that high firm value and earnings quality results from good corporate governance because corporate governance is a monitoring mechanism for assessing corporate responsibility and accountability through boards of directors. Thus, this study expect to provide practical evidence that board quality plays on important factor to increase firm value and earnings quality in selecting outside directors on board.

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