THE LONG-TERM BENEFITS OF DIRECTOR STOCK OWNERSHIP

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Abstract

In October 2009, the United States Treasury Department and Congress considered new regulations requiring executives and directors to receive much of their compensation in the form of long-term stock. One concern with this is that it may have negative consequences by entrenching managers and directors over the long term. This study compares the potential benefits of long-term director ownership with the potential costs of entrenchment. Using the dollar amount of stock owned by independent directors, the results suggest that the incentive effect dominates any costs related to entrenchment: firms with greater stock ownership outperform other firms, regardless of the degree of managerial entrenchment that may be present. The implication for policy-makers is that providing directors with incentives through stock ownership can be a very effective corporate governance mechanism.

Keywords: Corporate governance, agency problems, boards, directors, incentive alignment, entrenchment, ownership

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1. Introduction

Over the past ten years, corporate governance has come under considerable scrutiny due to corporate failures such Enron, to investor frauds such as Bernie Madoff, and to systemic panics such as the global financial crisis. Regulators, practitioners, and academics have been searching for ways to improve the relationship between managers of firms and the ultimate stakeholders, in hopes of finding a 'best' corporate governance structure. The Sarbanes-Oxley Act was passed in 2002 in the United States, and it stipulated new requirements for independent audits and new responsibilities for boards of directors. The major U.S. stock exchanges required listed firms to have a majority of independent directors in 2003, moving all firms towards a standard corporate governance structure. "Say on Pay" practices are widespread in Europe and are becoming more common in the U.S., allowing shareholders more input into the corporate governance process. And, in the wake of the U.S. financial crisis, regulators are considering a broad range of new initiatives, such as limiting executive compensation, outlining new requirements for boards of directors and encouraging firms to compensate directors and officers with long-term stock benefits rather than direct compensation.

All of these initiatives presuppose that there is an optimal corporate governance structure. Policies attempting to regulate and standardize how firms and their corporate governance environments are structured are intended to improve shareholder rights and to improve the agency costs inherent in the corporate form. If there is one structure that is indeed optimal, then all firms should move towards it. Prior academic literature has focused on the ownership of the firm. In theory, if the managers own 100% of the firm then there is no agency conflict. When managers own less than 100%, agency conflicts arise. The goal of any corporate governance policies should be to minimize these agency conflicts and, thus, to maximize the benefits to external stakeholders.

While firm ownership has been the primary focus of the academic literature, recent work has moved beyond ownership. In general, the research suggests that there is no single 'best' model for corporate governance that can be applied to all firms[1]. In general, the work analyzing complex indices composed of many corporate governance factors have failed to show that these indices can measure the quality of a firm's corporate governance environment. In equilibrium, each firm should choose its structure and

[1] See, for example, Gillan, Hartzell and Starks (2006), Wintoki (2007), and Bhagat, Bolton and Romano (2008).

unique features because they are optimal for that firm. In this sense, it is possible that the quality of a firm's corporate governance environment may best be measured by concentrating on individual characteristics.

With this in mind, recent strands of the literature have focused on two firm characteristics that should be directly related: ownership and entrenchment. Providing directors with the same incentives as common stockholders should better align the interests of the principals and agents, but allowing the officers and directors to become too entrenched might impose significant costs on shareholders. In their seminal work, Morck, Shleifer and Vishny (1998) identified this inherent conflict. They found that firm value increases when officers and directors have some incentives, but value decreases when they own 'too much,' presumably because they become too entrenched and are not necessarily always representing the interests of shareholders.

The purpose of this paper is to directly compare the potential benefits of directors owning common stock with the potential costs of officers and directors becoming too entrenched. In most firms, both effects will be present: there will be incentives provided to directors – through compensation, stock ownership, or non-monetary benefits – and there will be a certain amount of entrenchment – through tenure, charter provisions, or organizational structure. There will be trade-offs between these two effects. The primary research question in this study is which governance mechanism is more dominant in large U.S. firms: director ownership or management entrenchment. By directly comparing these two effects, and by considering any dynamic interactive effects between the two variables, this study will attempt to clarify how each of these factors influences a firm's long-term performance.

Using the dollar value of stockholdings owned by various classes of directors as the measure of the incentive effect and both the *G-Index* from Gompers, Ishii and Metrick (2003) and whether or not the CEO is also the board chair as measures of entrenchment, the results suggest that the incentive effect dominates. This result is robust to a number of different specifications, approaches, and controls. It is economically significant, as well. This suggests that the benefits of providing directors and officers with the appropriate incentives outweigh the potential costs associated with directors and officers becoming entrenched. Firms that have greater ownership by directors outperform those with lower ownership, regardless of any institutional costs of entrenchment. This result suggests that efforts to improve corporate governance should focus on ways to increase stock ownership by directors to better align their incentives with the incentives of the firm's stakeholders.

2. Motivation

The study of corporate ownership forms has a long history in the corporate finance literature. Berle and Means (1932) warned that too much power in the hands of managers, or a board of directors that is controlled by the managers, could present serious problems. Jensen and Meckling (1976) showed that agents acting in their own rational self-interest might not always be acting in the owners' best interest. The solution to this conflict was to better align the interests of agents and principals, which might be best addressed by giving the mangers of the firm ownership of the firm. Morck, Shleifer and Vishny (1988) studied this empirically and found that firm value does indeed increase when the managers and directors own up to 5% of the outstanding common stock. However, this benefit is not monotonic: value decreases when managers own between 5% and 20% of the firm, but increases again at ownership levels greater than 20%. This suggests that both incentive and entrenchment effects may be present in firms. Using the most recent standards for measuring ownership and entrenchment, this study analyzes the effects that each has on firm and shareholder value.

The corporate governance literature has identified countless measures of ownership. Morck, Shleifer and Vishny (1988) use the percentage of common stock owned by officers and directors. Among others, McConnell and Servaes (1990, 1995) consider the percentage of stock owned by blockholders and institutions. Denis and Denis (1994) consider majority stock ownership by insiders. Hermalin and Weisbach (1991) focus on the percentage of stock owned by the CEO. And, Bhagat and Bolton (2008) studied the dollar value of stock ownership by directors.

This study relies on the approach taken in Bhagat and Bolton (2008) and considers the dollar value of stock ownership of directors. The argument for focusing on dollar value of ownership rather than percentage ownership is simple. Imagine two directors. Director A owns a 0.10% stake in a $1 billion firm; Director B owns a 1.00% stake in a $100 million firm. The value of each stake is exactly $1,000,000. As rational economic agents, both directors have the same incentives and we would expect both directors to devote the same time and expertise to their work. If we focused on the percentage ownership, we would say that Director B has greater incentives, which is likely not the case.

While ownership by officers and directors is observable, entrenchment is not. As such, researchers have had to use a number of proxies to measure entrenchment. Jensen (1993) argues that it is important

to separate the roles of CEO and board chair positions. Gompers, Ishii and Metrick (GIM, 2003) analyze the relationship between firm value and an equally-weighted index of 24 corporate charter provisions and find that firms with fewer provisions, or fewer restrictions, have higher Tobin's *Q* and stock returns. Core, Guay and Rusticus (2007) show that GIM's *G-Index* is also associated with superior operating performance. Regardless of the measure, the story is the same: entrenchment is harmful and poses a significant cost to shareholders.

The purpose of this study is to compare the costs and benefits of these two effects: incentive alignment and entrenchment. Firms do not *choose* one effect over the other. All firms have some degree of incentive alignment and all firms have some degree of entrenchment. Using the latest measures of incentive alignment and entrenchment – director ownership and the *GIM G-Index* – I compare these two effects to see which dominates (if either does). Ex ante, either effect could dominate. Morck, Shleifer and Vishny (1998) observed that the incentive effect dominates at lower and higher levels of ownership, while the entrenchment effect dominates at moderate levels of ownership. But, as Wintoki (2007) explains, a firm's corporate governance environment is both nuanced and unobservable. If each firm has a unique, but different, optimal corporate governance structure, we might actually expect to see the two effects cancel each other out. Because it is impossible to observe the costs and benefits of corporate governance, which effect dominates is ultimately an empirical question.

3. Data and Methodology

The primary database for this study is the RiskMetrics database. This database tracks governance data for approximately 1,500 of the largest firms in the United States from 1998-2007[2]. The corporate charter provisions and director ownership data are all taken from RiskMetrics. Compustat's annual database, Compustat's Execucomp database, and CRSP are used for the financial and stock market variables. The sample consists of more than 12,000 firm-year observations, with more than 2,200 unique firms tracked during the 10 year sample period.

The primary relationship studied is the relationship between firm performance, director ownership and managerial entrenchment. The primary equation is:

(1) $Performance_t = DirectorOwnership_t + Entrenchment_t + Performance_{t-1} + IndustryPerformance_t + FirmSize_t + Leverage_t + CEOOwnership_t + MarketBook_t + Volatility_t + BoardSize_t + Independence_t$

Return on Assets is used as the measure of *Performance*[3] and the dollar value of stock owned by the median independent director is used as the measure of *DirectorOwnership*.[4] This variable is derived from Bhagat and Bolton (2008) who use the stock ownership of the median director because they believe it is the best measure of incentive alignment. Of all directors, the independent directors should be the least entrenched because their only tie to the firm is through their board duties. Thus, their ownership incentives should work to directly offset any entrenchment in the firm. Gompers, Ishii and Metrick's (2003) *G-Index* is used as one measure of entrenchment and whether or not the CEO is also the board chair (*CEO-Duality*) is used as another. *FirmSize* is the natural log of total assets. *Leverage* is the firm's long-term debt to assets ratio. *CEOOwnership* is the percentage of stock owned by the CEO. *MarketBook* is the firm's market value of equity to book value of equity ratio. *Volatility* is the standard deviation of the firm's stock returns over the preceding 60 months. Finally, *BoardSize* is the number of directors on the board, and *Independence* is the percentage of directors who are neither employees nor related to the firm in some manner. All regressions also include intercepts and year dummy variables, and standard errors are corrected for clustering at the firm level (Petersen, 2009).

However, as discussed above, firms do not choose between having incentive effects and entrenchment effects; all firms have both effects, to some extent. Thus, it is possible that the two effects work in combination with each other. If the combination is indeed the dominant effect, then it would be the interaction of the two effects, rather than either effect independent of the other, that would be dominating the corporate governance environment. To investigate this, equation (2) includes an interactive term composed of *DirectorOwnership* and *Entrenchment*.

(2) $Performance_t = DirectorOwnership_t + Entrenchment_t + (DirectorOwnership_t \times Entrenchment_t) + Performance_{t-1} + IndustryPerformance_t + FirmSize_t + Leverage_t + CEOOwnership_t + MarketBook_t + Volatility_t + BoardSize_t + Independence_t$

[2] Select data is available for more years, but all of the variables used in this study are only reliably tracked beginning in 1998.

[3] The results are qualitatively similar using *Tobin's Q* as the measure of *Performance*.

[4] The results are robust to alternative measures of *Director Ownership*, such as stock ownership of the median director and total stock ownership of all independent directors.

Since both *DirectorOwnership* and *Entrenchment* are continuous variables (except for *CEO Duality*), the coefficients on the interactive terms may be difficult to interpret. Thus, indicator variables are created to identify 'good' levels of *DirectorOwnership* and *Entrenchment*. For *DirectorOwnership*, if the amount of ownership is greater than the sample median, it is defined as 'good' and the indicator variable is equal to 1, and it is equal to 0 otherwise. Similarly, if the *G-Index* score is less than the sample median, it is considered 'good' and the indicator variable is equal to 1, and it is equal to 0 otherwise. For *CEO-Duality*, it is considered 'good' if the positions are separated. If the effects of *DirectorOwnership* and *Entrenchment* only work in combination with each other, then we would expect to see a significant coefficient on the interactive terms but not on the individual governance variables.

Finally, to see if the results are time specific, the above analyses are performed by year. The 1998-2007 time-period has been a unique period with respect to corporate governance, during which we observed many high-profile corporate governance failures, the introduction of the Sarbanes-Oxley Act in 2002 and governance regulations mandated by the major U.S. stock exchanges. It is possible that individuals' and firms' attitudes with respect to various corporate governance mechanisms have changed over time. If so, we might expect to see the relationships from the above analyses change over time. Equation (1) is estimated by year to assess how consistent these relationships are over time.

4. Results

Table 1 presents the descriptive statistics for the full sample. The median director owns stock worth approximately $900,000. The median independent director owns stock worth approximately $500,000 and the sum of the holdings of all independent directors is $5.7 million. Based on the *G-Index*, the average firm has about 9 (out of 24) anti-takeover provisions. The sample firms are generally larger firms, with about 9 board members, 6 of whom are independent. The CEO is also the board chair in about 60% of the firms. The *Performance* and control variables are comparable to other similar studies for this time period.

The primary relationship that is analyzed is from equation (1), with results presented in Table 2. The results are striking: in both cases, the *DirectorOwnership* variables are positive and highly significant (p-values < 0.01), while neither of the measures of *Entrenchment* are significant. These results suggest that the incentive effect of director ownership leads to greater long-term firm performance and valuation, despite any costs associated with directors and officers being entrenched. This result is in contrast to Gompers, Ishii and Metrick (2003), who did not control for director ownership in their finding that firms with low entrenchment outperform firms with higher entrenchment.

It is possible that these effects impact firms in combination with one another. To control for this, equation (2) allows *DirectorOwnership* and *Entrenchment* to interact to affect *Performance*. Table 3 presents the results estimating equation (2). For conciseness, while the entire equation (2) is estimated, only the coefficients and t-statistics for the three variables of interest are presented. However, three different specifications are included. Dummy variables for 'good' levels of *DirectorOwnership* and *Entrenchment* are assigned, as detailed above. This applies a structure such that all measures of 'good' governance have a value of 1 and measures of 'weak' governance have a value of 0. Three variations of interactive terms are considered: dummy for *DirectorOwnership* with continuous value of *Entrenchment*, dummy for *Entrenchment* with continuous value of *DirectorOwnership*, and dummy variables for both effects. We see that *DirectorOwnership* is still positively and significantly related to *ROA* in 4 of the 6 specifications, while *Entrenchment* is in only specifications (5) and (6). In models (1) and (2), the interaction term in Panel A includes the continuous value of *DirectorOwnership* interacted with whether or not *Entrenchment* is better than the median; in both models, the interaction term is not significant. This suggests that 'good' levels of *Entrenchment* are not critical to leading to better firm performance through director ownership. In models (3) and (4), the interaction term includes the continuous value of *Entrenchment* and an indicator variable for whether or not the firm has 'good' levels of director ownership; in both models, the interaction term is negative and significant. Because the continuous measures of *Entrenchment* are descending variables, this suggests that 'good' *DirectorOwnership* combined with better levels of *Entrenchment* does lead to superior performance. Taken with models (1) and (2), this suggests that the *DirectorOwnership* effect dominates the *Entrenchment* effect. Finally, in models (5) and (6), the interaction term includes the two indicator variables. The positive and significant coefficients suggest that when both factors are 'good,' the firm experiences better operating performance. This means that analyzing the two effects in combination with each other can provide important inferences.

The final analysis presented in Table 4 considers the results with respect to the sample time period. The sample years, 1998-2007, were certainly a time of evolving corporate governance, and relationships may have changed during this period. Equation (1) is estimated by year for the relationship between

Director Ownership and *GIM G-Index*. In addition, Fama and MacBeth (1973) analyses are performed over the 10-year period. We see the primary results persist when we focus on the analyses on a year-by-year basis. Except for 1999, *DirectorOwnership* is positively and significantly related to *ROA*. *Entrenchment – GIM G-Index –* is not significantly related to *Performance* in any of the 10 years. Given that the sample sizes are much smaller in several years, the strength of the *DirectorOwnership* result is striking. Finally, a Fama-MacBeth (1973) analysis is performed on the annual coefficients on *DirectorOwnership* and *Entrenchment* to determine the relative constancy of the relationships. Again, the Fama-MacBeth coefficient for *DirectorOwnerhip* is positive and significantly related to *Performance*s. The coefficient for *Entrenchment* is not significantly related to *Performance*. This could be due low power of the sample size, but the result is nonetheless consistent with all prior analyses.[5]

5. Conclusion

The primary finding of this study is that providing boards of directors with properly aligned incentives through the use of stock ownership leads to better long-term firm performance and higher firm values. This benefit exists despite any potential costs associated with managers and directors being too entrenched to function in the shareholders' interests. This is a novel finding, and has significant implications for both future corporate governance regulation and research. First, it suggests that regulators should proceed with caution in attempting to mandate standardized corporate governance regulations. Second, it suggests prior results showing the significance of entrenched officers and directors may be overstated. That result largely disappears when *DirectorOwnership* is included as a control. Finally, these results show the importance of considering the dollar value of stock ownership of officers and directors as a corporate governance mechanism.

While certain relationships have been identified as statistically significant, of more importance may be whether or not these results are economically significant. Measuring the elasticity of effects at the means, a 1.00% increase in *Director Ownership* leads to a 0.33% increase in *ROA*. This is quite meaningful as it suggests that increasing *Median Director Ownership* by less than $10,000 can yield substantial benefits to shareholders. In contrast, a 1.00% increase in the *G-Index* leads to a 0.10% decrease in *ROA*. Small efforts to improve the incentives to directors seem to provide benefits that far outweigh any associated costs related to directors becoming too entrenched.

The primary research purpose of this study was to identify how incentives and entrenchment affect the performance of firms, and to assess whether one effect dominates the other. The results from this study clearly suggest that the incentive effect dominates the entrenchment effect. The benefits to firm performance and firm value associated with directors owning more stock seem to outweigh the costs of systematic entrenchment by the boards of directors or executive officers. From a policy perspective, this suggests that efforts to improve corporate governance environments by mandating shareholder access or board structure may be misguided. Providing directors and managers with greater stockholdings may make them more entrenched, but the benefits of these agents having their incentives at least partially aligned with those of external suppliers of capital seem to far outweigh any costs associated with entrenchment. From an academic research perspective, this suggests that the dollar value of stock owned by directors should continue to be a proxy for governance. And, from a practitioner perspective, this suggests that efforts to improve corporate governance relationships between firms and their stakeholders should focus on providing the board of directors with properly aligned incentives through greater stock ownership. The long-term benefits seem to outweigh the costs and shareholders seem to be better off because of it.

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[5] A number of sensitivity tests were performed, including controls for endogeneity, earnings management, past stock returns and different sub-periods within the 10 years. The primary results are unchanged and are available upon request.

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Appendices

Table 1. Descriptive Statistics

This table presents the descriptive statistics for the primary variables in the analysis. The number of observations, and the mean, median, 5th percentile and 95th percentile values are presented for all firms in the full sample.

	# of observations	Mean	Median	5th percentile	95th percentile
Median Director Own ($)	12,410	$887,739	$925,929	$82,485	$9,876,762
Median Outsider Own ($)	12,321	$492,974	$585,409	$42,955	$4,699,252
All Outsiders Own	12,321	$5,713,580	$5,799,675	$335,256	$118,277,226
GIM G-Index	11,616	9.18	9.00	5.00	14.00
CEO Duality	13,135	59.55%	100.00%	0.00%	100.00%
Board Size	13,135	9.25	9.00	5.00	14.00
Independence	13,135	67.03%	70.00%	33.33%	90.00%
ROA	12,885	12.55%	12.38%	0.07%	28.79%
Firm Size ($m)	13,135	$2,144	$1,822	$181	$40,764
Leverage	12,436	18.56%	16.14%	0.00%	48.04%
Market Book	12,404	2.36	2.18	0.07	6.59

Table 2. Performance, DirectorOwnership and Entrenchment Relationship

This table presents the results from estimating equation (1), the impact of *DirectorOwnership* and *Entrenchment* on *Performance*. Ordinary Least Squares estimation is used. *Return on Assets* (*ROA*) is the dependent variable. Intercept terms and year dummy variables are included but not presented. Standard errors are adjusted for clustering at the firm level. Coefficients are presented with *p*-values below in parentheses.

Dependent Variable: Return on Assets$_t$		
	(1)	**(2)**
GIM G-Index$_t$	-0.001	-
	(0.88)	-
CEO Duality$_t$	-	0.000
	-	*(0.83)*
ROA$_{t-1}$	0.760	0.759
	(0.00)	*(0.00)*
Industry ROA$_t$	0.197	0.197
	(0.00)	*(0.00)*
Firm Size$_t$	-0.001	-0.001
	(0.12)	*(0.12)*
Leverage$_t$	-0.007	-0.007
	(0.18)	*(0.20)*
CEO % Ownership$_t$	-0.001	-0.001
	(0.63)	*(0.69)*
Market Book$_t$	0.000	0.000
	(0.01)	*(0.02)*
Volatility$_t$	-0.086	-0.102
	(0.00)	*(0.00)*
Board Size$_t$	0.000	0.000
	(0.91)	*(0.76)*
Independence$_t$	-0.010	-0.010
	(0.01)	*(0.01)*
Director Ownership$_t$	0.002	0.001
	(0.00)	*(0.00)*
R-squared	0.708	0.703
# of observations	9,236	9,791

Table 3. Performance, DirectorOwnership and Entrenchment Relationship, with Interactive Term

This table presents the results from estimating equation (2), the impact of *DirectorOwnership* and *Entrenchment*, plus a (*DirectorOwnership* x *Entrenchment*) interactive term, on *Performance.* OLS estimation is used. *Return on Assets* (*ROA*) is the dependent variable. Only the coefficients on *DirectorOwnership*, *Entrenchment* and the interactive term are shown; all other terms in equation (2) are included in the estimation but are not presented. Intercept terms and year dummy variables are included but not presented. In models (1) and (2), the interactive term is the continuous value of *DirectorOwnership* x a dummy variable equal to 1 if the *Entrenchment* value is below the sample median. In models (3) and (4), the interactive term is the continuous value of *Entrenchment* x a dummy variable equal to 1 if *Director Ownership* is above the sample median. In models (5) and (6), the interactive term is the product of *Director Ownership* and *Entrenchment* dummy variables. Standard errors are adjusted for clustering at the firm level. Coefficients are presented with *p*-values below in parentheses.

	Dependent Variable: Return on Assets$_t$					
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Median Outsider Own$_t$	0.002	0.001	0.001	0.001	0.001	0.001
	(0.00)	*(0.02)*	*(0.17)*	*(0.13)*	*(0.07)*	*(0.09)*
GIM G-Index$_t$	-0.001	-	-0.001	-	0.000	-
	(0.85)	-	*(0.25)*	-	*(0.09)*	-
CEO Duality$_t$	-	0.004	-	-0.002	-	0.004
	-	*(0.74)*	-	*(0.22)*	-	*(0.07)*
Ownership$_t$ x *DumEntrenchment$_t$*	-0.001	0.001	-	-	-	-
	(0.90)	*(0.75)*	-	-	-	-
DumOwnership$_t$ x *Entrenchment$_t$*	-	-	0.001	0.004	-	-
	-	-	*(0.00)*	*(0.01)*	-	-
DumOwnership$_t$ x *DumEntrenchment$_t$*	-	-	-	-	0.006	0.006
	-	-	-	-	*(0.00)*	*(0.01)*
R-squared	0.708	0.703	0.709	0.703	0.709	0.703
# of observations	9,236	9,791	9,239	9,791	9,236	9,791

Table 4. Performance, DirectorOwnership and Entrenchment Relationship, by firm characteristics

This table presents the results from estimating equation (1), the impact of *DirectorOwnership* and *Entrenchment* on *Performance*. *Return on Assets* (*ROA*) is the dependent variablee. Within each panel, the analysis is performed on quartileS based on *FirmSize*, *MarketBook* and *Independence.* Equation (1) is estimated, but only the *DirectorOwnership* and *G-Index* variables are presented for conciseness. OLS estimation is used. Intercept terms and year dummy variables are included but not presented. Standard errors are adjusted for clustering at the firm level. Coefficients are presented with *p*-values below in parentheses.

	Dependent Variable: Return on Assets$_t$			
	Low *FirmSize* Firms <----------> High *FirmSize* Firms			
	Quartile 1	**Quartile 2**	**Quartile 3**	**Quartile 4**
Director Ownership$_t$	0.007	0.005	0.001	0.002
	(0.00)	*(0.00)*	*(0.05)*	*(0.00)*
GIM G-Index$_t$	-0.001	0.000	0.000	0.000
	(0.25)	*(0.49)*	*(0.95)*	*(0.19)*
R-squared	0.646	0.712	0.730	0.833
# of observations	1,693	2,328	2,566	2,664

	Dependent Variable: Return on Assets$_t$			
	Low *MarketBook* Firms <----------> High *MarketBook* Firms			
	Quartile 1	**Quartile 2**	**Quartile 3**	**Quartile 4**
Director Ownership$_t$	0.002	0.001	0.001	0.001
	(0.06)	*(0.04)*	*(0.06)*	*(0.07)*
GIM G-Index$_t$	0.000	0.001	0.000	0.000
	(0.31)	*(0.16)*	*(0.73)*	*(0.35)*
R-squared	0.618	0.625	0.698	0.716
# of observations	2,124	2,355	2,400	2,372

	Dependent Variable: Return on Assets$_t$			
	Low *Independence* Firms <----------> High *Independence* Firms			
	Quartile 1	**Quartile 2**	**Quartile 3**	**Quartile 4**
Director Ownership$_t$	0.002	0.002	0.004	0.003
	(0.00)	*(0.03)*	*(0.00)*	*(0.00)*
GIM G-Index$_t$	0.000	0.000	0.000	0.000
	(0.50)	*(0.95)*	*(0.18)*	*(0.71)*
R-squared	0.675	0.737	0.788	0.663
# of observations	1,973	2,334	2,379	2,565

Table 4. Performance, DirectorOwnership and Entrenchment Relationship, by Year

This table presents the results from estimating equation (1), *Director Ownership* and *GIM G-Index* on *Performance*, by-year from 1998-2007. OLS estimation is used. *Return on Assets* (*ROA*) is the dependent variable. Intercept terms and year dummy variables are included but not presented. Standard errors are adjusted for clustering at the firm level. Coefficients are presented with *p*-values below in parentheses. A Fama-MacBeth (1973) analysis is also performed on the annual coefficients for both *Director Ownership* and *GIM G-Index*, with the FM coefficient and *t*-statistic presented in each Panel.

	Median Director Own$_t$		*GIM G-Index*$_t$			
YEAR	Coefficient - β	*t*-Stat	Coefficient - β	*t*-Stat	*R*-squared	*# of observations*
1998	0.0021	*(0.06)*	-0.0004	*(0.56)*	0.552	661
1999	0.0020	*(0.15)*	0.0004	*(0.59)*	0.583	695
2000	0.0007	*(0.08)*	-0.0009	*(0.35)*	0.675	741
2001	0.0056	*(0.03)*	-0.0004	*(0.67)*	0.585	708
2002	0.0039	*(0.03)*	-0.0001	*(0.91)*	0.730	663
2003	0.0067	*(0.00)*	-0.0005	*(0.37)*	0.840	1,091
2004	0.0030	*(0.01)*	0.0002	*(0.74)*	0.784	1,209
2005	0.0031	*(0.01)*	0.0009	*(0.14)*	0.818	1,146
2006	0.0041	*(0.00)*	0.0009	*(0.16)*	0.777	1,208
2007	0.0038	*(0.01)*	0.0004	*(0.43)*	0.757	1,129
FM β	0.0035		0.0001			
FM *t*-Stat	2.007		0.087			