
Corporate governance practices of small cap companies and their financial performance: an empirical study in New Zealand

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Abstract: The purpose of this paper is to examine the effect of corporate governance practices of small cap companies have had on their financial performances. Previous studies have mainly examined governance practices of larger corporations. This analysis focuses on the governance variables that have been highlighted by the New Zealand Securities Commission (2004) governance principles and guidelines and also on the governance variables that are supported in the literature as providing an appropriate structure for the firm in the environment in which it operates. The data for 71 small cap companies listed in New Zealand over a five-year period from 2001 to 2005 was analysed. Pooled data, OLS and 2SLS regression techniques were used and Tobin's Q, ROA and OPINC were used as the dependent variables. The evidence does support the hypothesis that the existence of board independence and audit committee has enhanced firm financial performance, as measured by Tobin's Q.

Keywords: corporate governance; shareholder value; Tobin's Q; board of directors; board independence; insider ownership; block ownership.

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1 Introduction

The problems associated with the separation of ownership and control in corporations was highlighted by Adam Smith as early as in the eighteenth century. He suggested that the managers of other people's money cannot be expected to "watch over it with the same anxious vigilance" [as] one would expect from [it's] owners and that "negligence and profusion, therefore, must always prevail, more or less, in the management of the affairs of such company" (Smith, 1776/1952, p.324). The challenge thereafter became to find ways that will make professional managers who run the day-to-day management responsibilities of the company, be accountable to its owners. In other words, how to design mechanisms that will motivate managers to make decisions that will improve the firm's performance. Berle and Means (1932) observed that professional managers, who

have little or no equity stake in firms, therefore, have the opportunity to expropriate the firm's assets by undertaking projects that benefit themselves but adversely affect the shareholders' wealth. This problem is further compounded when there are diffuse shareholders present who do not have the resources and expertise to monitor the actions of the managers, which leaves them free to pursue their self-interest activities. Jensen and Meckling (1976) proposed an agency theory to explain how public corporations could survive and prosper despite the self-interested proclivities of professional managers. According to Jensen and Meckling, increasing equity ownership of corporate insiders (officers and directors) would align their interest with that of the outside shareholders which should reduce the agency problem and improve firm performances.

The corporate governance research that followed focused primarily on the control of executive self-interest and the protection of shareholder interests in settings where organisational ownership and control are separated (Daily et al., 2003a). The emphasis of the empirical research was on finding whether increasing the equity ownership of corporate insiders (officers and directors) as suggested by Jensen and Meckling would have any effect on firm financial performances. The evidence provides no consensus on the relationship between equity holdings by various constituent groups and financial performance (see Bothwell, 1980; Short, 1994; Rediker and Seth, 1995; Himmelberg et al., 1999).

The extant literature, nevertheless, does identify a number of additional corporate governance mechanisms that shareholders could use to ensure managers strive to achieve outcomes that are in the best interest of the shareholders as Shleifer and Vishny (1997) state. Walsh and Seward (1990) suggested the use of other internal and external governance mechanisms to help bring the interests of managers in line with the shareholders. The internal governance mechanisms are characterised as board independence, size of the board and the level of debt financing; and external mechanisms are the market for corporate control and block ownership (see Demsetz and Lehn, 1985; Barnhart and Rosenstein, 1998; Byrd et al., 1998; Gedajlovic and Shapiro, 1998).

The high profile corporate failures like Enron and WorldCom in 2001 started a new wave of governance debate by politicians, regulators, commentators and investors that questioned the adequacy of corporate governance practices in large corporations. Ineffectiveness in the corporate governance systems was suggested as a contributing factor in the respective corporate failures (Dalton and Dalton, 2005). The debate focused primarily on two broad issues. Firstly, to promote confidence in distant investors regarding the adequacy of corporate governance practices and secondly, to promote board effectiveness (McNulty et al., 2005). The focus of the debate was consistent with the view La Porta et al. (2000) proposed that regulations protecting investors' interests will promote good corporate governance and enhance investor confidence. A number of empirical studies that examined the relationship between corporate governance practices and firm performances support La Porta et al.'s hypothesis that corporations practising good corporate governance outperform those companies whose processes and procedures are unsound (Eisenhofer and Levin, 2005). To this end, the appropriateness of a flexible 'principle-based'² governance approach versus a 'one size fits all' rule-based approach to address governance concerns was debated by many countries. The United States of America has taken a distinctively rule-based approach with the introduction of Sarbanes-Oxley Act, 2002. This is a law for regulating high standards of behaviour around financial reporting, auditing and board accountability in public companies. The UK,

Canada, Australia and New Zealand have adopted a more nuanced principle-based approach.

Although New Zealand did not face scandals to the extent reported in larger economies such as the USA, the UK and Australia, the concerns in New Zealand were about poor firm performances and sub-standard governance practices that were highlighted by both local and international market participants (Healy, 2003). The heightened international awareness of corporate governance issues in 2001 prompted New Zealand regulatory authorities to review its current practices and procedures. The consensus was that the measures adopted in the USA were unsuitable in New Zealand due to its relatively small economy. The focus of the regulators in New Zealand was to balance investors' needs for transparency and the corporate needs for minimised compliance costs. In this regard, New Zealand developed principle-based governance approaches which are akin to the UK, Canada and Australia.

The New Zealand Securities Commission³ (2004) recommended nine high level principles and guidelines that are intended to contribute to high standard of corporate governance practices in New Zealand business entities. The key elements of the New Zealand Securities Commission's principles and guidelines include independence of the chair, non-executive/independent directors, audit independence, non-audit services, board committees, adoption of international accounting standards and continuous disclosure. The New Zealand Securities Commission stipulates that the good governance principles and guidelines are not mandatory; however, all companies listed on the New Zealand Stock Exchange are required to observe these principles to the fullest extent. The companies reporting on corporate governance practices under NZX Listing Rule 10.5.3(h) are required to cover all recommended principles, and departures from these must be explained to the shareholders (New Zealand Securities Commission, 2004).

Concerns regarding the good governance recommendations proposed by the New Zealand Securities Commission are numerous. First, the compliance or explain policies implicitly makes the New Zealand Securities Commission's recommendations compulsory for the listed companies increasing their compliance costs. An increase in compliance costs of listed companies will make it difficult for the listed companies to compete with non-listed companies as they do not face the same reporting requirements. Also, an increase in compliance costs without an increase in the firm performance will lead to the destruction in shareholder wealth. Although it reduces risk, it also potentially impacts shareholders value in a neutral manner. Arguably, Shleifer and Vishny (1997) suggest that a better-governed firm reduces control rights which stockholders and creditors confer on managers, increasing the probability that managers invest in shareholder value creating projects. A number of studies conducted overseas on large firms report a positive relationship between governance practices and firm financial performance (see Denis, 2001). The question here is: Do these findings also hold for small-sized companies? Since New Zealand economy is dominated by smaller companies compared to larger economies overseas, the conjecture is whether the New Zealand small firms will also experience an increase in financial performance as well. If they do, will the increase in financial performance be large enough to compensate for the incremental compliance costs incurred by the shareholders?

Second, the New Zealand Securities Commission recommendations may have shifted the focus of the board towards compliance away from enterprising which focuses on strategic decisions of the company rather than on compliance. Whether the corporate governance recommendations made by New Zealand Securities Commission have caused

boards to be more compliance focused leading to the destruction of shareholder value or more entrepreneurial focused improving firm value, is an empirical question. However, the surveys undertaken by the New Zealand Securities Commission in 2005 and 2006 provide evidence that listed companies, in general, have complied with the corporate governance recommendations (New Zealand Securities Commission, 2005, 2006). However, little has been said about the impact of compliance on firm financial performances.

Third, it is unclear whether the New Zealand Securities Commission recommendations will have the desired effect on the investors' confidence and on the quality of corporate governance practiced as intended. The New Zealand Securities Commission recommendations are only a voluntary mechanism; therefore, companies can choose not to comply with certain aspects of the principles or guidelines so long as they explain the reason for non-compliance. There is no penalty for non-compliance, just a requirement for explicit disclosure. The lack of standards or metrics to measure what constitutes a 'good explanation' may make New Zealand Securities Commission recommendations less helpful.

For the reasons stated above, this study is notable in a number of ways: firstly, it focuses on small cap firms instead of large firms which were the focus of governance research undertaken overseas. Secondly, small firms in New Zealand are comparatively smaller than the similar type firms in larger economies which may provide evidence that is different from studies conducted overseas. Thirdly, the effect of small cap firms' compliance on performances is not widely researched. Fourthly, small firms are not ranked highly by potential board members who are seeking board appointments and the problem is exacerbated in New Zealand especially where the pool of directors available for board appointments are small. This makes the study of small cap firms in New Zealand more interesting. Finally, this study focuses on the wider range of variables including governance practices recommended by the New Zealand Securities Commission which has not received attention in the other governance studies.

This study aims to examine whether the corporate governance practices recommended by the New Zealand Securities Commission (2004) have any effect, either positively or negatively, on firm financial performances. In this context, the objectives of this article are to discuss briefly the current state of corporate governance practices of small cap listed companies in New Zealand, and establish corporate governance factors that significantly contribute towards the firm financial performances. A related objective of this study is to indicate those corporate governance practices which do not significantly influence the firm financial performances.

The next section provides a literature review on the topic which is followed by a description of the methods and procedures used for the empirical study. The results and conclusion follows next.

2 Literature and evidence

Agency theoretic literature provides mechanisms that could be used by the shareholders to resolve the key problems identified by Berle and Means (1932) regarding the separation of ownership and control. As managers are assumed to be utility maximisers, self-seekers and opportunist, therefore, the governance system must introduce mechanisms that will align the interests of principals (owners) with those of the agents

(managers) (Jensen and Meckling, 1976; Fama and Jensen, 1983). The corporate governance researchers have focused on both internal and external governance mechanisms that would minimise the agency costs associated with the business within a firm (Macey, 1997, p.602). The internal governance mechanisms are characterised as insider (officers and directors) ownership, board independence, board size, board committees and the level of debt and the external mechanism includes block ownership. The section below provides evidence from the literature regarding the use of such mechanisms and their relationship to firm financial performance.

2.1 Insider ownership

Berle and Means (1932) and Jensen and Meckling (1976) suggest that increasing equity ownership of corporate insiders (officers and directors) will lead to better alignment of their interest with that of the outside shareholders. A number of empirical studies do support the claim that increasing the level of insider equity ownership of corporate insiders (managers and directors) will lead to better firm financial performance. For example, Mehran (1995) examined 153 randomly selected manufacturing firms in the USA and reported that firm performance (measured by Tobin's Q and Return On Assets (ROA)) was positively related to the percentage of the equity held by managers. Morck et al. (1988) found that insider ownership between 0 and 5% and McConnell and Servaes (1990) found insider ownership up to 40% has a significantly positive influence on Tobin's Q. Rationalising the differences in the findings between Morck et al. and McConnell and Servaes, Kole (1995) suggested that for small firms, convergence of interest holds over a larger range of insider ownership. Studies conducted in New Zealand by Hossain et al. (2001) and Elayan et al. (2003) have also found a significantly positive relationship between insider ownership and Tobin's Q. Ang et al. (2000) found that agency cost (measured by the ratio of operating expenses to annual sales) of 1708 small corporations decreases as the proportion of equity held by managers increases. These studies do provide evidence that low levels of equity ownership by corporate insiders have a direct positive influence on firm performance measured by Tobin's Q.

Other studies have found a high level of insider ownership leads to a negative influence on firm performance measured by Tobin's Q. Morck et al. found managerial ownership in the range of 5–25% and McConnell and Servaes found insider ownership above 50% leads to an entrenchment effect.

There are growing concerns in the agency literature that studies on insider ownership may have ignored the endogeneity of ownership structure. Studies conducted by Demsetz and Villalonga (2001) and Welch (2003) considered the endogeneity of insider ownership and found no significant relationship exists between ownership and firm performance. However, Gunasekarage et al. (2006), after considering for endogeneity of ownership in 50 large firms in New Zealand, found a significant negative relationship between insider ownership and Tobin's Q. They concluded that insider ownership is not an effective mechanism for large firms in New Zealand for aligning the interest of the principal and the agent.

Based on Kole's (1995) suggestion that insider ownership may impact large and small firms differently, it is important to examine the effect insider ownership will have on small cap companies. Since insider ownership is a new concept for New Zealand, any increase in insider ownership may lead to a positive effect on firm's financial performance.

Hypothesis 1 (H1): Insider ownership is positively associated with a small companies' financial performance.

2.2 Board independence

Fama and Jensen (1983) described the role of the board of directors as an integral internal corporate governance mechanism in mitigating agency problem. The board reduces the agency conflict by separating the management and control aspects of the decision-making process. The management aspect includes the initiation and implementation of decisions while the control aspect involves the ratification and monitoring of decisions. From the control perspective, the role of the board is associated with the replacement of poorly performing managers. However, Jensen (1986) argued that the board has been ineffective in recognising the problems faced by the firm and standing up to the management, especially when tough decisions are necessary.

To improve the board vigilance, Cadbury (1992) suggested that the boards of companies should be independent of the management. Board independence is achieved by having outside, unrelated directors on the boards who can professionally and objectively assess managerial performance, determine their remuneration and replace them if necessary (see Fama, 1980; Fama and Jensen, 1983; Weisbach, 1988; Zahra and Pearce, 1989). Rhoades et al. (2000) suggest that non-executive/independent directors are financially independent from management which makes it easier for them to exert control over managerial self-interest and opportunism. The New Zealand Securities Commission (2004) recommended that all publicly listed companies should have an independent chair, the majority of its members should be non-executive/independent directors and a minimum of one-third of the members should be independent directors.

However, the empirical research on board independence and firm performance has found mixed results. A number of studies have found no relationship between board independence and firm performance (see Mace, 1986; Bryd and Hickman, 1992; Daily and Dalton, 1992; Chin et al., 2003). A number of studies have reported a negative relationship between board independence and firm performance (see Chaganti et al., 1985; Baysinger et al., 1991; Agrawal and Knoeber, 1996; Yermack, 1996; Bhagat and Black, 1998; Klein, 1998; Gunasekarage et al., 2006).

Despite these opposing views, it is widely accepted that board effectiveness is improved by having a high proportion of outside (unrelated) directors (see Pfeffer and Salancik, 1978; Mizruchi, 1983; Zahra and Pearce, 1989) and a number of studies have also reported a positive relationship between board independence and firm performance (see You et al., 1986; Rosenstein and Wyatt, 1990; Denis and Sarin, 1997; Hossain et al., 2001). The reason for a positive effect of board independence on performance is that outside (unrelated) directors bring a variety of perspectives (skills, resources, experience and networking) that enhance environmental analysis and organisational problem-solving techniques (Milliken and Martins, 1996). Also, outside (unrelated) directors represent shareholder interest at the 'upper echelons' (Hambrick and Mason, 1984) of the organisations which might not be the case if the board comprised insider directors. These studies suggest that outside (unrelated) directors can be an effective mechanism to monitor managerial behaviour provided they have sufficient influence over management (Bonn, 2004).

The studies undertaken by Hossain et al. (2001) and Gunasekarage et al. (2006) suggest that many New Zealand firms have a majority of outside directors on the

board; therefore, a positive relationship is expected between non-executive/independent directors and small cap companies' firm performance in New Zealand.

Hypothesis 2 (H2): The proportion of non-executive/independent directors on the board is positively associated with small companies' financial performance.

2.3 Board size

Board size is regarded as an important determinant of effective corporate governance (see Jensen, 1983; Pearce and Zahra, 1992; Dalton et al., 1999). Jensen (1983) suggests that a board should have a maximum of seven or eight members to function effectively. Smaller boards are more likely to reach consensus and also allow members to engage in genuine debate and interaction (Firstenberg and Malkiel, 1994). However, larger boards tend to provide an increased pool of expertise, have better ability to form environmental links and secure critical resources (Pfeffer, 1972, 1973; Pfeffer and Salancik, 1978; Goodstein et al., 1994). Singh and Harianto (1989) suggest that larger boards may enhance corporate governance by reducing CEO domination and the meta-analysis by Dalton et al. (1999) showed that board size is positively associated with firm financial performance.

However, a number of studies have highlighted disadvantages associated with larger boards. For example, Forbes and Milliken (1999), Lipton and Lorsch (1992) and Gladstein (1984) have suggested that large boards are less cohesive, more difficult to coordinate and are prone to fractionalisation and in-fighting (Zahra and Pearce, 1989; Ocasio, 1994). Therefore, largeness can significantly inhibit a board's ability to initiate strategic decisions (Goodstein et al., 1994). A number of studies have also reported a negative relationship between board size and firm financial performance, including Yermack (1996), Hossain et al. (2001) and Gunasekarage et al. (2006) who found inverse relationship between board size and Tobin's Q. Eisenberg et al. (1998) also found similar results for small- and medium-size firms in Finland.

It is important to note that the average board size of large firms in New Zealand are less than 10 members (Gunasekarage et al., 2006) which can be argued to be more than optimal. However, a smaller pool of directors available for companies to choose from provides difficulty in terms of obtaining the right mix of skills, expertise and environmental linkages in the boardroom. This will be difficult to balance with smaller board sizes. Therefore, companies in New Zealand tend to have larger board sizes. The problem is exacerbated for smaller companies as they may have difficulty in attracting good directors with their limited resources and size. Also, becoming a director for a small company may not be seen as enhancing a directors reputation in the same way as joining the board of larger firms might do. In order for small companies to have the level of expertise required in the boardroom may require them to have a larger board sizes. Therefore, larger board sizes may also be found in small cap companies which may have a positive effect on firm performances.

Hypothesis 3(H3): Board size is positively associated with small company's financial performance.

2.4 Block ownership

The theoretical effect of block ownership on firm value is a priori indeterminate (Pedersen and Thomsen, 2003). Research provides evidence of blockholders or their

representative on boards as directors or officers, implying more monitoring, reduced agency costs, higher expected profits and share prices. Blockholders have stronger incentives to monitor firms because of greater incentive alignment between owners and managers (Holderness, 2003). However, if blockholders have other goals instead of maximising value for the shareholders, it may have adverse effect on the minority shareholders (see Fama and Jensen, 1983; Morck et al. 1988; Shleifer and Vishny, 1997; La Porta et al., 2000; Holderness, 2003). Research provides evidence that blockholders do benefit at the expense of the minority shareholders by using access to insider information for their own advantage, excess expenditure according to their own preferences and entrenchment of managers (see Levy, 1982; Rydqvist, 1987; Horner, 1988; Zingales, 1994; Shleifer and Vishny, 1997; Gugler, 1999). One of the consequences of this is that minority shareholders may reduce their level of investment, thus causing illiquidity in the stock market. Alternatively, blockholders may become risk averse and focus only on the low risk, low return projects because disproportionate share of their wealth are being invested in a single firm. These events combined would have a positive impact on performance at low levels of block ownership, negative effect on performance at high levels of block ownership and zero impact on performance at optimum level of block ownership (Demsetz and Lehn, 1985). Therefore, blockholding could have a positive, negative or insignificant effect on firm value.

Blockholding is a common feature of the ownership structure of both small and large firms in New Zealand. Gunasekarage et al. (2006) reported an average blockholding of 63% in large firms. This shows that New Zealand large firms do rely on the expertise and experience of the blockholders. In small companies, the founder(s) tends to hold a large portion of the shares and based on interest alignment this could lead to an improvement in firm performance.

Hypothesis 4(H4): Block ownership will have a positive effect on small companies' financial performance.

2.5 Use of debt

Debt allows firms to voluntarily transfer the monitoring and evaluating function of the managers to the participants of the capital market (debtholders) (see Jensen, 1986; Agrawal and Knoeber, 1996; Begley and Feltham, 1999). Debt provides both monitoring and evaluating functions in two ways. First, debt requires a portion of the firm's cash flow to be returned to the debtholders which reduces the discretionary power of the managers. Second, debt financing decreases the firm's need for new share emissions and allows voting rights to be concentrated in the hands of the remaining shareholders. Therefore, debt forces managers to work harder and consume fewer perquisites which lessen the probability of bankruptcy and the loss of control and reputation (Grossman and Hart, 1982). Berger et al. (1997) found a lower level of debt in firms where the CEO appears to be entrenched; that is, CEOs who have had a long tenure and compensation plans are not closely linked to firm performance. Also, they find lower debt in firms where a CEO does not face significant monitoring; have large boards with few outside directors and no large blockholders. They report that firms significantly increase their leverage when they experience some discipline (such as a takeover attempt, involuntary CEO departure or arrival of outside blockholder) or receive enhanced managerial incentives through the management compensation contract.

Conversely, Fama (1980) states that when managers are at risk (both equity and reputation), there exists a tendency to increase leverage beyond the 'optimal capital structure' to increase the voting power of their equity stakes and reduce the likelihood of a takeover and the resulting possible loss of job tenure. A relatively high debt to assets ratio may be used to make a firm less attractive as a takeover target, substituting for the use of other takeover defence mechanisms (see Knoeber, 1985; Agrawal and Knoeber, 1996; Byrd and Stammerjohan, 1997; Begley and Feltham, 1999). Also a high level of debt may subject the firm to agency costs of debt, especially in the form of risk-shifting incentives. Shareholders may prefer riskier projects to compensate for additional risk faced by a high level of debt financing, thus raising firm's earning volatility.

The above findings suggest that debt may have either positive or negative effect on firm performance. Gunasekarage et al. (2006) reported that the average debt to assets ratio for the large firms in New Zealand was 48% which indicates that the large New Zealand companies tend to rely on debt as a source of finance and debtholders tend to provide a source of external scrutiny which may have a positive effect on firm performance. Small cap companies may also rely on debt as a source of funding.

Hypothesis 5(H5): Debt will have a positive effect on small companies' financial performance.

2.6 Dividend policy

Dividends play a role in controlling equity agency problems by facilitating primary capital market monitoring of the firm's activities and performance (Easterbrook, 1984). Higher dividend payouts increase the likelihood of a firm selling common stock in primary capital market. In theoretical studies Fluck (1998) and Myers (2000) presented agency-theoretic models of dividend behaviour, where managers pay dividends in order to avoid disciplining action by shareholders. Jensen (1986) argues that continued dividend payments help to dissipate cash which might otherwise have been wasted on non-value-maximising projects, therefore reducing the extent of overinvestment by managers. The company's target ratio of dividend to earnings operates as a control instrument, just like debt financing. The higher the payout ratio, the smaller the amount of free cash flows. Also, dividends impose much less severe constraints on firms' cash flows because their payment is not mandatory.

Crutchley and Hansen (1989) reported results that are consistent with the dividend policy acting as a corporate monitoring vehicle and with substitution effects between dividend payments and insider ownership and debt. Although Zeckhauser and Pound (1990) suggest that (after controlling for firm size and industry) the effect of dividend policy on other governance mechanisms may be indirectly controlled, in New Zealand it could be directly used as a mechanism to monitor manager's behaviour. With a small pool of directors available for the board appointments, it may become difficult for small companies to engage good directors suggesting that utilising dividend payouts as a means of getting capital market involvement in monitoring the manager's performance may be performance enhancing.

Hypothesis 6 (H6): Dividend payouts will have a positive effect on small companies' financial performance.

2.7 Board committees

The New Zealand Securities Commission (2004) recommendations recommend the appointment of audit committees to oversee the audit of the financial statements and a remuneration committee for setting remuneration of executive directors. The appointment of such committees is expected to have a positive effect on firm performance. Empirical research that focuses on the presence of an audit committee shows associated firms with fewer financial reporting problems (McMullen, 1996). On the other hand, Klein (1998) found evidence of a positive relationship between the presence of a remuneration committee and firm performance. However, this relationship was not highly significant. Gunasekarage et al. (2006) found a positive relationship between remuneration committee and performance when managers have equity holding in the firm. However, the relationship changes to negative when the firm has blockholders. This indicates that blockholding is a better mechanism for providing vigilance when setting remuneration of executive directors compared to a remuneration committee.

Hypothesis 7a (H7a): Audit Committee will have a positive effect on small companies' financial performance.

Hypothesis 7b (H7b): Remuneration Committee will have a positive effect on small companies' financial performance.

3 Methodology and procedure of analysis

3.1 Data and data sources

Data for this study were obtained from IRG (formerly Datex) databases for the small cap companies listed in the New Zealand Stock Exchange (NZSE) for the period 2001–2005. The sample firms covered all sectors of the economy, including utilities, insurance and financial institutions. The companies that did not have all the required information were excluded from the sample. From the 444 firms in the sample period, 89 firms were excluded because of missing information; the remaining 355 firms were included in the sample.

3.2 Dependent variables

Three commonly used performance measures, Tobin's Q, Operating Income (OPINC) and ROA, were used as dependent variables for this study. Tobin's Q was approximated by taking the sum of the market value of common equity, book value of long-term liabilities and book value of net short-term debt divided by the book value of total assets. The dependent variable is employed as a proxy for firm financial performance; a high score signifies a favourable performance. OPINC is calculated by dividing Earnings Before Interest, Tax, Depreciation and Amortisation (EBITDA) by total assets. A high score signifies a favourable performance. ROA is determined by dividing income after tax by total assets. The score signifies a favourable performance. The values for all the dependent variables were obtained from the IRG databases.

3.3 *Independent and control variables*

The independent and control variables are the factors that influence firm performance either positively or negatively. Twelve independent and control variables were selected which are represented by the following:

- 1 IOWN: Insider ownership defined as the proportion of equity held by all members of the board of directors including top officers of the firm who are members of the board divided by total shares outstanding.
- 2 BOWN: Block ownership is the proportion of shares held by the 20 largest shareholders of the firm.
- 3 BDIND: Proportion of non-executive/independent directors on the board.
- 4 BDS: Board size is the total number of directors on the board.
- 5 FD: Proportion of female directors on the board.
- 6 LEV: Is the proportion of the debt defined as long-term liabilities plus short-term liabilities divided by the total assets.
- 7 Log (TA): Log of total assets which is proxy for size.
- 8 AUDCOM: Dummy variable set equal to 1 if companies have an audit committee, otherwise it is set equal to 0.
- 9 REMCOM: Dummy variable set equal to 1 if companies have a remuneration committee, otherwise it is set equal to 0.
- 10 DIV2TA: Book value of the dividend paid by the firm divided by book value of the total assets.
- 11 FMRISK: Standard deviation of the return on assets of the firms for the period 2001–2005.
- 12 IND: Dummy variable equal to 1 if the industry is bank/finance, insurance or utility otherwise equal to 0.

The data for the independent and control variables were collected from the IRG databases. The following section outlines the models used in this study.

3.4 *Model specification*

Demsetz and Lehn (1985) and Demsetz and Villalonga (2001) have argued that ownership is endogenously determined and this may have impacted the findings of the studies that have treated ownership as exogenous. Therefore, this study is similar to Demsetz and Lehn (1985) and Demsetz and Villalonga (2001) in the treatment of ownership as endogenous variable. The two ownership variables considered in this study are Insider Ownership (IOWN) and Block Ownership (BOWN). The pooled Ordinary Least Squares (OLS) and Two-Stage Least Squares (2SLS) techniques were used in this study. In the first stage, ownership was determined by using OLS regression technique, in the second stage, the values determined in the first-stage OLS regression were used to determine performance. The econometric models being formulated are

based on Tobin's Q, ROA and OPINC as dependent variables. The model was formulated as follows:

$$\text{IOWN} = \alpha_1 + \beta_{10}\text{PERF} + \beta_{11}\text{BOWN} + \beta_{12}\text{BDIND} + \beta_{13}\text{FD} + \beta_{14}\text{BDS} + \beta_{15}\text{LEV} + \beta_{16} \log(\text{TA}) + \beta_{17}\text{FMRISK} + e_1 \quad (1)$$

$$\text{BOWN} = \alpha_2 + \beta_{20}\text{PERF} + \beta_{21}\text{IOWN} + \beta_{22}\text{BDIND} + \beta_{23}\text{FD} + \beta_{24}\text{BDS} + \beta_{25}\text{LEV} + \beta_{26} \log(\text{TA}) + \beta_{27}\text{FMRISK} + e_2 \quad (2)$$

$$\text{PERF} = \alpha_3 + \beta_{30}\text{IOWN} + \beta_{31}\text{BOWN} + \beta_{32}\text{BDIND} + \beta_{33}\text{BDS} + \beta_{34}\text{FD} + \beta_{35}\text{LEV} + \beta_{36} \log(\text{TA}) + \beta_{37}\text{DIV2TA} + \beta_{38}\text{AUDCOM} + \beta_{39}\text{RECOM} + \beta_{40}\text{FMRISK} + \beta_{41}\text{IND} + e_3 \quad (3)$$

where

PERF = Firm Performance (Tobin's Q, ROA, OPINC).

4 Empirical results

A summary of sample size used in this study is provided in Panel A of Table 1. Panel B provides a summary of descriptive statistics for the pooled data, including means, medians, minimum, maximum and inter-quartile ranges. The mean of Tobin's Q ratio is 2.892, with a median of 1.023. The mean (median) of ROA is -0.31% (2.5%) and the mean (median) of operating income to total assets ratio (OPINC) is -5.4% (8%). The mean proportion of insider holding (IOWN) is 31.3% with a median of 26.3%. The 25th percentile is 6.5% and 75th percentile is 53.1%.

Gunasekarage et al. (2006) studied 50 large firms in New Zealand for the period 1999–2005 and reported mean (median) IOWN of 14.4% (1.3%) and lower and upper percentiles of 0.1% and 23.1%, respectively. These figures indicated that insider holding in small companies is higher compared to large firms in New Zealand. This may have arisen from initial owners retaining a fraction of the shares of the company after becoming public and also taking up officer and director positions in the company.

Table 1 Sample descriptive statistics (Panel A: Sample size)

<i>Year</i>	<i>Sample size</i>	<i>Total number of listed ordinary shares (000)</i>
2001	70	9,401,920
2002	69	9,673,841
2003	73	9,616,441
2004	73	13,132,441
2005	70	13,776,578
Total	355	55,601,221

Table 1 Sample descriptive statistics (Panel B: Pooled cross-section time-series sample descriptive statistics for selected variables)

<i>Variable</i>	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>Inter-quartile range</i>
Q-ratio	2.892	1.023	-0.309	15.689	0.580 – 2.312
ROA	-0.306	0.025	-15.244	2.068	-0.113 – 0.071
OPINC	-0.054	0.080	-2.735	0.879	-0.056 – 0.149
IOWN	0.313	0.263	0.000	0.891	0.065 – 0.531
BOWN	0.693	0.714	0.032	0.982	0.579 – 0.835
BDIND	3.880	4	0	12	3 – 5
BDS	5.34	5	1	13	4 – 6
FD	0.17	0	0	2	
AUDCOM	0.76	1	0	1	
REMCOM	0.54	1	0	1	
DIV2TA	0.023	0.000	0.000	0.661	0.000 – 0.331
LEV	0.455	0.372	0.007	3.053	0.204 – 0.587
Log (TA)	4.462	4.466	1.820	6.447	3.769 – 5.144
FMRISK	0.193	0.081	0.000	0.919	0.028 – 0.285
IND	0.090	0.000	0	1	

Note: Q ratio is Tobin's Q approximated by taking the sum of the market value of common equity, book value of long-term liabilities and book value of net short-term debt divided by the book value of total assets. ROA is net income divided by total assets. OPINC is EBITDA divided by total assets. IOWN is inside ownership defined as the proportion of equity held by all members of the board of directors, including top officers of the firm who are members of the board to total shares outstanding. BOWN is the proportion of shares held by 20 largest shareholders of the firm. BDIND is the number of independent non-executive directors. BDS is the size of the board of directors. FD is the number of female directors. AUDCOM is dummy variable set equal to 1 if companies have an audit committee, otherwise it is set equal to 0. REMCOM is dummy variable set equal to 1 if companies have remuneration committee, otherwise it is set equal to 0. DIV2TA is the dividend divided by book value of the total assets. LEV is the proportion of the debt defined as long term liabilities plus short-term liabilities divided by the total assets. Log (TA) is the log of total assets is proxy for size. FMRISK is the standard deviation of the ROA of the firms in the sample period. IND is the dummy variable equal to 1 if the industry is bank/finance, insurance, otherwise equal to 0.

The proportion of stock held by the 20 largest shareholders (BOWN) is 69.3%. The mean (median) blockholding (BOWN) is 69.3% (71.4%). The inter-quartile range for BOWN is 57.9–83.5%. Gunasekarage et al. reported mean (median) BOWN of 63% (65%) and the inter-quartile range of 48–77% for the large firms in New Zealand. BOWN is an important component of small company ownership structure and the BOWN ratio was slightly higher in small companies compared to the large firms. The introduction of new legislations that restrict blockholding in New Zealand firms has not made any major effect on firm's ownership structure. From a corporate governance point of view, the figures for both IOWN and BOWN indicated these were mechanisms to control agency problem in small firms.

The median number of non-executive/independent directors is 4 with the narrow inter-quartile range of 3–5. The typical (median) board has 5 members with an inter-

quartile range of 4–6 members. Board seems to play an important role in mitigating agency conflicts. The mean number of female directors on boards is 0.17. The minimum number is 0 and the highest is 2. This indicates that there is awareness among shareholders in terms of diversity in the boardroom.

On an average, 76% of the boards have Audit Committees and 54% of the boards have Remuneration Committees in small companies. Gunasekarage et al. reported that 92% of the large firms in New Zealand have Audit Committees and 77% have Remuneration Committees. This shows that small companies have largely complied with New Zealand Securities Commission recommendations regarding appointment of Audit and Remuneration Committees.

The mean (median) dividend to total assets is 2.3% (0.00%) and inter-quartile range of 0.00–3.31%. The mean (median) leverage in small companies is 45.5% (37.2%). Gunasekarage et al. reported mean (median) leverage in large firms of 48% (47.2%). This shows that small companies have less leverage arguably because they may have difficulty in obtaining it compared to large firms. The mean (median) log (TA) is 4.462 (4.466). The mean (median) firm risk is 19.3% (8.1%). The risk in small companies is higher compared to large firms which had mean (median) risk of 5.6% (2.8%).

A pairwise correlation matrix for the independent and control variables is provided in Panel A of Table 2. The highest correlation is between BDS and BDIND at 0.748; a result consistent with well-known evidence that the number of non-executive/independent directors is positively related to board size. The other high correlations are between log (TA) and BDS (0.606), REMCOM and AUDCOM (0.574), FMRISK and log (TA) (–0.528), log (TA) and BDIND (0.478). With these exceptions, other correlations range between –0.304 and 0.382.

The correlation between independent and dependent variables is provided in Panel B of Table 2. The dependent variables are Tobin's Q, ROA and OPINC. The results show that dependent variables are negatively correlated with IOWN indicating IOWN is at a low level which is not optimal to have any positive effect on performance. On the other hand, BOWN is positively correlated with all the dependent variables but is not statistically significant. Presence of Female Directors (FD) on boards (board diversity) is seen to have a positive effect on all the dependent variables. However, none of the correlations is statistically significant. The correlation between Board Size (BDS) and Tobin's Q is negative implying larger boards have negative effect on performance. However, the correlation between BDS and ROA and between BDS and OPINC are positive. This is mainly because BDS is positively correlated with size (total assets). Since both ROA and OPINC are derived by dividing by total assets which gives a positive effect. Board Independence (BDIND), on the other hand, has a positive correlation with Tobin's Q but is negatively correlated with ROA and OPINC. Leverage (LEV) is only positively correlated with Tobin's Q but negatively correlated with ROA and OPINC. The correlation between LEV and dependent variables is statistically significant at 99% level. The correlation between Dividend to Total Assets (DIV2TA) and the dependent variables is positive and only correlation with Tobin's Q is not statistically significant. The correlation between size (log (TA)) and Tobin's Q is negative indicating size has a negative effect on performance. However, correlation between size and ROA and OPINC is positive and is statistically significant. The correlation is statistically significant at 99% confidence levels. The presence of audit committee has a negative effect on Tobin's Q and is not statistically significant. However, correlation between AUDCOM and ROA or OPINC is positive but not

statistically significant. Presence of Remuneration Committee (REMCOM) has a negative effect on performance but correlation is not statistically significant. Risk (FMRISK) has a negative effect on performance and correlations are statistically significant. Industry (IND) has a negative effect on Tobin's Q but has a positive effect on ROA and OPINC.

The extant literature identifies ownership to be an endogenous variable (see Demsetz and Lehn, 1985; Demsetz and Villalonga, 2001; Denis, 2001). Consistent with this view, this study identifies insider ownership (IOWN) and block ownership (BOWN) to be endogenous variables. Tables 3 and 4 report examination of the main effects of the explanatory variables discussed in hypotheses H1–H7.

Tables 3 and 4 present OLS and 2SLS regression results for IOWN, BOWN and dependent variables (Tobin's Q, ROA and OPINC). The estimates for the ownership variables IOWN and BOWN were estimated first by using OLS regression technique where firm performances were treated as an independent variable. The results of the analysis are presented in Columns (2), (3), (6) and (7) of Table 3 and Columns (2) and (3) of Table 4. In the second stage, 2SLS regression techniques were used to determine the estimates for equation (3) using firm performance as the dependent variable (Tobin's Q, ROA and OPINC). The results of this analysis are presented in Columns (4) and (8) of Table 3 and Column (4) of Table 4.

In our estimation of IOWN as a dependent variable, we found the model has reasonable predictive power, that is, adjusted R^2 ranges from 0.182 to 0.229. This indicates that IOWN is endogenously determined in small companies. All firm performance indicators have negative coefficients and only Tobin's Q is statistically significant at 99% confidence level. The coefficients for BOWN are positive in all three cases and are statistically significant at 99% confidence level. This shows that BOWN has a positive influence in determining insider ownership in small companies. The results also indicate that presence of non-executive/independent directors (BDIND) on the board has a negative effect on IOWN. The variable BDIND has a negative coefficient in all three cases and is statistically significant at 99% confidence level. The variable BDS has a negative effect on IOWN as their coefficients in all cases are negative. The presence of FD on the board also has a negative effect on IOWN in all cases as well and is statistically significant. Use of LEV has a positive effect on IOWN. Size ($\log(TA)$) and risk (FMRISK) also have a negative influence on IOWN.

In our estimation of BOWN as a dependent variable, we found the model has a reasonable predictive power, that is, adjusted R^2 ranges from 0.143 to 0.159. This indicates that BOWN is not endogenously determined in small companies and to some extent; initial owner could still be holding a large portion of the firm. Also, blockholding is not influenced by firm performance. All firm performance indicators have a negative coefficient apart from Tobin's Q which has a positive coefficient and is statistically significant at 99% confidence level. The results show that IOWN has a positive effect on blockholding and is statistically significant at 99% confidence level. The results show that non-executive/independent directors (BDIND) on boards of small companies have a negative effect on BOWN. The variable BDS has a negative effect on BOWN as its coefficient in all cases is negative. The presence of FD on the board has a positive effect on BOWN in all the cases. Use of LEV has a negative effect on BOWN. Size ($\log(TA)$) and risk (FMRISK) also have positive influence on BOWN.

The results of 2SLS regression are presented in Columns (4) and (8) of Table 3 and Column (4) of Table 4. The model has reasonable predictive power, that is, adjusted R^2

ranges from 0.181 to 0.259. The results in Column (4) and (8) of Table 3 show that IOWN has a negative coefficient indicating it has negative influence on firm performance measured by Tobin's Q and IOWN coefficient is statistically significant at 99% confidence level. This could be that IOWN in small companies is below optimal. Therefore, null hypothesis (H1) is rejected. BOWN has a positive coefficient when determining Tobin's Q and is statistically significant at 99% confidence level. Therefore, null hypothesis (H4) is accepted. This shows that presence of block owners has a positive effect on firm financial performance measured by Tobin's Q. The coefficient of BDIND is positive when determining Tobin's Q and is statistically significant at 95% confidence level. Therefore, null hypothesis (H2) is accepted. This shows that outside directors in small companies in New Zealand do provide expertise required in the boardroom. However, this finding is contrary to other studies where BDIND has a negative effect on firm performance. The coefficient for BDS is negative and is not statistically significant. Therefore, null hypothesis (H3) is rejected. This finding is consistent with other studies that board size has a negative effect on firm performance. The coefficient of LEV is positive when determining Tobin's Q and is statistically significant. The null hypothesis (H5) is also accepted. The null hypothesis (H6) is also accepted as the coefficients for DIV2TA is positive in all three cases and it is statistically significant at 99% confidence level for OPINC. The null hypothesis (H7a) is accepted as the coefficient of AUDCOM is positive and statistically significant at 99% confidence level. This shows that presence of Audit Committees does provide vigilance as required by the board and it has a positive effect on firm performance measured by Tobin's Q. The null hypothesis (H7b) is rejected as REMCOM has a negative coefficient in all the cases and is not statistically significant.

The Columns (5) and (9) in Table 3 and Column (5) in Table 4 show similar results to what is displayed in Column (4) and (8) in Table 3 and Column (4) in Table 4. The ownership variables (IOWN² and BOWN²) are squared to see if there is a curvilinear relationship between these variables and firm performances as was suggested by Morck et al. (1988). The results do show that IOWN changes signs from negative to positive indicating high levels of insider ownership have a positive effect on firm performance measured by Tobin's Q.

Table 2 Panel A: Correlation matrix for independent variables

	<i>IOWN</i>	<i>BOWN</i>	<i>BDS</i>	<i>BDIND</i>	<i>FD</i>	<i>AUDCOM</i>	<i>REMCOM</i>	<i>Log(TA)</i>	<i>LEV</i>	<i>DIV2TA</i>	<i>FMRISK</i>	<i>IND</i>
<i>IOWN</i>	–											
<i>BOWN</i>	0.382** (0.000)	–										
<i>BDS</i>	–0.122* (0.022)	–0.112* (0.035)	–									
<i>BDIND</i>	–0.151** (0.007)	–0.106 (0.056)	0.748** (0.000)	–								
<i>FD</i>	–0.163** (0.002)	0.000 (0.997)	0.150** (0.000)	0.125*** (0.000)	–							
<i>AUDCOM</i>	–0.055 (0.300)	–0.127* (0.017)	0.484** (0.000)	0.352*** (0.000)	–0.024** (0.007)	–						
<i>REMCOM</i>	0.047 (0.375)	–0.031 (0.566)	0.484** (0.000)	0.248** (0.000)	0.126 (0.891)	0.574** (0.000)	–					

Table 2 Panel A: Correlation matrix for independent variables (continued)

	IOWN	BOWN	BDS	BDIND	FD	AUDCOM	REMCOM	Log(TA)	LEV	DIV2TA	FMRISK	IND
Log(TA)	-0.003 (0.962)	0.021 (0.694)	0.606** (0.000)	0.478** (0.000)	-0.044 (0.416)	0.435** (0.000)	0.348** (0.000)	-				
LEV	0.031 (0.561)	0.023 (0.672)	0.038 (0.472)	0.119** (0.002)	0.023 (0.662)	0.199** (0.000)	0.236** (0.000)	-0.166 (0.132)	-			
DIV2TA	-0.045** (0.006)	0.140 (0.079)	0.052** (0.012)	0.149* (0.012)	-0.120 (0.134)	0.060** (0.006)	0.029 (0.018)	0.245** (0.006)	0.110 (0.169)	-		
FMRISK	-0.003 (0.955)	0.061 (0.253)	-0.304** (0.000)	-0.290** (0.000)	0.026 (0.621)	-0.147** (0.006)	-0.085* (0.014)	-0.528** (0.000)	0.105 (0.049)	-0.043 (0.596)	-	
IND	0.191** (0.000)	0.204** (0.000)	-0.019 (0.721)	0.098** (0.00)	0.006 (0.909)	0.133* (0.012)	0.123* (0.081)	0.093 (0.081)	0.133 (0.012)	0.067 (0.401)	-0.001 (0.995)	

Note: ** Correlation is significant at the 0.01 level (2-tailed), * Correlation is significant at the 0.05 level (2-tailed).

Q ratio is Tobin's Q approximated by taking the sum of the market value of common equity, book value of long term liabilities and book value of net short-term debt divided by the book value of total assets. ROA is net income divided by total assets. OPINC is EBITDA divided by total assets. IOWN is inside ownership defined as the proportion of equity held by all members of the board of directors, including top officers of the firm who are members of the board to total shares outstanding. BOWN is the proportion of shares held by 20 largest shareholders of the firm. BDIND is the proportion of independent non-executive directors. BDS is the size of the board of directors. FD is the proportion of female directors on the board. AUDCOM is dummy variable set equal to 1 if companies have an audit committee, otherwise it is set equal to 0. REMCOM is dummy variable set equal to 1 if companies have remuneration committee, otherwise it is set equal to 0. DIV2TA is the dividend divided by book value of the total assets. LEV is the proportion of the debt defined as long term liabilities plus short-term liabilities divided by the total assets. Log(TA) is the log of total assets is proxy for size. FMRISK is the standard deviation of the ROA of the firms in the sample period. IND is the dummy variable equal to 1 if the industry is bank/finance, insurance, otherwise equal to 0.

Table 2 Panel B: Correlation between dependent variable and independent variables

	<i>Q</i>	<i>ROA</i>	<i>OPINC</i>
IOWN	-0.229** (0.000)	-0.009 (0.873)	0.053 (0.323)
BOWN	0.026 (0.630)	0.003 (0.958)	0.019 (0.728)
BDS	-0.185** (0.000)	0.176** (0.001)	0.215** (0.000)
BDIND	0.059 (0.271)	-0.100 (0.059)	-0.001 (0.987)
FD	0.170 (0.001)	0.038 (0.484)	0.001 (0.988)
LEV	0.199** (0.000)	-0.381** (0.000)	-0.218** (0.000)
DIV2TA	0.010 (0.849)	0.109* (0.041)	0.228** (0.000)
Log (TA)	-0.344** (0.000)	0.344** (0.000)	0.336** (0.000)
AUDCOM	-0.021 (0.698)	0.020 (0.705)	0.063 (0.240)
REMCOM	-0.071 (0.180)	-0.016 (0.759)	0.040 (0.454)
FMRISK	0.184** (0.000)	-0.222** (0.000)	-0.248** (0.000)
IND	-0.096 (0.072)	0.039 (0.461)	0.042 (0.425)

Note: ** Correlation is significant at the 0.01 level (2-tailed), * Correlation is significant at the 0.05 level (2-tailed).

Q ratio is Tobin's Q approximated by taking the sum of the market value of common equity, book value of long-term liabilities and book value of net short-term debt divided by the book value of total assets. ROA is net income divided by total assets. OPINC is EBITDA divided by total assets. IOWN is inside ownership defined as the proportion of equity held by all members of the board of directors, including top officers of the firm who are members of the board to total shares outstanding. BOWN is the proportion of shares held by 20 largest shareholders of the firm. BDIND is the proportion of independent non-executive directors. BDS is the size of the board of directors. FD is the proportion of female directors on the board. AUDCOM is dummy variable set equal to 1 if companies have an audit committee, otherwise it is set equal to 0. REMCOM is dummy variable set equal to 1 if companies have remuneration committee, otherwise it is set equal to 0. DIV2TA is the dividend divided by book value of the total assets. LEV is the proportion of the debt defined as long-term liabilities plus short-term liabilities divided by the total assets. Log (TA) is the log of total assets is proxy for size. FMRISK is the standard deviation of the ROA of the firms in the sample period. IND is the dummy variable equal to 1 if the industry is bank/finance, insurance, otherwise equal to 0.

Table 3 Estimation of IOWN, BOWN and Financial Performance (Q and ROA) using OLS and 2SLS techniques (continued)

	IOWN (2)	BOWN (3)	Q(a) (4)	Q(b) (5)	IOWN (6)	BOWN (7)	ROA(a) (8)	ROA(b) (9)
REM			-0.320 (-0.578)	-0.274 (-0.494)			-0.243 (-1.170)	-0.248 (-1.205)
COM								
FMRISK	-0.099 (-1.570)	0.007 (0.163)	-0.467 (-0.424)	-0.402 (-0.364)	-0.101 (-1.560)	0.005 (0.107)	-0.225 (-0.545)	-0.188 (-0.459)
IND			-1.652* (-2.094)	-1.672* (-2.103)			0.479 (1.622)	0.399 (1.347)
IOWN ²				4.789 (1.254)				-3.875** (-2.726)
BOWN ²				4.143 (0.787)				2.434 (1.243)
F-value	14.007 (0.000)	9.317 (0.000)	9.629 (0.000)	8.508 (0.000)	10.671 (0.000)	8.292 (0.000)	11.137 (0.000)	10.246 (0.000)
Adj. R ²	0.229 (0.247)	0.159 (0.179)	0.229 (0.255)	0.231 (0.262)	0.200 (0.181)	0.143 (0.162)	0.259 (0.284)	0.271 (0.299)
N	355	355	355	355	355	355	355	355

Note: *** Significant at the 0.001 level (2-tailed), ** Significant at the 0.01 level (2-tailed), * Significant at the 0.05 level (2-tailed), *t*-statistics are in parenthesis.

Tobin's Q approximated is by taking the sum of the market value of common equity, book value of long term liabilities, book value of net short-term debt divided by the book value of total assets. IOWN is inside ownership defined as the proportion of equity held by all members of the board of directors, including top officers of the firm who are members of the board to total shares outstanding. BDIND is the proportion of independent non-executive directors. BDS is the size of the board of directors. FD is the proportion of female directors on the board. AUDCOM is dummy variable set equal to 1 if companies have an audit committee, otherwise it is set equal to 0. REMCOM is dummy variable set equal to 1 if companies have remuneration committee, otherwise it is set equal to 0. DIV2TA is the dividend divided by book value of the total assets. LEV is the proportion of the debt defined as long term liabilities plus short-term liabilities divided by the total assets. Log (TA) is the log of total assets is proxy for size. FMRISK is the standard deviation of the ROA of the firms in the sample period. IND is the dummy variable equal to 1 if the industry is bank/finance, insurance, otherwise equal to 0. The Column Q(a) gives the 2SLS estimation using Tobin's Q as a dependent variable. Whereas, Column Q(b) gives 2SLS estimation using Tobin's Q as dependent variable and ownership squared to test for curvilinear relationship. The Column ROA(a) gives the 2SLS estimation using ROA as a dependent variable. Whereas, Column ROA(b) shows 2SLS estimation using ROA as dependent variable and ownership is squared to test for curvilinear relationship.

Table 4 Estimation of IOWN, BOWN and Financial Performance (OPINC) using OLS and 2SLS techniques

	<i>IOWN</i>	<i>BOWN</i>	<i>OPINC(a)</i>	<i>OPINC(b)</i>
Constant	0.174 (1.706)	0.617*** (9.667)	-0.691*** (-3.246)	-0.309 (-1.038)
OPINC	0.023 (0.882)	-0.005 (-0.248)		
IOWN		0.257*** (7.279)	0.179 (1.583)	0.904** (2.599)
BOWN	0.522*** (7.7279)		-0.125 (-0.793)	-1.879* (-2.426)
BDS	-0.208 (-1.886)	-0.135 (-1.741)	0.195 (0.816)	0.171 (0.718)
BDIND	-0.103* (-2.192)	-0.013 (-0.396)	-0.036 (-0.359)	-0.017 (-0.166)
FD	-0.484*** (-3.593)	0.147 (1.523)	0.297 (1.065)	0.329 (1.189)
LEV	0.007 (0.215)	-0.002 (-0.074)	-0.212*** (-3.431)	-0.213*** (-3.474)
DIV2TA			2.183*** (4.070)	2.271*** (4.260)
Log (TA)	0.006 (0.323)	0.021 (1.524)	0.158*** (3.987)	0.161*** (4.090)
AUD COM			-0.061 (-0.742)	-0.058 (-0.714)
REM COM			-0.074 (-1.117)	-0.070 (-1.075)
FMRISK	-0.094 (-1.450)	0.004 (0.096)	-0.183 (-1.394)	-0.160 (-1.229)
IND			0.062 (0.660)	0.027 (0.284)
IOWN ²				-1.004* (-2.230)
BOWN ²				1.477* (2.379)
F-value (p-value)	10.737 (0.000)	8.285 (0.000)	7.418 (0.000)	7.047 (0.000)
Adj. R ² (R ²)	0.182 (0.201)	0.143 (0.162)	0.181 (0.209)	0.195 (0.228)
N	355	355	355	355

Note: *** Significant at the 0.001 level (2-tailed), ** Significant at the 0.01 level (2-tailed), * Significant at the 0.05 level (2-tailed), *t*-statistics are in parenthesis.

Tobin's Q approximated is by taking the sum of the market value of common equity, book value of long-term liabilities and book value of net short-term debt divided by the book value of total assets. BOWN is proportion of shares owned by 20 largest shareholders. BDIND is the proportion of independent non-executive directors. BDS is the size of the board of directors. FD is the proportion of the female directors on the board. AUDCOM is dummy variable set equal to 1 if companies have an audit committee, otherwise it is set equal to 0. REMCOM is dummy variable set equal to 1 if companies have remuneration committee, otherwise it is set equal to 0. DIV2TA is the dividend divided by book value of the total assets. LEV is the proportion of the debt defined as long-term liabilities plus short-term liabilities divided by the total assets. Log (TA) is the log of total assets is proxy for size. FMRISK is the standard deviation of the ROA of the firms in the sample period. IND is the dummy variable equal to 1 if the industry is bank/finance, insurance, otherwise equal to 0. The Column OPINC(a) gives the 2SLS estimation using OPINC as a dependent variable. Whereas, Column OPINC(b) gives 2SLS estimation using OPINC as dependent variable and ownership is squared to test for curvilinear relationship.

5 Conclusion

The results are interesting in a number of dimensions highlighting the governance mechanisms that have potential to provide good monitoring of the agents actions, producing a positive effect on firm's financial performance and governance mechanisms that may have negative influences on firm financial performance were also noted. A systematic consideration of the relationship between corporate governance mechanisms used by small companies and their effect on firm financial performances measured by Tobin's Q, OPINC and ROA was undertaken. A number of mechanisms that have not been used in studies involving small companies were examined. Insider ownership, block ownership, board size, board independence, debt, dividend and board committees as independent variables and female director, size, risk and industry as control variables were found to be important.

The findings reveal that the majority of small companies in the sample have complied with the Securities Commission's guidelines for good corporate governance practices. The empirical investigation reveals that the board independence and audit committees have a positive influence on firm financial performances measured by Tobin's Q. This raises support for the good governance guidelines proposed by the New Zealand Securities Commission especially in regard to having non-executive/independent directors and audit committees. The results also reveal that block ownership, leverage and dividends have positive influence on firm financial performance measured by Tobin's Q. The diversity in the board, that is, female directors on the board also has a positive effect on firm financial performance measured by Tobin's Q.

Our findings reveal that insider ownership does not have a positive effect on firms' financial performance. It may be that the insider ownership mechanism in small companies is not at an optimal level or other governance mechanisms are more effective in aligning managerial interest with the shareholders in small companies. The use of a remuneration committee has a negative effect on firm's performance. This may be that vigilance in remuneration setting is provided by other governance mechanisms in small companies. The board size has a negative effect on firm financial performance indicating board size in small companies is too large. Firms' size also had a negative effect on firm financial performance measured by Tobin's Q indicating firm size was increased for manager's personal benefit.

The broader implication of this research is that both listed and non-listed companies could benefit from adopting New Zealand Securities Commission recommendations in terms of board independence and audit committees. Other governance mechanisms including block ownership, leverage, dividend and board diversity also seem to provide a positive influence on firm financial performance measured by Tobin's Q. However, further study needs to be undertaken to determine if the increase in the firm value is large enough to compensate the costs incurred by small companies in complying with the Securities Commission guidelines.

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