Does Board Independence Matter? Evidence from New Zealand

Hardjo Koerniadi[1] & Alireza Tourani-Rad[1]

Abstract

This paper examines the effects of the presence of independent directors on firm value using both market-based performance measures (Tobin's Q ratio and EVA) and accounting-based ratios (ROA and ROE). We find that, instead of adding value, independent directors in New Zealand negatively affect firm value. We also find that, consistent with stewardship theory, independent directors have a positive effect on firm value only when they are in the minority. These findings are important given the increasing trend toward independence in corporate boards around the globe and suggest that board independence may not generally be suitable for countries where managers are considered as active partners along with other stakeholders in companies.

Keywords: Independent directors, firm performance, stewardship theory, EVA

JEL Classification: G30, M40.

[1]Auckland University of Technology
Email: hkoernia@aut.ac.nz

Introduction

In response to major corporate failures in the last decade or so, public authorities around the world have introduced new governance codes and guidelines. Among other aspects, they focus on board composition and conduct, particularly emphasising the independence of boards. Independent directors, considered to be the "custodians of the governance process," are assumed to have less or no conflicts of interest in the companies they serve. The justification is that board members with a connection to the company or its management do not assess company performance impartially and might even collude with managers, as they could have a vested interest in the company's business dealings. The presence of independent directors on boards is supposed to add more value, as these directors impartially oversee the executive directors. This concept seems to have been accepted as conventional wisdom around the world. Many corporate governance advocates suggest that a board should be made up of all or a majority of independent directors, while others suggest that a board should include a balance of independent and executive directors (see for example, American Law Institute 1994; Business Roundtable 2010; Council of Institutional Investors 2011; Financial Markets Authority 2004). Although the use of independent directors has become increasingly accepted, especially in Anglo-American countries where the stock market performance of listed companies attracts a great deal of interest from the public, some scholars question its rationale (e.g., Bhagat & Black 2002; Black, De Carvaho & Gorga 2010; Chhaochharia & Grinstein 2007; Coles, Daniel & Naveen 2008; Donaldson & Davis 1991; Duchin, Matsusaka & Ozbas 2010; Hermalin & Weisbach 1991; Muth & Donaldson 1998; Nicholson & Kiel 2007). These critics argue that monitoring by independent directors can be ineffective. They point out that, while independent board members could be independent in their evaluation of corporate performance, they usually have much less knowledge of the company and their judgment is largely based on (biased) information provided by the managers. Moreover, while the profile of independent board members is clearly defined by law and regulations, there is a small pool of talented independent directors available in many smaller countries, ultimately forcing corporations to have either time-constrained skilled independent board members who hold multiple positions or less competent independent directors on their boards. In recent years, a growing trend in hiring outside professionals has prompted researchers to investigate whether their presence actually has a positive impact on corporate performance.

The existing literature does not demonstrate a definitive relationship between board composition and corporate performance. Empirical evidence on the association between the presence of independent directors and firm performance is equivocal. Independent directors, for example, have been reported to have a positive effect on firm performance in several European countries (Krivogorsky 2006), New Zealand (Hossain, Prevost & Rao 2001), Korea (Black Jang & Kim 2006), Scandinavia (Oxelheim & Randoy 2003) and Chile (Lefort & Urzua 2008). However, except for small firms (Daily & Dalton 1992), the presence of independent directors on corporate boards in the US has been observed to have a negative impact on firm performance (Agrawal & Knoeber 1996; Bhagat & Black 2002; Dalton et al. 1998; Hermalin & Weisbach 1991; Yermack 1996). Similar results have been documented for Canadian firms (Klein, Shapiro & Young 2004, 2005), Australian firms (Lawrence & Stapledon, 1999) and Brazilian firms (Black et al. 2010). The negative effect of independent directors on firm performance certainly contradicts the accepted corporate governance norms that favor board independence. Additionally, there are several other studies reporting that independent directors have no significant effect on firm performance whatsoever (see, for example, Adjaoud, Zeghal & Andaleeb 2007; Pham, Suchard & Zein 2008). More recently, Erkens, Hung and Matos (2010) observed that board independence was negatively correlated

with accumulated stock returns during the 2007 financial crisis, whereas Duchin et al. (2010) reported that outside directors can increase (decrease) firm value when information cost is low (high). All of these studies suggest that the verdict on the usefulness of independent directors is far from settled and that we cannot develop a generalised conclusion based on international evidence.

In this paper, we investigate if "board independence matters" using data from New Zealand, which has a much smaller capital market in both absolute and relative (to its GDP) terms as compared with many other developed markets. We believe that the New Zealand market provides an interesting setting to explore this issue for several reasons. First, the proportion of independent directors on New Zealand firm boards has been increasing since the introduction of the New Zealand Corporate Governance Best Practice Code in October 2003 to such an extent that currently independent directors form the majority on corporate boards. A previous study of New Zealand covered a period when the concept of independence had just been introduced and independent board members were a minority. It is necessary to investigate a more recent period reflecting more recently accepted practices. Second, listed New Zealand firms have quite a high ownership concentration. As the impact of independent directors on firm performance in highly concentrated ownership firms has still not been settled (Klein et al. 2005, Krivogorsky 2006; Lefort & Urzua 2008), the results from our study are expected to contribute to the debate in the literature. Third, a recent study has contended that directors of New Zealand firms put less weight on their monitoring role and are evolving towards a more collaborative role with management (Anderson, Melanson & Maly 2007). These changes in the directors' views and practices are more consistent with stewardship theory than with agency theory. In addition to traditionally employed measures such as Tobin's Q and accounting performance measures, we further contribute to the literature by employing Economic Value Added (EVA) as an alternative performance measure to examine the effects of independent directors on firm value.

Our results generally indicate that, instead of adding value, independent directors in New Zealand have a negative impact on firm values which is in line with recent findings in this literature (Black et al. 2010; Chhaochharia & Grinstein 2007; Duchin et al. 2010) This finding is important given the increasing trend of independence in New Zealand firm boards and suggests that board independence, which is considered to be a better monitoring function, may not be suitable for firms in this country.

The remainder of the paper is organised as follows. The next section briefly reviews the relevant literature linking independent directors to firm performance and develops our hypotheses. The third section describes the methodology and data. The fourth section discusses the results and the fifth shows the robustness of the results while the final section concludes.

Literature Review and Hypothesis Development

Why do independent directors in different countries have different effects on firm performance? It is well known that corporate performance and its relationship to the board need to be studied within the broader picture of the corporate structure and governance of a country. One possibility is the institutional and corporate structure differences among the countries studied. For example, the level of ownership concentration may influence the effectiveness of independent directors in monitoring firm performance (Lawrence & Stapledon 1999). This is an important issue to be considered in the present study. Healy (2003) documented that institutional ownership is approximately 76% in New Zealand, which is much higher than in the US or the UK, where institutional ownership is 39.8% and 60.8%, respectively. The high level of ownership concentration in New Zealand could act as a

substitute for the weak legal protection of investors and its less developed capital market (Mikkelson & Partch 1997; Shleifer & Vishny 1997). Highly concentrated ownership could increase the alignment of incentive of managers and large shareholders, which would minimise agency problems, resulting in improved firm performance. It could also be argued that a high level of ownership concentration can cause an "entrenchment effect" and have negative effects on company performance and valuation (Morck, Shleifer & Vishny 1988). That is, at higher levels of ownership concentration, large shareholders may make suboptimal decisions that benefit their own interests at the expense of minority shareholders, which could deteriorate the firm's performance and valuation. The empirical evidence on the relationship between independent directors and the performance of highly concentrated ownership firms is mixed. Klein et al. (2004, 2005) reported a negative relationship between performance and the presence of independent directors of highly concentrated ownership firms in Canada, while several other studies have found a positive relation for similar firms, for example, in New Zealand (Hossain, Prevost & Rao 2001), European countries (Krivogorsky 2006) and Chile (Lefort & Urzua 2008).

Another possibility for the mixed results on the impact of independent directors on firm performance could be the choice of performance measure. Most previous studies used Tobin's Q to measure firm performance. Tobin's Q, however, does not always indicate firm performance. It could also reflect growth opportunities related not to managerial decisions but to external conditions (Pham, Suchard & Zein 2007). Because the effects of independent directors on firm performance may differ depending on the performance measures used, different measures of firm performance may produce different results (Krivogorsky 2006; Lawrence & Stapledon 1999). A recent study by Elali (2006) found that Economic Value Added (EVA) outperforms Tobin's Q in explaining shareholder wealth. Except for Adjaoud et al. (2007) and Pham et al. (2008), there have been a limited number of studies that directly examine the effects of independent directors on firm performance using EVA as a performance measure. Interestingly, both studies report an insignificant relationship between board independence and EVA.

A further possibility for the ambiguous results could be that not *all* independent directors are truly independent or add value (Bhagat & Black 2002). In a recent paper, Cohen, Frazzini and Malloy (2010) showed that, in the US, while firms technically appoint independent directors based on regulatory definition, in reality, the independent directors are overly sympathetic to management. Based on a hand-collected database, the authors found that financial analysts who were overly optimistic regarding the firms' performance in the past were more likely to be appointed as independent directors of those firms. Furthermore, the issue of whether the independent directors are in the majority could also play a role. In studies documenting a positive relationship between independent directors and firm performance, the mean proportion of independent directors is less than 50% (see for example, Agrawal & Knoeber 1996; Black et al. 2006; Dalton et al. 1998; Hossain, Prevost & Rao 2001; Krivogorsky 2006; Lefort & Urzua 2008; Mura 2007; Oxelheim & Randoy 2003; Yermack 1996). These results could suggest that independent directors add value when they are in the minority on the board.

Previous literature on the relationship between board composition and firm performance generally recognises two theories: agency theory and stewardship theory (Nicholson & Kiel 2007). Agency theory, which dominates the corporate governance literature, has its basis in the separation of ownership and management and the divergent interests between the two. As such, it requires control of management by boards of directors operating as agents for the owners. External directors are expected to be free from the influence of the firm's management, which allows them to perform their duties more effectively and provide more value than internal directors. Effective monitoring by

independent directors is expected to lower agency costs and increase firm performance (Baysinger & Butler 1985; Fama 1980; Jensen & Meckling 1976; Lefort & Urzua 2008).

Therefore, according to this theory, board independence should be positively associated with firm performance. Despite substantial research, as discussed earlier, on the relationship between boards and firm performance, the extant empirical results are far from conclusive.

Stewardship theory refutes the notion of self-interested managers, claiming that managers and non-independent directors are good stewards of the resources entrusted to them and can be trusted to maximise the value of firms. Managers are driven by non-financial motives, such as the need for achievement and recognition, the satisfaction of successful performance and a strong work ethic (Donaldson & Davis 1991; Muth & Donaldson 1998). Thus, demands for extensive monitoring and controls by external directors are not needed. Non-independent directors involved in the company on a daily basis are assumed to have a better commitment to the company and its goal. However, independent directors may not have the necessary skills and knowledge, may be less committed to the company and may "fail to support and empower management and reduce company performance" (Muth & Donaldson 1998, p. 10).

A recent study has found that, in the period after the New Zealand Corporate Governance Best Practice Code was introduced, directors of New Zealand firms viewed their roles more as active partners with management rather than as monitors (Anderson et al. 2007). As a matter of law in New Zealand, directors must act in what they consider to be the best interest of the company which may not necessarily mean acting in the best interest of shareholders. This is in line with the emerging view that the conventional notion of a board's control role, originating from agency theory, should expand to incorporate a service role "where the board is expected also to be more active in setting the strategic direction and decision making of the firm in conjunction with management" (Ingley & Karoui 2010, p.129). These collaborative views and practices are more consistent with stewardship theory than with agency theory.

The controversy regarding the role of internal and external directors is at the heart of both agency and stewardship theory. We investigate which of these theories is more relevant and supportive of the current situation in New Zealand. We contend that, when there is a majority of internal directors in firms, it could be beneficial for firms. Therefore, our hypotheses are as follows:

H_1: Independent directors are negatively related to firm performance.

H_2: Independent directors add value as long as they are the minority on a board.

Data and Methodology

Data

We obtain financial data of firms listed in New Zealand from the NZX Deep Archive database from 2004 to 2006 and hand collect corporate governance information from the firms' annual reports. We exclude firm-year observations that do not have the necessary variables to run the regression model and extreme firm performance variables below the 1st percentile and above the 99th percentile. The final sample consists of 182 firm-year observations.

Methodology

We examine the effects of independent directors on firm performance by regressing measures of firm performance as the dependent variable on several corporate governance and control variables. The performance measures that we use are: EVA, Tobin's Q, ROA and ROE. Tobin's Q is measured as the sum of the market value of equity and the book value of debt divided by total assets. ROA is calculated as the net income divided by total assets, and ROE is calculated as the net income divided by total equity.
EVA is defined as:

$$\text{EVA} = \text{IC x (ROIC - WACC)}. \tag{1}$$

where:

IC = Invested capital at the beginning of the year calculated as total assets at t-1 and non-interest-bearing liabilities at t-1
ROIC = Return on Invested Capital = NOPLAT/invested capital at the beginning of the year
NOPLAT = EBIT – taxes + changes in balance sheet deferred taxes
Taxes = Income tax + tax shield on interest expense
WACC = Weighted Average Cost of Capital
We deflated EVA by 1,000,000 so that the scale would be consistent with that of the other variables (Adjaoud et al. 2007).

To examine the relationship between the proportion of independent directors and firm performance, we use the following model:

$$
\begin{aligned}
Performance_t = \alpha &+ \beta_1\%IND_t + \beta_2 BDSIZE_t + \beta_3 BUSY_t + \beta_4 ACSIZE_t + \beta_5 BLOCK_t \\
&+ \beta_6 LEV_t + \beta_7 B/M_t + \beta_8 SIZE_t + \varepsilon_t
\end{aligned}
\tag{2}
$$

The independent variable, % IND, is the proportion of independent directors and is calculated as the number of independent directors divided by the total number of directors. Independent directors are defined according to New Zealand Stock Exchange Listing Rules, i.e., as non-executive directors holding less than 5% of the voting securities and having no direct or indirect interest or relationship that could reasonably influence their objective judgment and decision making. The existing literature on board size (BDSIZE) and firm performance usually reports that board size is negatively correlated with firm performance (Eisenberg, Sundgren & Wells 1998; Larcker, Richardson & Tuna 2007; Yermack 1996). Smaller boards are expected to work more efficiently than larger boards. Furthermore, Larcker et al. (2007) reported that the busier the directors, the lower the firm performance. The variable BUSY is the percentage of busy independent directors. An independent director is classified as a busy director if he or she serves as a director at more than three other companies. Larcker et al. (2007) also found that firms with a greater proportion of blockholders exhibit superior operating performance. However, Hossain, Prevost and Rao (2001) and Bhagat and Black (2002) found that blockholders are negatively correlated with firm performance. BLOCK is the cumulative percentage of shares held by shareholders holding at least 5% of ordinary shares in the firm. As discussed earlier, this variable is important in our study, as the New Zealand listed firms generally have high levels of ownership concentration. We also include audit committee size (ACSIZE) in our analysis, as

audit committees are expected to enhance the monitoring role of directors. Finally, we incorporate several commonly used control variables into our regressions. These variables are LEV, the ratio of long-term debt to total assets; B/M, the book to market ratio; and SIZE, the natural logarithm of the market value of equities.

In studies of firm performance and its relationship to corporate governance factors, which, in our case, is board composition, the issue of endogeneity needs to be addressed (see for example, Agrawal & Knoeber 1996; Hermalin & Weisbach 1991). In addition to employing OLS regressions, we address this issue by using two-stage least square regressions. Following Hermalin and Weisbach (1991) and Dahya, Dimitrov and McConnell (2008), we use the lagged values of independent variables as instruments for independent directors. Similar to Rajgopal and Shevlin (2002), in this estimation procedure, we assume that firm performance and independent directors are the only endogenous variables.[2]

We further use lagged values of firm performance as independent variables (Hermalin & Weisbach 1991; Rajgopal & Shevlin, 2002) to examine whether the independent directors' choice to sit on a board is affected by the firm's past performance. To accomplish this, we include the percentage of shares owned by independent directors as a control variable (Whidbee 1997).

Our second hypothesis is that independent directors add value as long as they are in the minority on a board. To test this hypothesis, we replace %IND with a dummy variable (NIND) that takes the value of 1 if independent directors are the minority and takes 0 otherwise. The second model we use is the following:

$$Performance_t = \alpha + \beta_1 NIND_t + \beta_2 BDSIZE_t + \beta_3 BUSY_t + \beta_4 ACSIZE_t + \beta_5 BLOCK_t$$
$$+ \beta_6 LEV_t + \beta_7 B/M_t + \beta_8 SIZE_t + \varepsilon_t \tag{3}$$

Empirical Results

Table 1 presents descriptive statistics for the sample firms. On average, as shown by positive firm performance across the four performance measures, New Zealand firms are profitable. The results show that Tobin's Q is approximately 1.65, return on assets is 9.5% and return on equity is 19%. These returns are well above the average Official Cash Rate, the prime rate in New Zealand, of 6.6% during the same period. In terms of EVA, the sample firms did not experience a significant increase in value. The average EVA is only around $0.002 million, which is only 0.001% of the average firm size.

Our data also reveal that there are, on average, six directors on a board. The number of directors is lower than that of US firms, which is around 12 directors (Yermack, 1996; Bhagat and Black, 2002). Board independence ranges from no independence to fully independent. Typically, however, independent directors are the majority on a board. The mean proportion of independent directors is 0.52.

---

[2] Our two-stage least square regression approach, however, is subject to some limitations. Some may view board size and blockholders as also endogenous. The inclusion of more than one endogenous variable, however, would involve the difficult task of finding instrumental variables for each equation (Holthausen, Larcker & Sloan 1995; Ittner & Larcker 2001; Rajgopal & Shevlin 2002). There is also a possibility that our system of equations is misspecified because of the omitted variable problem. However, according to Hausman tests that we conducted to examine whether independent directors and performance should be treated as endogenous, endogeneity is rejected for all four performance variables.

Table 1 further shows that, on average, about 40% of independent directors serve as directors in more than three other companies, which is on the lower end internationally. For instance, the percentage in the US is closer to 60%. The mean cumulative percentage of shares held by shareholders holding more than 5% is 45%, reflecting the fact that the ownership of listed firms in New Zealand is highly concentrated. This figure is close to that of Laporta et al. (1998), who reported the mean shares owned by blockholders in New Zealand at 48%. High ownership concentration can discourage efficiency-enhancing takeovers as a transfer of control can take place with the consent of only a limited number of large blockholders (Prevost, Rao & Hossain 2002). The presence of large blockholders could protect the board from external market discipline, which reduces value. But their presence could also enhance the effectiveness of independent directors in monitoring firm performance (Larcker et al. 2007).

Table 1

Sample descriptive statistics

	MEAN	SD	MIN	25TH	MEDIAN	75TH	MAX
Tobin's Q	1.647	1.348	0.341	0.948	1.169	1.853	8.243
ROA	0.095	0.119	-0.571	0.063	0.089	0.146	0.393
ROE	0.190	0.214	-0.874	0.105	0.170	0.297	0.812
EVA (in millions)	0.002	0.018	-0.126	-0.001	0.001	0.006	0.065
%IND	0.519	0.224	0.000	0.333	0.500	0.667	1.000
NIND	0.466	0.501	0.000	0.000	0.000	1.000	1.000
BDSIZE	6.165	1.660	2.000	5.000	6.000	7.000	12.000
BUSY	0.391	0.345	0.000	0.000	0.333	0.667	1.000
ACSIZE	3.363	1.077	0.000	3.000	3.000	4.000	7.000
BLOCK	0.451	0.250	0.000	0.259	0.465	0.655	0.944
LEV	0.422	0.195	0.020	0.290	0.406	0.550	1.228
B/M	0.765	0.868	-0.175	0.325	0.604	0.994	10.044
MKTVAL (in millions)	11.609	1.408	8.117	10.524	11.609	12.618	14.776

Notes:
Tobin's Q is measured as the sum of market equity and book value of debt, divided by total assets. ROA is return on assets. ROE is return on equity. EVA is invested capital at the beginning of year x (return on invested capital – weighted average cost of capital). %IND is the proportion of independent directors on a board defined as the number of independent directors/total number of directors. NIND is a dummy variable of 1 if a firm board is nonindependent. BDSIZE is total number of directors. BUSY is the proportion of independent directors who serve in more than three other companies. ACSIZE is the number of directors on the audit committee. BLOCK is the cumulative percentage of shares held by shareholders holding at least 5% of ordinary shares in the firm. LEV is long-term debt/total assets. B/M is book to market ratio and MKTVAL is the market value equity. There are 182 firm-year observations from 2004 to 2006.

Table 2 presents the correlations among the variables. Tobin's Q is not significantly correlated with the other three performance variables. ROA and ROE are highly correlated (0.79). EVA as a measure of value added is not highly correlated with these two accounting-based profitability measures. This finding could be seen as consistent with the views of the proponents of EVA that positive accounting-based profit measures do not always increase firm value.

As predicted, the correlations between the proportion of independent directors (%IND) and the three performance measures (ROA, ROE and EVA) are strongly negative.

Although statistically insignificant, negative performance relations are also observed for board size (BDSIZE). The proportion of busy independent directors is negatively correlated with Tobin's Q. This finding could be interpreted as in line with stewardship theory, which states that busy independent directors are not fully committed to the companies they serve. Block ownership is negatively correlated with the proportion of independent directors, suggesting that block owners and the proportion of independent directors substitute for monitors. Block ownership is also negatively correlated with EVA, which suggests that high ownership decreases firm value.

Table 2
Correlation matrix among the corporate governance variables and performance measures

	Tobin's Q	ROA	ROE	EVA	%IND	NIND	BDSIZE	BUSY	ACSIZE	BLOCK	LEV	B/M
ROA	-0.032											
ROE	0.085	0.788										
EVA	0.118	0.246	0.189									
%IND	-0.105	-0.166	-0.191	-0.144								
NIND	0.054	0.111	0.173	0.131	-0.823							
BDSIZE	-0.020	-0.011	-0.132	-0.070	-0.088	0.044						
BUSY	-0.137	0.109	0.076	0.019	0.150	-0.156	0.055					
ACSIZE	-0.039	0.089	-0.027	-0.065	0.040	-0.084	0.312	0.069				
BLOCK	0.011	0.025	0.021	-0.122	-0.066	0.058	-0.092	-0.071	-0.120			
LEV	-0.052	-0.039	0.343	-0.086	-0.014	0.088	-0.106	0.071	-0.141	-0.137		
B/M	-0.372	-0.205	-0.278	-0.158	0.020	-0.16	0.079	0.030	0.070	-0.011	-0.217	
SIZE	0.144	0.240	0.150	0.065	0.043	-0.118	0.390	0.196	0.107	0.258	-0.056	-0.150

Notes:
Tobin's Q is measured as the sum of market equity and book value of debt, divided by total assets. ROA is return on assets. ROE is return on equity. EVA is invested capital at the beginning of year x (return on invested capital – weighted average cost of capital). %IND is the proportion of independent directors on a board defined as the number of independent directors/total number of directors. NIND is a dummy variable of 1 if a firm board is nonindependent. BDSIZE is total number of directors. BUSY is the proportion of independent directors who serve in more than three other companies. ACSIZE is the number of directors on the audit committee. BLOCK is the cumulative percentage of shares held by shareholders holding at least 5% of ordinary shares in the firm. LEV is long-term debt/total assets. B/M is book to market ratio and SIZE is the natural logarithm of market value equity. There are 182 firm-year observations from 2004 to 2006.

Table 3 reports results for the OLS and 2-Stage regressions of firm performance on corporate governance and control variables. The results from OLS and the 2-Stage regressions are largely similar. Consistent with our first hypothesis, the proportion of independent directors on a board (%IND) is negatively correlated with all four performance measures and significantly correlated with ROA and ROE.[3] These results point to the fact that the presence of an independent board has a negative impact on firm value, and these results are consistent with those reported in prior studies (Agrawal & Knoeber 1996; Bhagat & Black 2002). Our findings, on the whole, contradict the notion that company boards should

---

[3] The results are similar but of opposite signs when we use the proportion of non-independent directors (defined as 1-%IND) instead of %IND. We find that non-independent directors are positively associated with the four firm performance measures and significantly correlated with ROA and ROE. These results, to conserve space, are not reported but are available upon request.

consist mostly of independent directors. Board size (BDSIZE) is also negatively related to performance and significantly related to ROA and ROE. This finding is consistent with prior studies (Eisenberg et al. 1998; Hossain, Prevost & Rao 2001;Yermack, 1996) showing that the larger the board size, the less efficient the monitoring function of the directors, which reduces the value of the company.

Table 3

Cross sectional regression results for firm performance on corporate governance variables

	OLS	2-SLS	OLS	2-SLS	OLS	2-SLS	OLS	2-SLS
	Tobin's Q		ROA		ROE		EVA	
Intercept	1.828**	0.772	-0.036	0.125	-0.078	0.025	0.016	-0.042***
%IND	-0.585	-0.711	-0.115***	-0.146***	-0.215***	-0.249***	-0.015**	-0.005
BDSIZE	-0.057	-0.017	-0.013**	-0.015**	-0.029***	-0.034***	-0.002*	-0.001
BUSY	-0.522	-0.566*	0.033	0.003	0.034	-0.016	0.002	0.002
ACSIZE	-0.031	0.084	0.012	0.009	0.015	0.019	-0.001	-0.002
BLOCK	-0.427	-0.446	-0.033	-0.019	-0.018	-0.031	-0.016***	-0.011*
LEV	-0.941*	-0.36	-0.052	-0.047	0.324***	0.236**	-0.016**	0.003
B/M	-0.566***	-0.316***	-0.024**	-0.026***	-0.041**	-0.038**	-0.003**	-0.001
SIZE	0.155**	0.151*	0.023***	0.014*	0.034***	0.033**	0.002*	0.006***
Adj. R^2	0.159	0.119	0.123	0.121	0.221	0.148	0.078	0.206
N	182	103	182	103	182	103	182	103

Notes:

Tobin's Q is measured as the sum of market equity and book value of debt, divided by total assets. ROA is return on assets. ROE is return on equity. EVA is invested capital at the beginning of year x (return on invested capital – weighted average cost of capital). %IND is the proportion of independent directors on a board defined as the number of independent directors/total number of directors. BDSIZE is total number of directors. BUSY is the proportion of independent directors who serve in more than three other companies. ACSIZE is the number of directors on the audit committee. BLOCK is the cumulative percentage of shares held by shareholders holding at least 5% of ordinary shares in the firm. LEV is long-term debt/total assets. B/M is book to market ratio and SIZE is the natural logarithm of market value equity. Sample period is from 2004 to 2006.

* significant at 10% level; ** significant at 5% level; ***significant at 1% level

Table 3 also reports that blockholders (BLOCK) are negatively correlated with performance. This result is similar to those reported in prior studies (Hossain, Prevost & Rao 2001; Johnson et al. 2000; Laporta et al. 1998) that show that high firm ownership concentration has a somewhat negative impact on firm value.

The percentage of busy independent directors is negatively correlated with Tobin's Q, suggesting that busy independent directors do not add value, as they may not be fully committed to the company for which they sit as independent directors. The low average percentage of busy directors on a board (as reported in Table 1), however, may explain the weak significance of the relationship between the percentage of busy independent directors and firm performance.

In Table 4, we report the results of cross-sectional regressions on the relationship between the proportions of independent directors and lagged corporate governance variables. We observe that the lagged performances are negatively correlated with independent variables but are not statistically significant. These results confirm that endogeneity is not a problem in our study, and the results are generally consistent with Dahya et al. (2008),

showing that the relationship between firm performance and independent directors runs only in one direction.

Table 4
Cross sectional regression results on the relation between the proportion of independent directors and lagged corporate governance variables

Intercept	0.057	0.013	0.007	0.006
BLOCK	-0.026	-0.007	-0.009	-0.008
BLOCK$_{-1}$	0.117	0.106	0.108	0.112
% SIND	0.928**	0.929**	0.918**	0.936**
% SIND$_{-1}$	-0.870	-0.816	-0.809	-0.823
%IND$_{-1}$	0.862***	0.853***	0.853***	0.858***
BDSIZE$_{-1}$	-0.012	-0.013	-0.013	-0.013
BUSY$_{-1}$	-0.082	-0.071	-0.071	-0.072
ACSIZE$_{-1}$	0.033**	0.033**	0.034**	0.032**
LEV$_{-1}$	-0.111	-0.080	-0.062	-0.076
B/M$_{-1}$	-0.015	0.011	0.009	0.014
SIZE$_{-1}$	0.004	0.003	0.003	0.002
Tobin's Q$_{-1}$	-0.022			
ROA$_{-1}$		-0.056		
ROE$_{-1}$			-0.047	
EVA$_{-1}$				-0.029
Adj. R^2	0.625	0.622	0.622	0.621
N	103	103	103	103

Notes:
Tobin's Q is measured as the sum of market equity and book value of debt, divided by total assets. The dependent variable is %IND which is the proportion of independent directors on a board defined as the number of independent directors/total number of directors. ROA is return on assets. ROE is return on equity. EVA is invested capital at the beginning of year x (return on invested capital – weighted average cost of capital). %SIND is the proportion of shares owned by independent directors. BDSIZE is total number of directors. BUSY is the proportion of independent directors who serve in more than three other companies. ACSIZE is the number of directors on the audit committee. BLOCK is the cumulative percentage of shares held by shareholders holding at least 5% of ordinary shares in the firm. LEV is long-term debt/total assets. B/M is book to market ratio and SIZE is the natural logarithm of market value equity. Sample period is from 2004 to 2006.

*, ** and *** denote significance at 10%, 5% and 1% respectively.

In Table 5, we present our results for the regression of firm performance variables on non-independent boards and other corporate governance and control variables. The coefficient of interest here is NIND, which positively correlates with four performance measures and has a particularly significant relationship with ROA and ROE. These results are essentially in line with our second hypothesis that independent directors add value as long as

they are in the minority, but when they become the majority, their effectiveness as monitors diminishes, which reduces firm value. The results for the other independent variables are principally similar to those reported in Table 3. Board size, the proportion of busy independent directors and blockholders are negatively correlated with firm performance. One common factor that can be observed, as in prior studies, is that the presence of independent directors is positively related to firm performance when they are the minority, but their presence negatively affects firm value when they are the majority. This observation may suggest that not *all* independent directors have the necessary knowledge, experience, time and skills to be effective monitors (Klein 1998), and, consistent with stewardship theory, that some or most of them are not good stewards of the companies they serve (Muth & Donaldson 1998).

As far as New Zealand is concerned, only one study has investigated the issue of board composition and firm performance (Hossain, Prevost & Rao 2001). During the period investigated, it can be noted that the independent directors of New Zealand firms were the minority on a board in more than half of the sample period. Therefore, we possibly could argue that the positive relationship between independent directors and performance reported in that study could be attributed to the performance of a non-independent board and not to that of an independent board. The proportion of independent directors at New Zealand firms has been growing over time. Taking into account more recent practice, our current research findings provide a worthwhile outcome for New Zealand.

Table 5
Cross sectional regression results on the relation between firm performance and the minority independent directors

	Tobin's Q	ROA	ROE	EVA
Intercept	0.422	0.037	-0.126	-0.046***
NIND	0.069	0.046**	0.083**	0.002
BDSIZE	0.000	-0.013**	-0.032**	-0.001
BUSY	-0.589**	-0.002	-0.024	0.002
ACSIZE	0.065	0.004	0.011	-0.002*
BLOCK	-0.421	-0.021	-0.035	-0.011*
LEV	-0.314	-0.036	0.254**	0.003
B/M	-0.312***	-0.023**	-0.033*	-0.001
SIZE	0.141	0.013*	0.032**	0.006***
Adj. R^2	0.107	0.109	0.144	0.209
N	103	103	103	103

Notes:
Tobin's Q is measured as the sum of market equity and book value of debt, divided by total assets. ROA is return on assets. ROE is return on equity. EVA is invested capital at the beginning of year x (return on invested capital – weighted average cost of capital). NIND is a dummy variable that takes the value of 1 if independent directors are the minority on a board, 0 otherwise. BDSIZE is total number of directors. BUSY is the proportion of independent directors who serve in more than three other companies. ACSIZE is the number of directors on the audit committee. BLOCK is the cumulative percentage of shares held by shareholders holding at least 5% of ordinary shares in the firm. LEV is long-term debt/total assets. B/M is book to market ratio and SIZE is the natural logarithm of market value equity. Sample period is from 2004 to 2006.
* significant at 10% level; ** significant at 5% level; ***significant at 1% level

Robustness Tests

Although the two-stage regression model can address endogeneity, the statistical properties of the simultaneous regression estimates are sensitive to the choice of instrumental variables because even the instrumental variables themselves can be partially endogenous (Larcker & Rusticus 2006). Therefore, we address both the endogeneity and fixed panel effects by using the feasible generalised least squares (FGLS) method and a generalised method of moment estimation (GMM). The GMM permits simultaneous control of both endogeneity and firm fixed effects (Mura 2007). In addition to these two estimation methods for our robustness tests, we also use the OLS method with adjustments in the standard errors of the OLS estimators, assuming the presence of both firm and time fixed effects (Petersen 2009)[4].

The results, not reported here to save space, are all largely in line with those reported in Table 3 and confirm our hypothesis that the presence of a majority of independent directors on the board of New Zealand firms is negatively associated with firm performance.

Summary

In this paper, we examined the effects of independent directors on firm performance. We found that, on average, independent directors are negatively associated with several measures of performance. On the basis of our findings, we could argue that independent directors add value only when they are in the minority. We note that the presence of independent directors is negatively (positively) associated with firm performance when they are in the majority (minority) on a board. Our results confirm recent findings in the literature that good governance practices are not universal but may depend on market and firm characteristics (Black et al. 2010; Coles et al. 2008; Chhaochharia & Grinstein 2007; Duchin et al. 2010).

A possible explanation as to why a board consisting mostly of independent directors could have a negative impact on firm value could be that the behaviour of executive or non-independent directors cannot be entirely explained by agency theory, which assumes that managers maximise their self-interest at the expense of shareholders. The New Zealand stock market consists mostly of small firms suggesting that it may not be that easy for these firms to have truly independent boards (Chhaochharia & Grinstein, 2007; Duchin et al. 2010). The relatively small size of the New Zealand market could also suggests that directors are strongly network connected, a characteristic where stewardship theory is likely to hold (Muth & Donaldson 1998). The stewardship theory, which contends that managers and non-independent directors are good stewards of firm assets and are loyal to the company, predicts a positive association between management and firm performance. Our results are more in line with the latter theory for the period investigated in New Zealand.

References

Adjaoud, F, Zeghal, D & Andaleeb, S 2007, 'The effect of board's quality on performance: A study of Canadian firms', *Corporate Governance: An International Review* vol.15, pp623-635.

---

[4] These different estimators account for nonnormality in the error terms such as heteroskedasticity and autocorrelations (see Wooldridge 2009).

Agrawal, A & Knoeber C 1996, 'Firm performance and mechanisms to control agency problems between managers and shareholders', *Journal of Financial and Quantitative Analysis* vol.31, pp377-97.

American Law Institute 1994, Principles of Corporate Governance: Analysis and Recommendations, §3A.01

Anderson, DW, Melanson, SJ & Maly, J 2007, 'The evolution of corporate governance: power redistribution brings boards to life', *Corporate Governance: An International Review* vol.15, no.5, pp780-797.

Baysinger, B & Butler, HN 1985, 'Corporate governance and the board of directors: Performance effects of changes in board composition', *Journal of Law, Economics, & Organization* vol.1, pp101-104.

Bhagat, S & Black, B 2002, 'The non-correlation between board independence and long-term firm performance', *Journal of Corporation Law* vol.27, pp231-273.

Black, BS, De Carvalho, AG & Gorga, E 2010, 'Corporate governance in Brazil', accessed 25 September 2009, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1152454

Black, BS, Jang, H & Kim, W 2006, 'Does corporate governance predict firms' market values? Evidence from Korea', *Journal of Law, Economics ,& Organization* vol.22, pp366-413.

Business Roundtable 2010, *Principles of Corporate Governance*, accessed 2 February 2011, http://businessroundtable.org/studies-and-reports/2010-principles-of-corporate-governance.

Chhaochharia, V & Grinstein, Y 2007, 'Corporate governance and firm value: The impact of the 2002 governance rules', *Journal of Finance* vol.62, pp1789-1825.

Cohen, L, Frazzini, A & Malloy, C 2010, 'Hiring Cheerleaders: Board Appointments of "Independent" Directors', accessed 10 June 2009, http://ssrn.com./abstract=1343176.

Coles, JL, Daniel, ND & Naveen, L 2008, 'Boards: Does one size fit all?', *Journal of Financial Economics* vol.87, pp329-356.

Council of Institutional Investors 2011, *Council Corporate Governance Policies*, accessed 14 March, 2011, http://www.cii.org/CouncilCorporateGovernancePolicies.

Dahya, J, Dimitrov, O & McConnell, JJ 2008, 'Dominant shareholders, corporate boards, and corporate value: A cross-country analysis', *Journal of Financial Economics* vol.87, pp73-100.

Daily, CM & Dalton, DR 1992, 'The relationship between governance structure and corporate performance in entrepreneurial firms', *Journal of Business Venturing* vol.7, pp375-386.

Dalton, DR, Daily, CM, Ellstrand, AE & Johnson, JL 1998, 'Meta-analytic reviews of board composition, leadership structure, and financial performance', *Strategic Management Journal* vol.19, pp269-90.

Donaldson, L & Davis, J 1991, 'Stewardship theory or agency theory: CEO governance and shareholder returns', *Australian Journal of Management* vol.16, pp49-64.

Duchin, R, Matsusaka, JG & Ozbas, O 2010, 'When are outside directors effective?', *Journal of Financial Economics* vol.96, pp195-214.

Eisenberg, T, Sundgren, S & Wells, M T 1998, 'Larger board size and decreasing firm value in small firms', *Journal of Financial Economics* vol. 48, no. 1, pp35-54.

Elali, W 2006, 'Contemporaneous relationship between EVA and shareholder value', *International Journal of Business Governance and Ethics* vol.2, pp237-253.

Erkens, D, Hung, M & Matos, P 2010, 'Corporate governance in the 2007-2008 financial crisis: Evidence from financial institution worldwide', Working paper. University of Southern California.

Fama, EF 1980, 'Agency problems and theory of the firm', *Journal of Political Economy* vol.88, no.2, pp288–307.

Financial Markets Authority 2004, *Corporate Governance in New Zealand - Principles and Guidelines*, accessed 26 June 2009, http://www.fma.govt.nz/keep-updated/reports-and-papers/handbook-corporate-governance-in-nz-principles-and-guidelines/.

Healy, J 2003, *Corporate Governance & Wealth Creation in New Zealand*. Dunmore Press Ltd. Palmerston North, New Zealand.

Hermalin, EB & Weisbach, SM 1991, 'The effects of board composition and direct incentives on firm performance', *Financial Management* vol.20, pp101- 112.

Holthausen, R, Larcker, D & Sloan, R 1995, 'Business unit innovation and the structure of executive compensation', *Journal of Accounting and Economics* vol.19, pp279-313.

Hossain, M, Prevost, AK & Rao, RP 2001, 'Corporate governance in New Zealand: The effect of the 1993 Companies Act on the relation between board composition and firm performance', *Pacific-Basin Finance Journal* vol.9, pp119-145.

Ingley, C & Karoui, L 2010, Corporate Governance and Smaller Firms, in A. Tourani-Rad and C. Ingley (eds) *Handbook of Emerging Issues in Corporate Governance*, World Scientific, Singapore, pp129-154

Ittner, C & Larcker, D 2001, 'Assessing empirical research in managerial accounting: a value-based management perspective', *Journal of Accounting and Economics* vol.32, pp349-410.

Jensen, MC & Meckling, WH 1976, 'Theory of the firm: Managerial behavior, agency costs and capital structure', *Journal of Financial Economics* vol.3, pp305–360.

Johnson, S, La Porta, R, Lopez-De-Silanes & Shleifer, A 2000, 'Tunneling', *American Economic Review* vol.90, pp22-27.

Klein, A 1998, 'Firm performance and board committee structure', *Journal of Law and Economics* vol.41, pp275-303.

Klein, P, Shapiro, D & Young, J 2004, 'Board independence and the family-owned firm', *Canadian Investment Review* vol.17, pp8-12.

Klein, P, Shapiro, D &Young, J 2005, 'Corporate governance, family ownership and firm value: the Canadian evidence', *Corporate Governance: An International Review* vol.13, pp769-784.

Krivogorsky, V 2006, 'Ownership, board structure, and performance in continental Europe', *International Journal of Accounting* vol.41, pp176-196.

La Porta, R, Lopez-De-Silanes, F, Shleifer, A & Vishny, RW 1998, 'Law and Finance', *Journal of Political Economy* vol.106, pp1113-1155.

Larcker, DF, Richardson, SA & Tuna, I 2007, 'Corporate governance, accounting outcomes, and organizational performance', *Accounting Review* vol.82, pp963-1008.

Larcker, DF & Rusticus, TO 2007, 'Endogeneity and empirical accounting research', *European Accounting Review* vol.16, pp207-215.

Lawrence, J & Stapledon, G 1999, *Do independent directors add value?* Research Report CCLSR, University of Melbourne.

Lefort, F & Urzua, F 2008, 'Board independence, firm performance and ownership concentration: Evidence from Chile' *Journal of Business Research* vol.61, pp615-622.

Mikkelson, WH & Partch, MM 1997, 'The decline of takeovers and disciplinary managerial turnover', *Journal of Financial Economics* vol.44, pp205-228.

Morck, R, Shleifer A & Vishny, RW 1988, 'Management ownership and market valuation: An empirical analysis', *Journal of Financial Economics* vol.20, pp293-315.

Mura, R 2007, 'Firm performance: Do non-executive directors have minds of their own? Evidence from UK panel data', *Financial Management* vol.36, no.3, pp81-112.

Muth, MM & Donaldson, L 1998, 'Stewardship theory and board structure: a contingency approach', *Corporate Governance* vol.6, pp5-28.

Nicholson, GJ & Kiel, GC 2007, 'Can directors impact performance? A case-based test of the three theories of corporate governance', *Corporate Governance: An international Review* vol.15, no.4, pp585-608.

Oxelheim, L & Randoy, T 2003, 'The impact of foreign board membership on firm value', *Journal of Banking & Finance* vol.27, pp2369-2392.

Petersen, MA 2009, 'Estimating standard errors in finance panel data sets: Comparing approaches', *The Review of Financial Studies* vol.22, no.1, pp435-480.

Pfeffer, J, Salancik, GR 2003, *The External Control of Organizations: A Resource Dependence Perspective,* Stanford University Press, Stanford, CA.

Pham, PK, Suchard, J & Zein, J 2007, 'Corporate governance, cost of capital and performance: Evidence form Australian firms', Working paper. School of Banking and Finance. University of New South Wales.

Pham, PK, Suchard, J & Zein, J 2008, 'Corporate governance and alternative performance measures: Evidence from Australian firms', Working paper. School of Banking and Finance. University of New South Wales.

Prevost, AK, Rao, RP & Hossain, M 2002, 'Board composition in New Zealand: An agency perspective', *Journal of Business Finance & Accounting* vol. 29, pp731-760.

Rajgopal, S & Shevlin, T 2002, 'Empirical evidence on the relation between stock option compensation and risk taking', *Journal of Accounting and Economics* vol.33, pp145-171.

Shleifer, A & Vishny, RW 1997, 'A survey of corporate governance', *Journal of Finance* vol.52, pp737-783.

Whidbee, DA 1997, 'Board composition and control of shareholder voting rights in the banking industry', *Financial Management* vol.26, pp27-41.

Wooldridge, JM 2009, *Introductory Eeconometrics: A Modern Approach*, 4th Edn. South Western, Mason, OH.

Yermack, D 1996, 'Higher market valuation of companies with a small board of directors', *Journal of Financial Economics* vol.40, pp185-212.