



LEAD DIRECTORSHIP AND FIRM PERFORMANCE

Bo Ouyang

Management Division, Great Valley School of Professional Studies, Pennsylvania State University, USA.

E-mail: bouyang@psu.edu.

KEYWORDS

Corporate governance, lead directors, firm performance, Sarbanes oxleyact.

ABSTRACT

This paper empirically explores the role of the lead directors in the corporate governance system and strives to empirically examine the association between the lead directorship and firm performance. I measure firm performance by three empirical proxies: Tobin's Q, returns on assets (ROA) and stock returns. I explore the research question on the relationship between lead directorship and firm performance in both cross-sectional and inter-temporal contexts. The sample consists of S & P 500 firms from 2001 to 2004 that have all the required financial, stock returns, and other relevant information. Overall, the empirical results of both cross-sectional and inter-temporal analyses indicate a positive association between lead directorship and firm performance.

1. INTRODUCTION

Classical agency theory suggests that in the modern firm, shareholders provide investment capital and in return they obtain the ownership of the firm. Professional managers, however, make investment decisions on the capital provided by shareholders and virtually control the operations of the firm. Human nature determines that managers maximize their personal interests rather than those of investors (Jensen and Meckling, 1976).

Board of directors is one of the most important internal corporate governance mechanisms that monitor the management and ensure that the managers are acting in the best interests of shareholders to minimize agency cost. To minimize agency costs, board of directors represents shareholders and is charged with monitoring and advising the management, as well as executive compensation and CEO turnover decisions. Board independence is one of the most crucial factors that underlie the board effectiveness since the CEO tries to capture the board of directors so as to maximize the CEO's own interests (Hermalin and Weisbach, 2003). It is generally believed that the board is not truly independent of management since CEOs generally are able to influence the nominations and tenures of independent directors. One of the features in the American corporate governance system, which is constantly criticized by corporate governance researchers, is the CEO duality problem, the problem of CEO and chairman of the board chairman (the monitor of the CEO) being the same person. Another issue inherent in the American corporate governance is the free-rider problem of independent directors. Independent directors have different backgrounds, experiences and opinions on board issues. They enjoy a fraction of benefits but bear 100% costs of their efforts to monitor the management. Hence there exists a free-rider problem for independent directors, similar to the one for common shareholders (Hermalin and Weisbach, 2003).

In the era post Sarbanes-Oxley, corporate governance has received more press ever since and lead directorship is proposed by both investors and regulators as one way to solve some corporate governance problems, especially the problem of CEO duality and the free-rider problem of independent directors, and to improve board independence and corporate governance.

The revised listing requirement for firms listed in NYSE specifically mandates a presiding director for every board: "To empower non-management directors to serve as a more effective check on management, the non-management directors of each listed company must meet at regularly scheduled executive sessions without management. A non-management director must preside over each executive session of the non-management directors... (p.39)" The new corporate governance listing requirement went into effect on June 30, 2003 and all companies listed in NYSE will have to comply with the new standards of corporate governance before January 15, 2004 (Section 303A, Corporate Governance Rules, New York Stock Exchange, 2003). NASDAQ passed a similar proposal in October 2002 that requires "regularly convened executive session of the independent directors" without presence of management and there must be an independent director to preside at the meeting, or a presiding (lead) director in those executive sessions and that the firm must disclose properly the information on the presiding director in the proxy statement.³ The new NASDAQ corporate governance proposal became effective with a company's first annual meeting occurring after January 1, 2004.

Designation of a lead director in the past decade, especially in recent years, has been gaining substantial popularity. In 1996, 27 percent of respondents to the Korn/Ferry International board study of Fortune 500 firms indicated that they had a lead director in their board. Spencer Stuart⁴, an executive recruiting firm, reports in its 20th Annual Spencer Stuart Director Survey that in 2005 a total of 94 percent of all S&P 500 boards that responded to their survey had a lead or presiding director, compared with 85 percent in 2004 and just 36 percent in 2003. Moody's 2006 report indicates that more than sixty percent of S&P 500 firms in 2005 had a lead director in their board.⁵ Other studies also document a similar trend in recent years.

The role of a lead director in the board dynamics has gained substantial attention for its potential role of improving board effectiveness since several prominent accounting scandals around the turn of the century. Despite the demand for a lead director in the board of directors from the researchers, investors and regulators, whether the designation of a lead director can enhance the board independence and board effectiveness, thus improve firm performance, is an unanswered empirical question.

In this study, I empirically explore the relationship between lead directorship and firm performance. The sample in this study consists of S & P 500 firms from 2001 to 2004 that have all the required financial, stock returns, and other relevant information. In the univariate cross-sectional analysis, I compare mean values of firm performance (Tobin's Q, ROA and stock returns) of two mutually-exclusive groups from year 2001 to year 2004 on a year-to-year basis: the set of firms that had a lead director in the board (with-LD group) and the set of firms without a lead director in the board (no-LD group), i.e., one group-mean comparison for each year from 2001 to 2004. I also compare mean values of firm performance of those two groups for the four years on a pooling basis to see the general effect of the lead directorship on firm performance. In the above cross-sectional univariate analysis, I conduct both parametric t-tests and non-parametric Wilcoxon tests to examine the group difference. In the cross-sectional multivariate analysis, I run both OLS and fixed-effect regressions to assess the relationship between lead directorship and firm performance, controlling other factors that may influence that relationship. I regress proxies of firm performance on lead directorship in the following regression model:

$$F (\text{Firm performance}) = L (\text{lead directorship}) + C (\text{control variables}).$$

The empirical results indicate that there is a positive association between the designation of lead directorship and firm performance measured by Tobin's Q, controlling other factor that may influence the relationship. The performance improvement of Tobin's Q after the addition of a lead director in the board of directors is statistically significant.

2. INSTITUTIONAL BACKGROUND OF LEAD DIRECTORSHIP

The trend of setting a lead directorship in the board of directors began in the 1980s and it became prominent in the corporate board when General Motors dismissed its CEO during a financial crisis in 1992. Throughout the 1980s, a small percentage of boards created this position primarily to empower one of their independent directors to serve as an ad hoc trouble-shooter in some critical times in response to a temporary crisis, or as a task force leader in executing a specific board initiative. The duties of the lead directors in the 1980s were not clearly defined and generally varied from leading the CEO selection and transition process and some other specific assignments of crisis-response nature. In early phases of this trend, for example, lead directors were sometimes selected for the limited purpose of leading a search for a new CEO, or for unexpected board vacancies. Other times lead directors were appointed to fulfill special board assignments, such as working closely with some outside consultants and facilitating the board with the decision-making process on a major prospective corporate events, such as merger or acquisitions, or hostile takeover bids, which could have significant impact on the company's future directions. In the 1990s when corporate governance became a prominent issue and shareholder activism picked up its momentum, lead directorship was not synonymous with crisis and stop-gap measure any more, but was rather proposed as a solution to the problem of CEO duality: the chairperson of the board of directors and CEO are the same person.

As a result of strong shareholders activism in the 1990s, investors and corporate governance researchers have increasingly called for U.S. firms to separate the chairman and CEO jobs, a model of corporate governance that is prevalent in the United Kingdom as well as in most European countries. Fama and Jensen (1983) called the CEO duality "the proverbial fox guarding the chicken coop (p.28)".

A key strength of separation of CEO and chairman in the board is that a separate chairman empowers the board versus the CEO. The board has a clear leader that is supposed to monitor and help CEO to run the firm. In general, directors in a board should focus on the functioning of the board-its agenda, the adequacy of the information provided, the quality of debate, and quality of the board decisions, such as CEO compensation and CEO turnover decisions. Monitoring of the management is the primary duty of the board and the separation of the board chairman and CEO enhances the board's oversight capabilities. CEO duality compromises the board's functioning when the CEO is charged with leading both the board and the management.

Another strength of the separation of CEO and chairman of the board is that the CEO can focus on running the company without having to pay attention to leading the board. A CEO is not distracted by the board affairs and is able to focus on maximizing shareholders' interests. The chairman of the board can focus on the board agenda and lighten the CEO's load substantially. A non-executive chairman of the board can also have "tremendous value in placating unhappy shareholders and representing the firm to governmental bodies, trading associations, employees and suppliers as well as assuming other responsibilities (page 29)" (Larker et al, 2005).

Unlike firms in U.K where more than 80% of the major listed companies have separated CEO and the chairman of the board, less than 20% of the U.S firms have their CEO and chairman of the board separated and the vast majority of U.S CEOs are opposed to separating the row roles by arguing that (1) the separation of the two posts would dilute their capability to provide effective leadership of the company; (2) the separation would create potential power struggle and power divisiveness between the two posts; (3) the non-executive chairman may be too close to the CEO to monitor the CEO and; (4) less clear-cut division of power and duties between the two posts and both CEO and the chairman may represent the firm externally for public affairs (Lorsch and Lipton, 1993).

Shareholders have increasingly viewed the lead directorship as a fast track to improved board independence in the case of CEO duality. For example, in the wake of poor financial performance in 2000, Boeing shareholders requested in the shareholder proposal that “the Board of Directors take all necessary steps to adopt a policy of requiring an independent outside Lead Director when the office of Chair and CEO are held by the same person” and claimed that a lead director “will enable independent oversight of management to improve Boeing performance”⁹. When First BanCorp announced in 2005 the establishment of a lead directorship in its board, it specifically indicated that the move was to “bring additional independence to the board of directors from bank management (when board chair and CEO are the same person)”.

Some prominent institutional investors and business associations also consistently press for the designation of lead directorship as an improvement of board independence if CEO and board Chair is the same person. For example, TIAA-CREF, one of the nation’s largest pension funds, in its 2004 Policy Statement on Corporate Governance¹¹ states: “when the board chooses not to separate the positions, it should designate a lead or presiding director who would preside over executive sessions of independent directors and, if the board determines it to be appropriate, would participate actively in the preparation of board agendas.” CalPERS, another leading institutional investor in the nation, specifically includes the designation of a lead director as one of the corporate governance rating criteria in its Corporate Governance Focus List if the CEO and board chair is not separated. Conference Board, the nation’s most respected business association, also recommends in its 2003 Commission on Public Trust and Private Enterprise that when the chairman is not an independent director or when the chairman is the CEO of the firm, then a lead independent director or a presiding director should be specifically established to improve the board’s independence.

In response to a number of major accounting scandals at the turn of the new century that resulted in a decline of public trust in accounting and financial reporting quality, the U.S Congress passed the Sarbanes-Oxley law, or SOX, in 2002. Sarbanes- Oxley law deals with many corporate governance issues, including executive compensation and the use of independent directors. Without a doubt, the Sarbanes-Oxley Act is the single most important piece of legislation affecting corporate governance, financial disclosure and the practice of public accounting since the US securities laws of the early 1930s. The purpose of the Sarbanes-Oxley law is to “improve quality and transparency in financial reporting and independent audits and accounting services for public companies, to create a Public Company Accounting Oversight Board, to enhance the standard-setting process for accounting practices, to strengthen the independence of firms that audit public companies, to increase corporate responsibility and the usefulness of corporate financial disclosure, to protect the objectivity and independence of securities analysts, to improve Securities and Exchange Commission resources and oversight and for other purposes.” One of the focus point of Sarbanes-Oxley laws is the corporate governance.

Following the Sarbanes-Oxley law passed by the U.S Congress that aims at improving corporate governance and financial reporting quality, New York Stock Exchange (NYSE) revised the listing requirement of corporate governance of firms listed in NYSE specifically mandates a presiding director for every board: "To empower non- management directors to serve as a more effective check on management, the non- management directors of each listed company must meet at regularly scheduled executive sessions without management...A non-management director must preside over each executive session of the non-management directors...(p.39)" The new corporate governance listing requirement went into effect on June 30, 2003 and all companies listed in NYSE will have until the earlier of their first annual meeting after January 15, 2004 or October 31, 2004, to comply with the new standards of corporate governance (Section 303A, Corporate Governance Rules, New York Stock Exchange, 2003).

NASDAQ passed a similar proposal in October 2002 that requires "regularly convened executive session of the independent directors" without presence of management and there must be an independent director to preside at the meeting, or a presiding (lead) director in those executive sessions and that the firm must disclose properly the information on the presiding director in the proxy statement. The new NASDAQ corporate governance proposal became effective with a company's first annual meeting occurring after January 1, 2004.

3. METHODOLOGY AND DATA

3.1 Measures of Firm Performance

I measure firm performance by three empirical proxies: Tobin's Q, returns on assets (ROA) and stock returns, which are the most widely used firm performance proxies. All of the above three empirical measures have their own shortcomings as far as empirical validity is concerned, but they are highly correlated with each other such that "the qualitative nature of the results (of the empirical studies) should not be affected by the choice of the proxy" (Mehran, 1995).

Tobin's Q is named after the Nobel prize winner James Tobin from Yale University and is calculated as the ratio of market value to asset replacement value (Yermack, 1996).

Tobin's Q is calculated as:

$$\text{Tobin's Q} = (\text{Market value of assets}) / (\text{Replacement cost of assets})$$

Return on assets (ROA) indicates how efficient management is at using its assets to generate earnings. Calculated by dividing a company's annual earnings by its total assets, ROA is generally displayed as a percentage. Sometimes this is referred to as "return on investment", an indicator of how profitable a company is:

$$\text{Return on assets (ROA)} = (\text{Net income}) / (\text{Total assets})$$

Stock returns are measured as buy-and-hold returns compounded during the whole fiscal year. Financial data is from S&P Compustat database and insider equity ownership data is from S&P ExecuComp database, while data of stock returns is from Center for Research in Security Prices (CRSP).

3.2 Univariate Analysis

My sample consists of S & P 500 firms from 2001 to 2004 that have all the required financial and stock returns information. In the univariate cross-section analysis, I compare mean values of firm performance (Tobin's Q, ROA and stock returns) of two mutually-exclusive groups from

year 2001 to year 2004 on a year-to-year basis: the set of firms that had a lead director in the board (with-LD group) and the set of firms without a lead director in the board (no-LD group), i.e., one group-mean comparison for each year from 2001 to 2004. I also compare mean values of firm performance of those two groups for the four years on a pooling basis to see the general effect of the lead directorship on firm performance. In the above cross-sectional univariate analyses, I conduct both parametric t-test and non-parametric Wilcoxon test to test the group difference. If the designation of a lead director in the board of directors improves the board independence and the board monitoring effectiveness, I predict that overall, the firm performance is significantly better for the groups of with-LD than the group of no-LD for both the year-by-year and the pooling univariate analyses.

3.3 Multivariate Analysis

I use both OLS and fixed effect regressions to estimate directly the relationship between lead directorship and firm performance, following Yermack (1996). I regress proxies of firm performance on lead directorship, controlling other factors influencing firm performance.

$$F (\text{Firm performance}) = L (\text{lead directorship}) + C (\text{control variables}).$$

Where: F is proxies of firm performance: either Tobin's Q, return on assets (ROA), or stock returns; L is an indicator variable that is equal to one if there is a lead director in the board, zero otherwise; C comprises of a set of control variables based on prior research.

In multivariate analysis, the regression model is:

$$\text{Firm performance (Tobin's Q, ROA, stock returns)} = a_1\text{LEAD} + a_2\text{BSIZE} + a_3\text{DUALITY} + a_4\text{FOUNDING} + a_5\text{OUTSIDE} + a_6\text{DIROWNLI} + a_7\text{DIROWNIT5} + a_8\text{DIROWN5T20} + a_9\text{SIZE} + a_{10}\text{BM} + a_{11}\text{LEVERAGE} + a_{12}\text{SEGMENT} + a_{13}\text{DELAWARE} + a_{14}\text{ROA} + a_{15}\text{LAGROA} + a_{16}\text{AGE} + \text{INDUSTRY} + \text{YEAR}$$

LEAD is an indicator variable that has the value of one if the firm had a lead director in the board, zero otherwise. I include some corporate governance variables related to board structure and independence as control variables, based on previous research on the relationship between firm performance and those corporate governance variables. BSIZE refers to the log of board size. Yermack (1996) suggests that board size is inversely associated with firm performance measured by Tobin's Q and return on assets (ROA) and thus I expect the coefficient of BSIZE to be negative. DUALITY is a dummy variable that is equal to one if the position of CEO and chairperson of the board of directors is the same person, and zero otherwise. The relationship between CEO duality and firm performance is not conclusive. Some studies (Yermack, 1995) indicate that firms with CEO duality have experienced inferior firm performance, while others (Berg and Smith, 1978; Larker et al, 2005) fail to identify any relationship. Thus I do not have any prediction on the sign of DUALITY.

FOUNDING is an indicator variable that is equal to one if the CEO is the founding CEO, zero otherwise. Empirical studies, such as DeAngelo et al. (2000), document that the founding CEOs in public firms extract private rents through special dividends, excessive compensations, and with related-party transactions, and thus firm performance is inversely related to the founding CEO status. I therefore predict a negative effect of FOUNDING on firm performance proxied by Tobin's Q. Another board characteristic is the equity ownership by all the insider directors in the board. Classical agency theory (Jensen and Meckling, 1976) suggests that equity ownership can properly align the interests of the management with those of shareholders and empirical studies also provide evidence of it. Morck et al (1988) and McConnell and Servaes (1990) find evidence

of a curvilinear relationship between firm performance proxied by Tobin's Q and the insider equity ownership: Tobin's Q initially increases as insider equity ownership increases up to 5 percent and then falls as insider ownership increases to 25 percent, after which the Tobin's Q increases again. Consistent with Panasian et al. (2005), I divide insider equity ownership into four categories since the relationship between insider equity ownership and firm performance is curvilinear: if the insider as a group owns less than 1 percent of the total outstanding shares (DIROWN1), between 1 and 5 percent (DIROWN1T5), between 5 and 20 percent (DIROWN5T20) and over 20 percent (DIROWN20). Note that in the regression model, DIROWN20 is subsumed in the intercept term and is thus not included in the regression model. Based on previous research, I predict DIROWN1T5 to be positive, DIROWN5T20 to be negative. I do not have any prediction on DIROWN1.

OUTSIDE is the percentage of outside directors in the board of directors. As discussed in section 2.6.2, the empirical studies have not reached a conclusive agreement on the relationship between the percentage of outside directors and firm performance. Therefore, I do not have expectation of the sign of the coefficient of OUTSIDE. Following previous research (Morck et al, 1988; Yermack, 1996), I include other control variables in multiple regressions: firm size, growth opportunities, investment opportunities, leverage ratio and firm age. SIZE is the firm size, as measured by the log of total assets. The proxy for growth opportunities is BM (book to market ratio). Following Gompers et al (2003), BM is defined as the ratio of book value of common equity to market value of common equity. I also use capital expenditure scaled by total assets as an alternative proxy for growth opportunities in the robustness test. LEVERAGE is defined as long-term debt to total assets. SEGMENT is the number of business segments reported in COMPUSTAT. Lang and Stultz (1994) document that diversified firms have lower Tobin's Q values and therefore I predict a negative sign for the coefficient of SEGMENT.

Following Daines (2001), I control a firm's profitability and include return on assets (ROA) and the ROA of prior year (LAGROA). Return on assets (ROA) is defined as operating income divided by lagged total assets. Daines (2001) argues that a firm's profitability positively impacts a firm's Tobin's Q and therefore I expect a positive sign for both ROA and LAGROA. DELAWARE is an indicator variable that is equal to one if the firm was incorporated in the state of DELAWARE, zero otherwise. Daines (2001) presents evidence that Delaware corporate law improves firm value and thus I expect a positive sign for the variable of DELAWARE. AGE is the log of total fiscal quarters a firm has existed in Compustat, consistent with Brown and Caylor (2006). The longer the firm age, the less business risk and the more mature the firm is and the higher Tobin's Q. I expect therefore a positive sign for the variable of AGE. Finally, I use dummy variables (INDUSTRY and YEAR) to control industry (two-digit SIC) and time period effect in the multiple regression.

4. RESULTS

4.1 Descriptive Statistics

Table 1 reports the sample derivation process. Starting from financial data from Compustat, I lose one hundred and twenty eight firms due to incomplete financial data or no-coverage of Compustat database. I require at least two hundred fifty trading days for each firm to calculate the fiscal year stock returns and I lose another fifty six firms due to incomplete returns data or no-coverage of CRSP database. Information of board characteristics is collected from firm proxy statements. I lose ten firms due to incomplete board or equity ownership information. The total sample size is 306 firms and 1,224 firm years for four years.

Table1:SampleDerivation

Initial sample: S&P500 (year2001-2004)	500 firms
Compustat (incomplete financial data or no-coverage)	(128 firms)
CRSP(incomplete returns data or no-coverage)	(56 firms)
Proxy statements (incomplete board or ownership information)	(10 firms)
Final sample	306 firms

Out of the 306 firms in the S&P 500 from 2001 to 2004 that have complete financial and stock returns information, only thirteen firms, or 4.3% of my sample, disclosed detailed definitions and duties of the lead directorship in their board of directors.

4.2 Univariate Results

Appendix 1 presents the empirical results of the cross-sectional analyses. Panel A is the yearly distribution of lead directors for the 1,224 firm years. For the year of 2001, 82 firms, or 26% of the 306 firms in the sample had a lead director in the board. In 2002, 34 firms added a lead director into the board of directors, boosting the total number of firms with a lead director to 116, or 38% of the total 306 firms. The year of 2003 when the regulatory change took effect witnessed a drastic increase of number of firms that added a lead director into the board: 109 firms introduced a lead director and the number of firms that had a lead director in the board in 2003 increased to 225, or 74% of the 306 firms in the sample. Fifty more firms designated a lead director in the board in 2004 and the total number of firms with a lead director in the board reached 275 or 90% out of 306 firms. Altogether, eighty two firms have always had a lead director in the board for each of the four years from 2001 to 2004, while thirty one firms did not have a lead director for any of the four years. Those eighty two firms constitute the always-designation group and the thirty firms comprise the never-designation group in the inter-temporal analyses.

Panel B of Appendix 1 examines the Tobin's Q difference between the firms with a lead director in the board and those without for each of the four years from 2001 to 2004. For each of the four years, firms with a lead director in the board had consistently higher mean Tobin's Q and t-tests suggest that the differences are all statistically significant at the conventional five percent significance level. I also pool Tobin's Qs of all four years and conduct an overall mean difference t-test. The overall mean and median differences for the all four years also indicate that firms with a lead director in the board have statistically significant higher Tobin's Q. The less powerful non-parametric Wilcoxon median tests are able to find significant differences of Tobin's Q for three of the four years from 2001 to 2004.

Panel C of Appendix 1 examines the returns on assets (ROA) difference between the firms with a lead director in the board and those without for each of the four years from 2001 to 2004. Neither the t-tests nor the non-parametric Wilcoxon tests find any statistically significant difference between those two groups except a t-test of group mean difference for the year of 2002, which is significant at 0.1 level. Thus, in terms of returns on assets (ROA), there is no univariate cross-sectional evidence that firms with a lead director in the board outperform the group of firms without.

Panel D of Appendix 1 examines the stock market performance difference between the firms with a lead director in the board and those without for each of the four years from 2001 to 2004. For three of the four years, firms with a lead director in the board had consistently higher mean stock returns and t-tests suggest that the differences are all statistically significant at the conventional five percent significance level. The non-parametric median tests also confirm the similar pattern.

In the tests of pooled four-year stock returns, both the t-test of the group means and the non-parametric Wilcoxon median test are able to find significant differences of stock returns.

Therefore, the univariate results indicate that firms with a lead director in the board generally outperformed those without in terms of Tobin's Q and stock returns, but not ROA.

4.3 Multivariate Results

Appendix 2 provides empirical results of the multiple regressions in which firms performance measures are regressed on the lead directorship and other factors that may impact the relationship between firm performance and lead directorship. Panel A is the empirical result of the regression with Tobin's Q as the dependent variable. The coefficient of LEAD, an indicator variable equal to one if a firm had a lead director and zero otherwise, is positive and statistically significant in both of the basic OLS model ($a_1=0.01$, $p<0.1$) and the fixed effect model (FE model hereafter) that controls the time-invariant factors ($a_1=0.01$, $p<0.1$), indicating that there is a positive relationship between lead directorship and firm performance measured by Tobin's Q, after controlling other factors that may influence the relationship of interest.

Consistent with previous research, the result suggests that firms with a larger board size tend to have a lower Tobin's Q ($a_2= -0.6$ in OLS and -0.5 in the FE model respectively, $p<0.01$), firms with a founding member as CEO have a lower Tobin's Q ($a_4=-0.01$ in OLS and -0.02 in the FE model respectively, $p<0.01$), firms with a higher percentage of outside directors have a higher Tobin's Q ($a_5=0.19$ in OLS and 0.14 in the FE model respectively, $p<0.01$), firms with higher growth opportunities have higher Tobin's Q ($a_{10}= -0.15$ in OLS and -0.24 in the FE model respectively, $p<0.01$), firms with more business segments have lower Tobin's Q ($a_{12}= -0.09$ in OLS and -0.08 in the FE model respectively, $p<0.01$), firms incorporated in the state of Delaware have higher Tobin's Q ($a_{13}=0.29$ in OLS and 0.46 in the FE model respectively, $p<0.01$), and firms with bigger firm age and thus with less business risk have higher Tobin's Q ($a_{16}=0.06$ in OLS and 0.07 in the FE model respectively, $p<0.01$). Consistent with Morck et al (1988) and McConnell and Servaes (1990), I find a curvilinear relationship between insider equity ownership and Tobin's Q: firms having an insider ownership of less than one percent and less than five percent enjoy a higher Tobin's Q ($a_6=0.09$ and $a_7=0.02$ in OLS, and $a_6=0.08$ and $a_7=0.06$ in the FE model respectively, $p<0.01$). However, when the insider equity ownership is between five percent and twenty percent, there is a negative association between insider equity ownership and Tobin's Q ($a_8= -0.05$ in OLS and -0.07 in the FE model respectively, $p<0.01$), due to the more entrenched position the CEO has (Morck et al, 1988; McConnell and Servaes, 1990). The adjusted R squares are 0.34 for the basic OLS model and 0.37 for the fixed effect model respectively.

Panel B presents the empirical result of the regression with ROA as the dependent variable. The coefficient of LEAD, an indicator variable equal to one if a firm had a lead director and zero otherwise, is positive but not statistically significant in either of the basic OLS model ($b_1=0.01$) or the fixed effect model ($b_1=0.08$). Consistent with previous research, the result suggests that firms with a larger board size tend to have a lower ROA ($b_3= -0.1$ in OLS and -0.02 in the FE model respectively, $p<0.01$), firms with a founding member as CEO have a lower ROA ($b_4= -0.09$ in OLS and -0.08 in the FE model respectively, $p<0.01$), firms with a higher percentage of outside directors have a higher ROA ($b_5=0.03$ in OLS and 0.05 in the FE model respectively, $p<0.01$), firms with higher growth opportunities have higher ROA ($b_{10}= -0.03$ in OLS and -0.02 in the FE model respectively, $p<0.01$), and firms with bigger firm age and thus with less business risk have higher ROA ($b_{13}=0.01$ in OLS and 0.03 in the FE model respectively, $p<0.01$). Consistent the regression model with Tobin's Q as the dependent variable, I find a curvilinear relationship

between insider equity ownership and accounting performance: firms having an insider ownership of less than one percent and less five percent but greater than one percent enjoy a higher ROA ($b_6=0.02$ and $a_7=0.09$ in OLS, and $b_6=0.08$ and $b_7=0.1$ in the FE model respectively, $p<0.01$). However, when the insider equity ownership is between five percent and twenty percent, there is a negative association between insider equity ownership and ROA ($b_8=-0.01$ in OLS and -0.09 in the FE model respectively, $p<0.01$). The adjusted R squares are 0.28 for the basic OLS model and 0.31 for the fixed effect model respectively.

Panel C presents the empirical result of the regression with stock returns as the dependent variable. The coefficient of LEAD, an indicator variable equal to one if a firm had a lead director and zero otherwise, is positive and statistically significant in both of the basic OLS model ($c_1=0.01$, $p<0.1$) and the fixed effect model that controls the time-invariant factors ($c_1=0.01$, $p<0.1$), indicating that there is a positive relationship between lead directorship and firm performance measured by fiscal annual stock returns, controlling other factors that may influence the relationship of interest. Consistent with previous research, the result suggests that firms with a larger board size tend to have a lower stock returns ($c_3=-0.9$ in OLS and -0.04 in the FE model respectively, $p<0.01$), firms with a founding member as CEO have a lower stock returns ($c_4=-0.09$ in OLS and -0.07 in the FE model respectively, $p<0.01$), firms with a higher percentage of outside directors have a higher stock returns ($c_5=0.06$ in OLS and 0.07 in the FE model respectively, $p<0.01$), and firms with bigger firm age and thus with less business risk have higher stock returns ($c_{12}=0.09$ in OLS and 0.08 in the FE model respectively, $p<0.01$). Consistent the regression model with Tobin's Q and ROA as the dependent variables, I find a curvilinear relationship between insider equity ownership and accounting performance: firms having an insider ownership of less than one percent and less five percent but greater than one percent enjoy a higher stock returns ($c_6=0.1$ and $a_7=0.13$ in OLS, and $c_6=0.12$ and $c_7=0.09$ in the FE model respectively, $p<0.01$). However, when the insider equity ownership is between five percent and twenty percent, there is a negative association between insider equity ownership and stock returns ($c_8=-0.06$ in OLS and -0.02 in the FE model respectively, $p<0.01$). The adjusted R squares are 0.21 for the basic OLS model and 0.19 for the fixed effect model respectively.

In summary, the evidence from cross-sectional analyses indicates that there exists a positive relationship between lead directorship and firm performance measured by Tobin's Q and stock returns.

5. CONCLUSION

In summary, the empirical results indicate that there is a positive association between the designation of lead directorship and firm performance measured by Tobin's Q and stock returns, but not accounting performance measured by return on assets, controlling other factor that may influence the relationship. The performance improvement of Tobin's Q and stock returns after the addition of a lead director in the board of directors is statistically significant.

The results are not surprising, given the inherent difference between the three empirical proxies of firm performance and the sample in the study. Tobin's Q is calculated as the ratio of market value to asset replacement value (Yermack, 1996). If Tobin's q is greater than 1.0, then the market value is greater than the value of the company's recorded assets, which suggests that the market value reflects some unmeasured or unrecorded assets of the company. Therefore, Tobin's Q measures better the market expectation (Yermack, 1996) and so do stock returns that hinge on the expectation of future cash flow. The positive association between the designation of lead directorship and Tobin's Q and stock returns indicates that the introduction of a lead director in the

board has impact on the future cash flow and thus leads to very high expectation of future performance. In other words, Tobin's Q and stock returns are able to promptly pick up market expectation of future performance. Return on assets, however, indicates how efficient management is using their assets to generate earnings for the current period. Lead directorship may not instantly improve accounting performance and it may take several years for the impact of the lead directorship to be reflected on the accounting performance. The sample consists of only four-year data, in which there is only one year data after the regulatory requirement came into effect. It is therefore not surprising to observe the insignificant influence of the lead directorship on accounting performance given the data structure in this dissertation. A longitudinal study with multiple years of data may be better suited to examine the effect on accounting performance.

REFERENCES

- Berg, S. and Smith, S. (1978). CEO & Board Chairman: A quantitative study of dual versus unitary board leadership. *Directors & Boards*, Spring 34-39
- Charan, Ram (1995): The Case Against the Lead director, *Directorship*, Vol. 21, Issue 8, p6, 1995.
- DeAngelo, H., DeAngelo, L., and Skinner, D. (2000).Special dividends and the evolution of dividend signaling.*Journal of Financial Economics*, 57, 309-354.
- Daines, R., (2001). Does Delaware law improve firm value? *Journal of Financial Economics* 62, 525-558.
- Fama, E.F., and Jensen, M.C. (1983). Separation of ownership and control. *Journal of Law and Economics*, 26, 301-325.
- Gompers, P., Ishii, J., and Metrick, A. 2003.Corporate governance and equity prices. *The Quarterly Journal of Economics*.Febuary 2003, 107-155.
- Hermalin, B and Weisbach, M. (1998).Endogenously chosen boards of directors and their monitoring of the CEO.*American Economic Review* (88) 96-118.
- Hermalin, B and Weisbach, M, (2003): Boards of Directors as an Endogenously Determined Institution: A Survey of the Economic Literature. *FRBNY Economic Policy Review*, April 2003.
- Jensen, M., and Meckling, W. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3, 305-360.
- Lang, L., and Stulz, R. 1994. Tobin's q, corporate diversification, and firm performance. *Journal of Political Economy* (102) 1248-1280.
- Larcker, D, Richardson, S and Tuna, I, 2005: Ratings Add Fire to the Governance Debate, *Financial Times*, May 26th, 2005.
- Mehran, H. 1995. Executive compensation structure, ownership, and firm performance. *Journal of Financial Economics* 38, 163-184.
- Morck, R., Shleifer, A., and Vishny,R., 1988. Management ownership and market valuation: An empirical analysis. *Journal of Financial Economics*, 20, 293-315.
- McConnell, J., Servaes, H., 1990. Additional evidence on equity ownership and corporate value.*Journal of Financial Economics* 27, 595-612.
- Panasian, C., Prevost, A., and Bhabra, H. 2005. Board composition and firm performance: The case of the Dey report and publicly listed Canadian firms. Working paper.Texas Tech University.
- Yermack, D. (1996). Higher market valuation of companies with a small board of directors. *Journal of Financial Economics* (40) 185-211.

Appendix 1: Descriptive Statistics (Yearly Distribution)**Panel A: Lead Directors**

Year	Without Lead Director		Total Firm (C)	Percent (A/C)	Changes
	With Lead Director (A)	(B)			
2001	82	224	306	0.26	16
2002	116	190	306	0.38	34
2003	225	81	306	0.74	109
2004	275	31	306	0.9	50
All four years	82	31	306	0.26	209

Panel B: Tobin's Q

Year	Mean			Median		
	With LD	W/o LD	Difference	With LD	W/o LD	Difference
2001	2.18	2.12	0.06**	2.03	1.97	0.06**
2002	2.01	1.89	0.12***	1.93	1.92	0.01
2003	2.33	2.22	0.11***	2.21	2.18	0.03**
2004	2.38	2.30	0.08**	2.24	2.20	0.04**
All years	2.35	2.26	0.09***	2.19	2.16	0.03**

Panel C: ROA

Year	Mean			Median		
	With LD	W/o LD	Difference	With LD	W/o LD	Difference
2001	0.09	0.08	0.01	0.08	0.06	0.02
2002	0.03	0.02	0.01	0.02	0.01	0.01
2003	0.11	0.1	0.01	0.1	0.1	0
2004	0.14	0.11	0.03**	0.11	0.1	0.01
All Years	0.11	0.09	0.01	0.09	0.07	0.01

Panel D: Stock returns

Year	Mean			Median		
	With LD	W/o LD	Difference	With LD	W/o LD	Difference
2001	0.07	0.06	0.01	0.06	0.05	0.01
2002	-0.01	-0.03	0.02***	-0.01	-0.03	0.02**
2003	0.11	0.08	0.03**	0.09	0.04	0.05***
2004	0.15	0.07	0.08***	0.12	0.05	0.07***
All Years	0.13	0.07	0.06***	0.11	0.05	0.06***

***: significant at .01 level; **: significant at .05 level; *: significant at .1 level, all two-tail;

Appendix 2: Multiple Regression

Panel A

$$\text{Tobin's } Q = a_0 + a_1\text{LEAD} + a_2\text{BSIZE} + a_3\text{DUALITY} + a_4\text{FOUNDING} + a_5\text{OUTSIDE} + a_6\text{DIROWNLI} + a_7\text{DIROWN1T5} + a_8\text{DIROWN5T20} + a_9\text{SIZE} + a_{10}\text{BM} + a_{11}\text{LEVERAGE} + a_{12}\text{SEGMENT} + a_{13}\text{DELAWARE} + a_{14}\text{ROA} + a_{15}\text{LAGROA} + a_{16}\text{AGE}$$

Model	N		a ₀	a ₁	a ₂	a ₃	a ₄	a ₅	a ₆	a ₇	a ₈	a ₉	a ₁₀	a ₁₁	a ₁₂	a ₁₃	a ₁₄	a ₁₅	a ₁₆	AdjR ²
OLS	1,124	Coefficient	0.02	0.01	-0.6	-0.03	-0.01	0.19	0.09	0.02	-0.05	-0.12	-0.15	0.38	-0.09	0.29	0.78	0.03	0.06	0.34
		t-value	2.69	1.67	-3.4	-0.2	-3.7	2.58	2.76	2.17	-3.7	-0.75	-1.98	0.48	-2.98	3.17	2.94	2.76	2.85	
		Significance	***	*	***		***	***	***	**	***		**		***	***	***	***	***	***
FE	1,124	Coefficient	0.03	0.01	-0.5	-0.02	-0.02	0.14	0.08	0.06	-0.07	-0.32	-0.24	0.28	-0.08	0.46	0.07	0.01	0.07	0.37
		t-value	3.22	1.63	-2.9	-0.1	-2.5	2.32	2.47	2.32	-3.2	-2.18	-3.29	3.98	3.18	2.48	2.48	2.36		
		Significance	***	*	***		***	**	**	**	***		**		***	***	***	**	**	**

Panel B

$$\text{ROA} = b_0 + b_1\text{LEAD} + b_2\text{BSIZE} + b_3\text{DUALITY} + b_4\text{FOUNDING} + b_5\text{OUTSIDE} + b_6\text{DIROWNLI} + b_7\text{DIROWN1T5} + b_8\text{DIROWN5T20} + b_9\text{SIZE} + b_{10}\text{BM} + b_{11}\text{LEVERAGE} + b_{12}\text{SEGMENT} + b_{13}\text{AGE}$$

Model	N		b ₀	b ₁	b ₂	b ₃	b ₄	b ₅	b ₆	b ₇	b ₈	b ₉	b ₁₀	b ₁₁	b ₁₂	b ₁₃	AdjR ²
OLS	1,124	Coefficient	0.18	0.01	-0.1	-0.6	-0.09	0.03	0.02	0.09	-0.01	0.08	-0.03	0.29	-0.19	0.01	0.28
		t-value	0.7	-2.6	-0.4	-2.8	2.35	2.82	3.23	-3.1	2.1	-2.01	0.14	-0.18	3.1		
		Significance		***	***		***	**	***	***	***	**	**		***		
FE	1,124	Coefficient	0.13	0.08	-0.02	-0.8	-0.08	0.05	0.08	0.1	-0.09	0.06	-0.02	0.13	-0.21	0.03	
		t-value	3.2	1.03	-3	-0.3	-3.1	2.58	2.19	2.81	-3.3	3.03	-2.38	0.09	-0.82	3.2	
		Significance	***		***		***	***	**	***	***	***	**		***		

Panel C

$$\text{RET} = c_0 + c_1\text{LEAD} + c_2\text{BSIZE} + c_3\text{DUALITY} + c_4\text{FOUNDING} + c_5\text{OUTSIDE} + c_6\text{DIROWNLI} + c_7\text{DIROWN1T5} + c_8\text{DIROWN5T20} + c_9\text{SIZE} + c_{10}\text{BM} + c_{11}\text{AGE}$$

Model	N		C ⁰	C ¹	C ²	C ³	C ⁴	C ⁵	C ⁶	C ⁷	C ⁸	C ⁹	C ¹⁰	C ¹¹	Adj R ²
OLS	1,124	Coefficient	0.34	0.01	-0.09	-0.4	-0.09	0.06	0.1	0.13	-0.06	0.45	-0.11	0.09	0.21
		t-value	3.24	2.07	-2.2	-0.9	-2.4	3.19	2.8	3.3	-3.2	0.48	-2.75		
		Significance	***	**	**	**	***	***	***	***	***	***	***	***	***
FE		Coefficient	0.83	0.01	-0.04	-0.8	-0.07	0.07	0.12	0.09	-0.02	0.31	-0.13	0.08	0.19
		t-value	3.03	3.14	-2.5	-0.1	-2.5	2.45	2.89	2.45	-3.6	0.22	-1.91	3.2	
		Significance	***	***	**		**	**	***	**	***	**	**	***	

***: significant at .01 level; **: significant at .05 level; *: significant at .1 level, all two-tail;

LEAD is an indicator variable that has the value of one if the firm had a lead director in the board, zero otherwise. BOARD SIZE is the size of the board of directors; DUALITY is a dummy variable that is equal to one if the position of CEO and chairperson of the board of directors is the same person, and zero otherwise; FOUNDER is an indicator variable that is equal to one if the CEO is the founding CEO, zero otherwise; OUTSIDE is the percentage of outside directors in the board of directors; DIROWNLI is an indicator variable that is equal to one if the insider as a group owns less than 1 percent of the total outstanding shares, between 1 and 5 percent (DIROWN1T5), and between 5 and 20 percent (DIROWN5T20); SIZE is total assets in millions (Compustat item 6); BM is the book to market ratio (Compustat item 60/item 199*item 25); LEVERAGE is long-term debt divided by total assets (item 9/item 6); SEGMENT is the number of business segments reported in Compustat; PEXEOWN is the percentage of the shares owned by the insiders; DELAWARE is a dummy variable equal to one if the firm is incorporated in Delaware, zero otherwise; AGE is the number of quarters that a firm has existed in Compustat; ROA is the returns on assets (item 178/average item 6); Tobin's Q is calculated as (Market value of assets) / (Replacement cost of assets), or (Compustat item 6+ item 199* item 25- item 60-item 74/ (item 6)); RETURNS is the fiscal year stock returns.