

## **IS THERE A “BUSINESS CASE” FOR BOARD DIVERSITY?**

**ABSTRACT.** The purpose of this paper is to investigate the relationship between board diversity, as represented by the percentage of female, minority or female and minority directors on the boards of directors, and firm financial performance, and to explore the potential determinants of board diversity, using data from the Australian corporate sector. The analysis shows that greater diversity does not lead to poor performance, which suggests that gender and racial diversity could be achieved without a negative effect on shareholder wealth. With respect to the explanatory factors for diversity, it is reported that larger firms tend to have relatively more female members, and smaller firms or firms with larger boards may have more minority directors.

**JEL CLASSIFICATION:** G34, J15, L20, M14

**KEY WORDS:** Australia, board of directors, diversity, equity, firm performance, shareholder value

## 1. INTRODUCTION

Some authors note that, in spite of some progress during the past twenty years, corporate boards in the U.K., U.S. and Australia remain dominated by white males. They suggest that the homogeneity of corporate boards may raise significant ethical, political and economic issues, while women and minorities are continuing to become a larger proportion of the workforce (Daily *et al.*, 1999; Singh *et al.*, 2001; Carter *et al.*, 2003; Singh and Vinnicombe, 2004; Grosvold *et al.*, 2007). As found by Grosvold *et al.* (2007), board diversity has recently acquired a higher strategic salience within organisations for several reasons.

First, some institutional investors have implemented diversity screens as part of their investment practices and a commitment to diversity in employment practices is included in some socially responsible investment indices. Second, board diversity may be desired by customers, employees and other stakeholders for whom it is a demonstration of the sensitivity of management to stakeholder preferences, aspirations and concerns. Third, board diversity has been the subject of discussions for best practices in corporate governance. For example, the Higgs Report on the role and effectiveness of non-executive directors highlights the fact that "... the current population of non-executive directors is narrowly drawn" (Higgs, 2003, p. 13), and argues that "... a commitment to equal opportunities ... is inevitably undermined if the board itself does not follow the same guiding principles" (Higgs, 2003, p. 42).

According to Brancato and Patterson (1999), there is a real debate between those who think we should be more diverse because it is the right thing to do and those who think we should be more diverse because it actually enhances shareholder value. Therefore, there are two important aspects to the issue of board diversity, i.e., equity and shareholder value. Some corporate leaders and other parties suggest that board diversity must be considered in the context of shareholder value (Carter *et al.*, 2003). We have to look at the connection between diversity, the success of the board, and a successful company, which means that the issue is

going to make a difference to shareholders (Brancato and Patterson, 1999). Some commentators believe that a positive link exists between board diversity and firm performance. For example, based on the discussion in Cox and Blake (1991) and Robinson and Dechant (1997) on workplace diversity, Carter *et al.* (2003) provided some points, which do not flow from any single theoretical framework, to explain why board diversity would enhance a firm's financial performance.

First, diversity may promote a better understanding of the market. Since the market is becoming more diverse, matching the diversity of a company to the diversity of the company's potential customers and suppliers increases the ability to penetrate markets. Second, diversity may increase creativity and innovation. Attributes, cognitive functioning, and belief, as asserted by Robinson and Dechant (1997), are not randomly distributed in the population, but tend to vary systematically with demographic variables such as age, race and gender. Third, diversity may produce more effective problem solving. Although heterogeneity may initially present more conflicts in the decision-making process, the variety of perspectives that emerges could enable decision makers to evaluate more alternatives and explore the consequences of these alternatives more carefully. Fourth, diversity could enhance the effectiveness of corporate leadership. While homogeneity at the top of a firm is believed to result in a narrow perspective, diversity at the top may result in a better understanding of the environment and consequently more astute decisions. Finally, diversity may promote more effective global relationships. Cultural sensitivity is critical in an international environment and ethno-cultural diversity makes corporate leaders more sensitive to other cultures.

In addition, Rose (2007) proposed that a higher degree of diversity could serve as a positive signal to potential job applicants, thereby attracting well qualified persons outside the circles from which board candidates are usually recruited. Board diversity may increase

the competition within the firm's internal labour market since women and ethnic groups know that they are not excluded from the highest positions which are available depending only on each person's skills and qualification. Board diversity may also serve as a positive signal to the firm's environment or stakeholders improving its reputation, and perhaps also matching the firm's internal organization with its environment creating symmetry.

This study intends to present robust evidence on the relationship between board diversity and firm performance, and to explore the potential determinants of board diversity, using data from the Australian corporate sector. It should be noted that our focus is on the economic implications of board diversity, which may shed some light on the concern over equity, and we leave the political and sociological implications to others.

## **2. EMPIRICAL EVIDENCE**

Scholars, in general, have taken two approaches to examine the empirical link between board characteristics and firm performance. The first approach is based on relating board characteristics to certain corporate events, such as executive turnover and remuneration, financial reporting, making or defending against a takeover bid, management buy-outs and shareholder litigation. Lawrence and Stapledon (1999) and Bhagat and Black (1999, p. 3) reviewed this literature, and believed that "[t]he principle weakness of this approach is that it cannot tell us how board composition affects overall firm performance".

The second approach involves investigating directly the correlation between board characteristics and financial performance, i.e., the "bottom line" of corporate performance. As recommended by Bathala and Rao (1995), Lawrence and Stapledon (1999), Bhagat and Black (1999) and Panasian *et al.* (2003), it may avoid the weakness inherent in the first group of studies. It appears that the vast majority of researchers in this area have been motivated by agency theory, which suggests that where the board of directors is more independent of

management, company performance would be higher. Consequently the proportions of inside (individuals employed by the firm) and outside or independent directors serving on the boards have been frequently tested in their studies. The results, however, have been inconsistent so it is concluded that prior research does not establish a strong relationship between board independence and firm performance (Wang *et al.*, 2008).

More recently, some academics have begun to address the influence of board diversity, most typically gender diversity, on firm performance. As found by Campbell and Minguez-Vera (2007), the empirical evidence is inconclusive and mostly based on the U.S. data. Shrader *et al.* (1997), in their sample of 200 top U.S. firms, did not find any significant relationship between the percentage of female members on the boards and several accounting measures of financial performance. Erhardt *et al.* (2003) reported that board diversity, as measured by the percentage of women and minorities which include African, Asian, Hispanic and Native Americans on the boards for 112 large U.S. firms, was positively associated with return on assets (ROA) and return on investment.

Carter *et al.* (2003) found a positive relationship between Tobin's  $Q$  and the proportion of women or minorities, which include African, Asian, Hispanic, on the boards of 638 *Fortune* 1000 firms in 1997. Farrell and Hersch (2005) identified an insignificant stock market reaction to the announcement of female additions to the boards of 309 *Fortune* 500 companies during the decade of the 1990s. The likelihood of a firm adding a woman to its board in a given year is negatively affected by the number of women already on the board, and women tend to serve on better performing firms. They therefore concluded that, rather than the demand for women directors being performance-based, the increase in female boardroom appointments in the U.S. had been in response to internal or external calls for greater diversity.

Of the non-U.S. papers that exist, a study of 2500 Danish firms, listed as well as unlisted, by Smith *et al.* (2006) fails to locate a significant link between female board representation and accounting measures of performance, over the period 1993-2001. Their results are consistent with the findings of Rose (2007) that no significant relationship exists between the proportion of female or foreign members on Danish boards and Tobin's  $Q$ , for a sample of 443 firm-year observations during 1998-2001.

Bohren and Storm (2005) reported a significant negative relationship between the proportion of women on the boards of Norwegian firms and Tobin's  $Q$ . Their sample contains all non-financial firms listed on the Oslo Stock Exchange over the period 1989-2002. Randoy *et al.* (2006) analysed the impact of board diversity on the performance of the 343 largest firms from three Scandinavian countries - Denmark, Norway and Sweden in 2005, and found that the percentage of female or foreign board members did not have significant influence on stock market value and ROA. Campbell and Minguez-Vera (2007), after an examination of 408 observations from 1995 to 2000 for 68 Spanish firms, concluded that the ratio of women to men on the board had a positive effect on firm value as measured by Tobin's  $Q$ , and firm value did not affect the ratio of women to men. The direction of causality is thus from gender to firm performance and not the other way round.

There are two Australian papers on this topic. Bonn (2004) located a positive relationship between the proportion of female directors in 1999 and market-to-book ratio in 2004, for her sample of 84 large listed companies. Therefore it is suggested that women are selected to board positions due to exceptional attributes or qualifications, which prove significant for better firm performance (Bonn, 2004). The sample in Nguyen and Faff (2007) include 832 firm-year observations over the period 2000-2001. Employing both a dummy variable and a continuous variable to measure the presence of women directors on the board, they reported that women director variables were both significantly related to a higher Tobin's  $Q$ . Nguyen

and Faff (2007, p. 25) argued that the results “... are supportive of the view that board diversity should be promoted as a common corporate governance practice”.

The literature review suggests that the empirical studies addressing the board diversity-financial performance relationship have been growing, although the evidence provided has been ambiguous. Campbell and Minguez-Vera (2007) identified some sources for these conflicting findings, including differences in time-frames, estimation methods, countries, legal and institutional contexts, and lack of control variables in some studies. We find that the papers introduced above suffer from some methodological limitations, such as small sample size (Erhardt *et al.*, 2003; Bonn, 2004), short-term observation of firm performance (Shrader *et al.*, 1997; Erhardt *et al.*, 2003; Carter *et al.*, 2003; Rose, 2007; Thomsen and Oxelheim, 2006; Nguyen and Faff, 2007), limited performance measures (Carter *et al.*, 2003; Bohren and Storm, 2005; Rose, 2007; Campbell and Minguez-Vera, 2007; Nguyen and Faff, 2007) and control variables (Shrader *et al.*, 1997; Bonn, 2004), and failure to examine whether board diversity is endogenously related to performance (Shrader *et al.*, 1997; Erhardt *et al.*, 2003; Rose, 2007; Nguyen and Faff, 2007).

Taking into consideration the limitations in prior research, there is perhaps a need for an in-depth investigation of the relationship between board diversity and firm performance. Few academics have addressed the link between racial diversity and firm performance. It would be interesting to ascertain whether there is a “business case” for greater female and minority participation in boardrooms in the Australia context.

### **3. METHOD**

This paper uses the top 500 companies listed on the Australian Stock Exchange (ASX), ranked by market capitalisation, as the initial data-set. Each year the ASX collects information on these companies to calculate its All Ordinaries Index, the primary indicator of

the Australian equity market. At 31 December 2003, the top 500 companies represented 95% of the total market capitalisation of the ASX-listed companies (Standard & Poor's, 2004). Therefore this dataset offers a reasonable coverage for the population of interest - Australian public corporations.

Following some prior studies on the relationship between board diversity and firm performance, for example, Farrell and Hersch (2005), Bohren and Strom (2006), Rose (2007) and Campbell and Minguez-Vera (2007), financial institutions including property trusts and investment funds are removed from the 2003 list of the top 500 companies as presented in *Huntleys' Shareholder* (2003), because of a lack of comparable performance data in the financial institution section and the fact that the recorded assets of financial institutions consist of loans which represent the use of depositors' funds. A sample of 384 firms is then obtained. The sources of data include *Connect 4* database containing the annual reports of the top 500 companies, *Fin Analysis* database giving market information and statistics of Australian firms, and *Huntleys' Shareholder* (2003) providing some information on firm age and lines of business. The sample is further reduced to 243 firms due to missing data.

In this research board diversity is defined as the proportion of women, racial minorities (i.e., people who are not Anglo-Australians), or women and minorities on the board of directors, measured at one point in time, i.e., mid-2003. The relevant details of directors are available in directors' reports included in the annual reports. As noted by Devinney *et al.* (2005), there are two broad groups of performance measures – accounting measures drawn from the accounting systems used by firms to track their internal affairs and financial market measures relating to the share prices and dividend streams observed in the operation of financial markets.

Accounting measures are historical and therefore experience a backward and inward-looking focus. Developed as a reporting mechanism, they represent the impact of many

factors, including the past successes of advice given by the board to the management team. They are the traditional mainstay of corporate performance factors (Kiel and Nicholson, 2003). However, accounting measures are “distortable”. This distortion arises from such sources as accounting procedures and policies, government policies towards specific activities, human error and purposeful deception (Devinney *et al.*, 2005). Nevertheless, ROA and ROE are included in this study as performance measures. Muth and Donaldson (1998) noted that ROA and ROE had been extensively used in research on board composition.

Market-based measures are forward-looking indicators that reflect current plans and strategies, in theory representing the discounted present value of future cash flows (Fisher and McGowan, 1983). Related to the value placed on the firm by the market, market measures are not susceptible to the impact of accounting policy changes or mere timing effects. They are objective in the sense that they exist outside the influence of individuals (Devinney *et al.*, 2005). Examples of market measures frequently endorsed by the authors in the field of corporate governance include shareholder return and Tobin’s  $Q$ . Given that the acceptance of shareholder return as a performance measure is encouraged by the Australian Investment Managers’ Association (AIMA) and Australian Institute of Company Directors (AICD) (AIMA and AICD, 1994), shareholder return is used in this study.

Bathala and Rao (1995), Coles *et al.* (2001) and Campbell and Minguez-Vera (2007) suggested that the mixed evidence on the correlation between board composition and firm performance might be attributed to the omission of other variables that affect performance. Therefore, a number of covariates are introduced into the analysis to control for confounding influences, including firm age, blockholder ownership, dividend payout, managerial shareholdings, leverage, firm size, diversification, prior performance and board size.

Coles *et al.* (2001) proposed that blockholders had the capacity to monitor their investments and, by virtue of the magnitude of their investments, could affect managerial

behaviour. The threat that blockholders will sell large blocks of shares if the firm fails to provide an acceptable return is a significant issue for managers. Jensen and Meckling (1976) asserted that increasing managerial ownership could mitigate agency conflicts. The higher the proportion of equity owned by managers, the greater the alignment between managers and shareholder interests.

In Jensen (1986) it is argued that the payment of dividends reduces the amount of discretionary funds available to management, thereby reducing their incentive to engage in non-optimal activities. Similarly, Easterbrook (1984) suggested that the regular payment of dividends would force firms to go to the capital markets for investment funding. Scrutiny of firms accessing the markets would act as a deterrent to opportunistic behaviours by managers. In addition, some authors argue that the size of a firm may influence its structure, decision-making capabilities, and ultimately, its performance (Bluedorn, 1993; Ramaswamy, 2001; Frank and Goyal, 2003). Diversification has been shown to be value destroying (Berger and Ofek, 1996; Servaes, 1996; Denis *et al.*, 1997).

[Take in Table 1]

Shrader *et al.* (1984) found that most studies on the empirical relationship between strategic planning and organisational performance had chosen 3 or 5-year periods as their time frames, as suggested to be appropriate for a given strategic planning intervention to take effect. To reduce the influence of short-term fluctuations, the performance figures used are the three-year averages over the 2003-2006 financial years. Like the measures for board diversity, data on firm age, blockholder ownership, managerial shareholdings, diversification and board size are collected for the 2003 financial year. Consistent with the performance measures, dividend payout, firm size and leverage are calculated for the 3-year periods of

2000-2003 and 2003-2006. Prior performance is measured by the average shareholder returns for the years 2000-2003.

Ordinary least squares (OLS) regressions are constructed for these variables. In the regressions to test the influence of board diversity on performance, firm performance serves as the dependent variable. The independent variables include board diversity, firm age, blockholder and managerial shareholdings, dividend payout, leverage, firm size, diversification and board size. An algebraic statement of the models is as follows:

$$Y_i = \alpha + \beta_1(Diversity)_i + \beta_2(AGE)_i + \beta_3(BLOCK)_i + \beta_4(DIVR2)_i + \beta_5(EQED)_i + \beta_6(GEAR2)_i + \beta_7(LogMCAP2)_i + \beta_8(SEGMT)_i + \beta_9(SIZE)_i + \mu_i$$

Where, for the  $i^{th}$  company

$Y$	= ROA, ROE or SHRET2
$\alpha$	= Constant of the equation
$\beta$	= Coefficient of the variable
$Diversity$	= PFEM, PMIN or PFAM
$\mu$	= Error term

In the regressions to test the determinants of board diversity, board diversity serves as the dependent variable. The independent variables include firm age, blockholder and managerial shareholdings, dividend payout, leverage, firm size, diversification, prior performance and board size. An algebraic description of the models is listed below:

$$Y_i = \alpha + \beta_1(AGE)_i + \beta_2(BLOCK)_i + \beta_3(DIVR1)_i + \beta_4(EQED)_i + \beta_5(GEAR1)_i + \beta_6(LogMCAP1)_i + \beta_7(SEGMT)_i + \beta_8(SHRET1)_i + \beta_9(SIZE)_i + \mu_i$$

Where, for the  $i^{th}$  company

$Y$	= PFEM, PMIN or PFAM
$\alpha$	= Constant of the equation
$\beta$	= Coefficient of the variable

$\mu$  = Error term

#### 4. RESULTS

Table 2 gives a description of board characteristics for the 243 firms in 2003. The total number of directors on the board ranges from a low of 3 to a high of 15, with an average of just over 6. The proportion of female members, minority members, or female and minority members on the board varies between 0% and 87.50%, with a mean of 5.09%, 4.05% or 9.00%, respectively. Thus the vast majority of directors of sample firms are Anglo-Australian males. The findings correspond well with the evidence reported in Sheridan and Milgate (2003) that only 3.40% of Australian directors are women. While the percentage of female participation has been rising in large Australian companies from 1.20% in 1993 as observed by Clifford and Evans (1996) to 5.09% in our study, it is still well below what is equitable.

[Take in Table 2]

Table 3 displays regression estimates for the effects of gender diversity and other variables on firm performance. The levels of significance reported in this paper are for two-tailed tests. There is no statistically significant association between subsequent ROA, ROE and shareholder return, and the percentage of female members on the board.

[Take in Table 3]

A Durbin-Watson close to 2 is consistent with no serial correlation, while a number closer to 0 means there probably is a serial correlation. Therefore there is no indicator of serial correlation for the models in our study. Table 4 shows regression estimates for the effects of racial diversity on corporate performance. The proportion of minority directors on the board does not present any significant influence on ROA, ROE and shareholder return.

[Take in Table 4]

Table 5 provides regression results for the impact of board diversity, as measured by the percentage of female and minority directors on the board, and other variables on performance measures. No significant relationship between board diversity and performance is found.

[Take in Table 5]

With respect to the control variables used in the regressions, some interesting patterns emerge from Tables 3, 4 and 5. It appears that dividend payments of sample firms reflect the accounting performance measures of ROA and ROE. In 2000-2003 larger blockholder ownership or lower managerial shareholdings were favoured by the Australian market, leading to better shareholder return. In addition, during the test period firms with lower leverage have better ROE.

The regressions for the determinants of board diversity as represented by the percentage of female, minority, or female and minority members on the board are reported in Table 6. A positive impact of firm size on gender diversity, at the 5% level, is identified. Racial diversity is negatively related to dividend payout and firm size, and positively related to board size, at the 5% level. The findings indicate that larger firms tend to have relatively more female members. Smaller firms or firms with larger boards or poor dividend payout may have more minority representations.

[Take in Table 6]

## **5. CONCLUSIONS**

This study explores the link between board diversity and firm financial performance. Based on the data analysis, it could be concluded that there is no strong relationship between

gender and racial diversity on the board and financial performance. An apparent explanation for the findings is that there are simply very few female and minority directors. As argued by some authors, for example Rosener (1995), one female board member is often dismissed as a token and two females are not enough to be taken seriously. But three may give the board a critical mass and the benefit of women's talents.

In Rose (2007) there is another plausible reason – there may be a process of socialisation where the unconventional board members have adopted the behaviour and norms of the conventional board members and business leaders. The reason is that it may be the only way to be qualified in the eyes of the top decision makers for high positions in society including access to boardrooms. As a consequence, the gains from having female and minority board members are never realised or reflected in any chosen performance measure.

It should be noted that, according to the results, greater board diversity does not lead to poor performance, which suggests that enhanced board diversity could be achieved without a negative effect on shareholder wealth. This study could therefore be used to support the equity argument for increased diversity. As reported earlier, the representation of women on the boards of Australian listed companies is quite low. In Norway, the Government introduced mandatory quotas, i.e., 40% women on the boards, in 2005, because "... diversity is a value in itself" (Oslo, 2007). Spain followed suit by passing a law, and Germany and Netherlands followed a similar course beginning with voluntary charters dedicated to gender equality in boardrooms (Toomey, 2008).

The results show that companies with higher blockholder ownership or lower managerial shareholdings tend to have better performance in terms of shareholder return. As introduced before, Coles *et al.* (2001) argued that blockholders had the capacity to monitor their investments and could affect managerial behaviour. There is empirical evidence that institutional investors and other blockholders do impact managerial behaviour and therefore

company performance (e.g., Barclay and Holderness, 1991; Brickley *et al.*, 1994; Shome and Singh, 1995; Bethel *et al.*, 1998; Allen and Phillips, 2000).

For the effect of executive ownership on firm performance, the literature survey in Sundaramurthy *et al.* (2005) shows that the empirical evidence is inconclusive. The studies supporting the view of Jensen and Meckling (1976) include Morck *et al.* (1988), Kim *et al.* (1988) and Hudson *et al.* (1992). Tsetsekos and DeFusco (1990) and Sundaramurthy *et al.* (2005), however, could not locate any significant relationship between managerial shareholdings and performance. There are a number of papers, for example, McConnell and Servaes (1990) and Brailsford *et al.* (2002), which identify a non-linear relationship.

It is not surprising that in this study dividend payments of sample firms reflect the accounting measures of ROA and ROE. As discussed before, accounting measures are historical and therefore experience a backward and inward-looking focus. Market-based measures are forward-looking indicators that reflect current plans and strategies, and in theory represent the discounted present value of future cash flows (Devinney *et al.*, 2005; Fisher and McGowan, 1983). Thus it could be concluded that in the Australia market dividend payout is based on the historical performance, rather than the market expectation.

Moreover, during the test period of 2000-2003, firms with lower leverage have better ROE. The negative effect of leverage on ROE coincides with Alaganar (2004) in which the author documented an inverse relationship between leverage and ROE for the top ASX 100 companies from 1994 to 2003. According to Alaganar (2004), one possible explanation is that newly acquired debt may be deployed on projects that have a negative impact on profitability. The earnings generated by investments funded by new debt are not adequate to offset the additional interest expense. This may have been fuelled by the prevailing low interest rate environment where firms were inclined to undertake such projects.

With respect to the determinants of board diversity, it is reported that larger firms tend to have relatively more female members. This finding is in line with the Australian paper of Nguyen and Faff (2007), in which the authors noted that a firm was more likely to have a higher percentage of woman director representation if it was larger. The results also suggest that smaller firms and firms with larger boards or poor dividend payout may have relatively more minority directors.

Although this paper tries to address some of the limitations identified in prior research, such as small sample size, short-term observation of firm performance, limited performance measures and control variables, and failure to examine whether board diversity is endogenously related to performance, it is still subject to a number of limitations. The sample tested is restricted to companies listed on the ASX. The conclusions reached should not be extrapolated to all Australian firms. Another potential weakness is the use of secondary data. It may be feasible to interview a sample of directors to ensure that their opinions validate the results gained using the dataset. We have made some rather utilitarian assumptions by examining the impact of gender and racial diversity on financial performance. To ascertain the complete impact of gender and racial diversity on all corporate stakeholders future research could consider non-financial performance indicators.

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Table 1  
Description of Research Variables

Measure	Abbreviation	Definition
<i>Board Diversity</i>		
Female directors	FEM	Number of female directors on the board
Female directors (%)	PFEM	Percentage of female directors on the board
Minority directors	MIN	Number of minority directors on the board
Minority directors (%)	PMIN	Percentage of minority directors on the board
Female and minority directors	FAM	Number of female and minority directors on the board
Female and minority directors (%)	PFAM	Percentage of female and minority directors on the board
<i>Firm Performance</i>		
ROA	ROA	Ratio of EBIT to book value of total assets
ROE	ROE	Ratio of profit after interest and tax to book value of equity
Shareholder return	SHRET1, 2*	ASX realised Rate of return incorporating dividend payments and share price appreciation (adjusted for share splits)
<i>Control</i>		
Firm age	AGE	Number of years listed on the ASX
Blockholder ownership	BLOCK	Percentage of common stocks held by the top 20 shareholders
Dividend payout	DIVR1, 2	Ratio of dividend payments to profit after interest and tax
Managerial ownership	EQED	Percentage of equity including options held by executive directors
Leverage	GEAR1, 2	Ratio of short-term and long-term debt to book value of equity
Firm size	LogMCAP1, 2	Natural logarithms of market value of common stocks (in \$million)
Diversification	SEGMT	Number of industrial and geographical segments
Board size	SIZE	Number of directors on the board

\* SHRET, Log(MCAP), DIVR and GEAR are coded 1 for 2000-2003, and 2 for 2003-2006.

Table 2  
Descriptive Statistics: Boards of Directors

Sample Period: 2003

Included Observations: 243

Variable	Mean	Median	Maximum	Minimum	Std. Dev	Skewness	Kurtosis
FEM	0.35	0	2.00	0	0.57	1.38	3.90
PFEM	5.09%	0%	50.00%	0%	0.09	1.89	7.06
MIN	0.26	0	7.00	0	0.84	4.71	30.09
PMIN	4.05%	0%	87.50%	0%	0.13	3.84	19.12
FAM	0.60	0	7.00	0	0.95	2.79	15.33
PFAM	9.00%	0%	87.50%	0%	0.14	2.26	9.46
SIZE	6.33	6.00	15.00	3.00	2.05	1.02	4.53

Table 3

## OLS Regressions: Female Directors and Firm Performance

Sample Period: 2003-2006

Included Observations: 243

Coefficient			
t-Statistic	ROA	ROE	SHRET2
Intercept	-0.367	-0.031	-0.090
	-1.938	-0.061	-0.270
PFEM	-0.133	-1.116	-0.530
	-0.312	-0.964	-0.709
AGE	0.0009	-0.003	0.002
	0.387	-0.491	0.467
BLOCK	-0.008	-0.863	1.053
	-0.039	-1.511	2.855**
DIVR2	0.202	0.521	-0.237
	2.472*	2.348*	-1.655
EQED	-0.352	0.059	-0.953
	-1.595	0.099	-2.466*
GEAR2	-0.019	-0.701	0.002
	-1.064	-14.431**	0.071
LogMCAP2	0.055	0.134	0.053
	1.797	1.625	0.989
SEGMT	-0.002	0.099	-0.029
	-0.118	1.846	-0.852
SIZE	-0.002	-0.067	-0.037
	-0.076	-1.022	-0.872
Adjusted $R^2$	0.093	0.491	0.075
Std Error (Regression)	0.058	0.471	0.039
F-Statistic	2.663	24.979	2.093
Probability (F-Statistic)	0.006	0	0.031
Durbin-Watson	2.037	2.040	2.013

\* Significance at the 5% level

\*\* Significance at the 1% level

Table 4  
 OLS Regressions: Minority Directors and Firm Performance

Sample Period: 2003-2006  
 Included Observations: 243

Coefficient			
t-Statistic	ROA	ROE	SHRET2
Intercept	-0.349 -1.848	-0.023 -0.045	-0.060 -0.182
PMIN	-0.393 -1.336	0.024 0.030	-0.594 -1.148
AGE	0.0009 0.396	-0.003 -0.479	0.002 0.479
BLOCK	0.026 0.124	-0.830 -1.446	1.114 3.016**
DIVR2	0.180 2.185*	0.502 2.231*	-0.276 -1.911
EQED	-0.357 -1.631	0.015 0.025	-0.975 -2.534*
GEAR2	-0.019 -1.039	-0.701 -14.398**	0.003 0.097
LogMCAP2	0.048 1.578	0.126 1.518	0.040 0.753
SEGMT	-0.004 -0.179	0.099 1.842	-0.031 -0.904
SIZE	0.002 0.088	-0.071 -1.076	-0.032 -0.753
Adjusted $R^2$	0.100	0.489	0.078
Std Error (Regression)	0.065	0.469	0.042
F-Statistic	2.870	24.778	2.191
Probability (F-Statistic)	0.003	0	0.023
Durbin-Watson	2.031	2.027	2.008

\* Significance at the 5% level

\*\* Significance at the 1% level

Table 5  
 OLS Regressions: Female and Minority Directors and Firm Performance

Sample Period: 2003-2006

Included Observations: 243

Coefficient			
t-Statistic	ROA	ROE	SHRET2
Intercept	-0.352	-0.006	-0.061
	-1.864	-0.012	-0.183
PFAM	-0.350	-0.405	-0.634
	-1.375	-0.583	-1.419
AGE	0.0008	-0.003	0.002
	0.381	-0.484	0.465
BLOCK	0.010	-0.812	1.095
	0.049	-1.422	2.981**
DIVR2	0.189	0.488	-0.266
	2.323*	2.199*	-1.862
EQED	-0.344	0.030	-0.951
	-1.570	0.050	-2.474*
GEAR2	-0.019	-0.700	0.003
	-1.045	-14.400**	0.095
LogMCAP2	0.052	0.124	0.045
	1.709	1.499	0.850
SEGMT	-0.003	0.097	-0.031
	-0.171	1.820	-0.907
SIZE	0.002	-0.065	-0.030
	0.099	-0.989	-0.711
Adjusted $R^2$	0.100	0.490	0.081
Std Error (Regression)	0.065	0.470	0.045
F-Statistic	2.883	24.851	2.274
Probability (F-Statistic)	0.003	0	0.018
Durbin-Watson	2.028	2.033	2.007

\* Significance at the 5% level

\*\* Significance at the 1% level

Table 6  
OLS Regressions: Determinants of Board Composition

Sample Period: 2000-2003

Included Observations: 243

Coefficient			
t-Statistic	PFEM	PMIN	PFAM
Intercept	-0.013	0.053	0.043
	-0.459	1.240	0.885
AGE	-5.68E-05	-2.85E-05	-0.0001
	-0.170	-0.058	-0.208
BLOCK	-0.028	0.066	0.033
	-0.862	1.409	0.620
DIVR1	0.012	-0.037	-0.024
	0.977	-1.989*	-1.120
EQED	0.041	0.005	0.043
	1.244	0.106	0.785
GEAR1	0.001	0.005	0.006
	0.383	0.808	0.949
LogMCAP1	0.011	-0.018	-0.005
	2.115*	-2.345*	-0.610
SEGMT	-0.001	-0.001	-0.002
	-0.317	-0.286	-0.449
SHRET1	2.02E-05	-0.007	-0.006
	0.005	-1.184	-0.987
SIZE	0.002	0.011	0.012
	0.577	2.013*	1.855
Adjusted $R^2$	0.065	0.070	0.034
Std Error (Regression)	0.029	0.034	0.004
F-Statistic	1.808	1.937	0.899
Probability (F-Statistic)	0.068	0.048	0.527
Durbin-Watson	1.883	2.087	2.065

\* Significance at the 5% level

\*\* Significance at the 1% level