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# Excessive Managerial Entrenchment, Corporate Governance, and Firm Performance

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**ABSTRACT:** This paper investigates the differential impact of positive and negative excessive managerial entrenchment on the CEO turnover-performance sensitivity, CEO compensation, and firm performance. We measure the degree of managerial entrenchment using the E-index introduced by Bebchuk et al. (2009). Our findings suggest that an increase in excess CEO entrenchment reduces the likelihood of CEO turnover due to poor performance. We also show a positive association between excessive entrenchment and CEO compensation as managers gain more power and authority when they are entrenched. On the other hand, excess CEO entrenchment has an inverse correlation with firm performance and firm value. Overall, we propose that excessive managerial entrenchment has a converse impact on board monitoring and shareholders' welfare.

**Keywords:** CEO Entrenchment, Corporate Governance, Turnover-Performance Sensitivity, Managerial Compensation; Firm Performance.

## **1. Introduction**

Do over-entrenched and under-entrenched managers act differently and, consequently, have a dissimilar effect on the soundness of the firm's governance structure? Are over-entrenched managers more secure in their jobs as compared to under-entrenched managers? Do managers with above normal entrenchment levels extract higher pay levels than those with below normal entrenchment levels? How does excess CEO entrenchment, whether positive or negative, affect firm performance? Our research attempts to answer these questions by investigating the effect of excess managerial entrenchment on the soundness of the firm's internal monitoring and future firm performance.

Berger, Ofek, & Yermack (1997) define entrenchment as the failure of the assigned corporate governance codes to impose managerial discipline. Thus, entrenched managers may be incentivized to pursue their own interests and extract private benefits rather than maximizing shareholders' welfare. Gompers, Ishii, & Metrick (2003) present their governance index (G-index) based on 24 governance provisions. The authors imply that a direct relationship exists between the G-index and agency costs. Consequently, an inverse correlation between the G-index and firm performance is highlighted. Bebchuk, Chen, & Ferrell (2009) demonstrate that the converse relationship between the G-index and firm value is essentially driven by six anti-takeover provisions that comprise the entrenchment index (E-index). The E-index is composed of golden parachutes, poison pills, staggered boards, supermajority requirements for charter amendments, supermajority requirements for merger amendments, and limits to shareholder bylaw amendments. Accordingly, in this paper, we employ the E-index presented by Bebchuk et al. (2009) to measure managerial entrenchment and, accordingly, answer the posited research questions.

This paper contributes to the extant literature by quantifying the implications of excess managerial entrenchment on aspects of board monitoring and firm performance. Excessive managerial entrenchment is calculated by taking the difference between the firm's E-index and its industry mean in a given year.<sup>1</sup> We then label firm-years that fall above (below) the industry mean in a given year as over-entrenched (under-entrenched). The objective is to highlight the differential impact of over-entrenched managers, relative to under-entrenched managers, on the firm's governance structure and performance. In order to examine the impact on board monitoring, we study the impact of excessive managerial entrenchment, whether negative or positive, on the CEO's turnover-performance sensitivity and CEO compensation. Dah & Frye (2017) propose that an entrenched board environment implies an increase in CEO job security as well as remuneration levels. Furthermore, we examine the effect of CEO excess entrenchment on future firm performance.

Huson, Parrino, & Starks (2001) propose that managerial replacement serves as an indicator of the quality and effectiveness of the firm's internal monitoring. In that sense, the decrease in firm performance is expected to increase the likelihood of CEO replacement. However, the turnover-performance sensitivity may be reduced when the CEO assumes more power and authority within the firm, i.e., an over-entrenched CEO. Thus, we investigate the effect of excess managerial entrenchment on the probability of CEO turnover following poor performance. Our results imply that an increase in excess CEO entrenchment reduces the turnover-performance sensitivity, i.e., the tenure of an over-entrenched CEO is less sensitive to performance. In other words, the likelihood of managerial replacement due to poor performance decreases as managerial over-entrenchment increases.

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<sup>1</sup> As we discuss in Section 3, our results remain unchanged when using the median instead of the mean.

As a matter of fact, if the turnover of over-entrenched CEOs is less sensitive to performance, then such CEOs are likely to be dominant and powerful, which is found to be reflected in their pay (Bebchuk, Cremers, & Peyer, 2011). Hermalin & Weisbach (2003) suggest that powerful and influential CEOs tend to extract private benefits and enhance their well-being by inflating their compensation levels.<sup>2</sup> In the same vein, van Essen, Otten, & Carberry (2012) argue that managerial power has a significant impact on CEO pay. Therefore, we study the relationship between excess entrenchment and CEO compensation. Our findings propose that an increase in excess E-index levels is likely to inflate managerial pay. That is, CEO remuneration increases due to the boost in the executive's power and authority within the company. Moreover, we find that over-entrenched managers receive a significantly higher compensation compared to under-entrenched managers, where this effect is pronounced mainly in equity compensation.

To the extent that over-entrenched CEOs are likely to prioritize their benefit over shareholders' benefit, it might be the case where over-entrenched CEOs do not align their efforts with that of the firm. Accordingly, we investigate the effect of excess entrenchment on future firm performance. Prior literature implies that a strong corporate governance structure leads to a higher firm valuation (Bebchuk et al., 2009; Core, Guay, & Rusticus, 2006; Cremers & Nair, 2005; Gompers et al., 2003; Yermack, 1996) . In other words, firms with weak governance structures experience greater agency problems and, thus, would tend to underperform. As expected, our results indicate an inverse correlation between over-entrenchment and firm performance, i.e., firms managed by over-entrenched CEOs realize lower stock returns than firms managed by under-entrenched CEOs. This finding incentivized us to examine the impact of excessive entrenchment

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<sup>2</sup> Hermalin and Weisback (2003) also propose that managers with high levels of authority and control would work to reduce the percentage of independent directors serving on the firm's board of directors.

on firm value, measured by Tobin's Q. The results suggest that over-entrenching CEOs is detrimental to shareholder's value.

This research is of interest to capital market participants and policy makers who strive to protect investors' rights by preventing the expropriation of their wealth. Our findings suggest that CEOs who gain greater levels of entrenchment will probably weaken the governance structure of firms, which hampers the performance and value of such firms. Protecting shareholders rights requires actions and measures by corporate boards in order to moderate managerial entrenchment levels and, thus, prevent CEOs' consumption of private benefits at the expense of owners' welfare.

This paper is organized as follows: Section 2 presents the literature review. Section 3 presents the data and summary statistics. Section 4 discusses the results and regression analysis. Section 5 concludes.

## **2. Managerial Entrenchment and Its Measures**

Shleifer & Vishny (1989) define entrenched managers as "making themselves valuable to shareholders and costly to replace", whereby they indirectly impose their power on shareholders. There is an extensive literature demonstrating managerial entrenchment as an impediment to good corporate governance, and focusing on board monitoring and advising, financial performance, corporate life cycles, capital structure, and corporate social responsibility reporting (Al-ahdal, Alsamhi, Tabash, & Farhan, 2020; Al-Shaer & Harakeh, 2020; Al Dah, 2018; Al Dah, Michael, & Dixon, 2017; Alves, Couto, & Francisco, 2015; Arayssi, Dah, & Jizi, 2016; Bebchuk et al., 2009; Brick et al., 2006; Dah & Jizi, 2018; Esqueda & O'Connor, 2020; Gompers et al., 2003; Harakeh, El-Gammal, & Matar, 2019; O'Connor, 2012).

As mentioned earlier, our research focuses on the excessive levels of managerial entrenchment and its effects on board monitoring and firm performance. Prior studies have developed corporate

governance indices to proxy for managerial entrenchment. Specifically, Gompers et al. (2003) develops the governance index (G-index) that comprises 24 anti-takeover provisions to study the impact of corporate governance on the firm's value. The provisions are grouped into five categories (delay, voting, protection, state laws, and other). The presence of a provision indicates more solid antitakeover protection measures while the absence of a provision implies stronger shareholder rights. Drawing on Gompers et al. (2003), Bebchuk et al. (2009) further investigate the 24 provisions presented in the G-index and show that six provisions have an adverse effect on firm valuation; the six provisions are referred to as the entrenching provisions. Accordingly, Bebchuk et al. (2009) construct of the E-index based on the six provisions that proxy for managerial entrenchment. Of the six provisions put forth by the entrenchment index (E-index), four create limitations on the voting power of the shareholders and deprive them from fully imposing their will on management. The four provisions are staggered boards, limits to shareholder amendments of the bylaws, supermajority requirements for mergers, and supermajority requirements for charter amendments. The other two provisions, namely the poison pill and golden parachute arrangement, are mainly adopted as defense mechanisms against hostile takeovers.

The construction of the E-index is computed based on the number of the six provisions that the company has adopted, i.e., the E-index takes values from zero to six. Gompers et al. (2003) and Bebchuk et al. (2009) show that taking a long position on companies that have low values in the G- and E- indices, and short positions on companies that have high values in the aforementioned indices, generates positive abnormal returns. Subsequent studies document further findings on the association between the G- and E- indices and firm performance. For example, Cremers and Nair (2005) show that a firm with a lower G-index score, specifically with a higher takeover vulnerability, has a higher market value on average. Similarly, Bhagat & Bolton (2008) find that

a better governance, as proxied by the G- and E- indices, is positively associated with a better contemporaneous and subsequent operating performance. In the vein, other studies incorporate the aforementioned governance indices to examine a variety of financial matters other than those related to firm value. For example, Dittmar & Mahrt-Smith (2007) find that lower scores in the G- and E- indices are associated with a more valuable use of cash holdings. Masulis, Wang, & Xie (2007) find that lower scores in the indices are also associated with relatively better acquisition decisions as indicated by the favorable market reaction accompanying the acquisition. Interestingly, the authors find that the positive abnormal returns surrounding the acquisition event are attributed specifically to the entrenchment provisions. Moreover, Ashbaugh-Skaife, Collins, & LaFond (2006) provide empirical evidence suggesting a negative association between a firm credit rating and its governance score. Bowen, Rajgopal, & Venkatachalam (2008) document that higher scores of the G-Index is associated with higher levels of accounting discretion, which usually reflects low financial reporting quality (Leuz & Wysocki, 2016) and increases the demand for better governance Bushman, Chen, Engel, & Smith (2004).

Some other studies further investigate the provisions of the E-index separately, which we discuss in what follows. One of the most studied provisions in the E-index is staggered boards, also known as classified boards. When the company utilizes a staggered board structure, directors are divided into three distinct classes and the annual elections are held for one class per year (Bates, Becher, & Lemmon, 2008). This way, shareholders are unable to replace the majority of the directors in a given year even if they unanimously agree on it. However, critics of the staggered board classification argue that the announcement of the adoption of the provision leads to negative stock returns (Faleye, 2007) and that firm's announcement of eliminating board classification is associated with positive stock returns (Guo, Kruse, & Nohel, 2008). Staggered boards are usually



a defensive mechanism against takeovers. Nevertheless, Manne (2002) argues that hostile takeovers serve as a disciplinary tool for managers and thereby provide bigger incentives for managers to engage in activities that maximize shareholders' wealth. On the other hand, being hard to replace results in exacerbating the principal-agent problem as the manager might waste cash on value-destroying projects to benefit privately or engage in extracting higher levels of pay. Accordingly, several studies suggest that staggered boards yield in managerial entrenchment and cause deterioration in firm value due to agency costs (e.g., Bebchuk & Cohen, 2005; Cremers & Nair, 2005; Faleye, 2007; Gompers et al., 2003).

In addition to the provision relating to the voting power for director removal, shareholders have the right to vote on charter amendments, merging arrangements, and bylaw amendments. The supermajority requirements necessitate the approval of more than a majority of shareholders on these provisions, aiming to act as a defense mechanism against a takeover. Poison pills, on the other hand, are rights that prevent a hostile bidder from buying the company's shares provided that the incumbents deny redeeming the pill (Bebchuk et al., 2009). Boards can utilize poison pills without shareholders' approval and may adopt it before or even after the emergence of a bid. Consequently, companies having no poison pill in place are still viewed as adopting a "shadow pill" strategy as it can be rolled out in case of a hostile bid (Coates, 2000). It is worth noting that some studies show how the adoption of the poison pill strategy can be associated with a favorable stock market reaction only when the fraction of outside board members is high (Comment & Schwert, 1995). Finally, a golden parachute, another anti-takeover measure, is an executive agreement that provides significant financial benefits to the top management in the event of replacement or demotion due to a change in control. Golden parachutes strive to decrease the likelihood of a hostile takeover by increasing the opportunity cost of the incumbents'

compensation, thus the adoption of the provision protects them from the prospect of replacement. As a matter of fact, among the six provisions mentioned above, both golden parachutes and poison pills are the most commonly used tactics while the supermajority provisions are less pervasive (Bates et al., 2008).

Another strand of the literature tackles the impact of managerial entrenchment on CEO compensation. From a theoretical perspective, the managerial power theory (Bebchuk & Fried, 2003, 2004) and the optimal contracting theory (Jensen & Murphy, 1990; Murphy, 1999) complement in explaining the relation between managerial entrenchment and CEO compensation under the umbrella of the agency theory (van Essen et al., 2012). The managerial power theory argues that managers determine their compensation contracts when the level of managerial entrenchment is high within the firm. In other words, managerial entrenchment shifts the bargaining power from investors to insiders when it comes to compensation contracts. Therefore, a positive association is expected between managerial entrenchment and CEO compensation. The optimal contracting theory posits that the CEO compensation structure is designed to enhance efficient contracting between the principal and the agent by introducing a performance-based compensation element, which creates an incentive for managers to maximize shareholders' value and thus reaches an equilibrium in the capital market. As such, even firms with bad governance (and highly entrenched managers) will also exhibit a positive association between managerial entrenchment and CEO compensation. Empirical studies support the aforementioned theories. For example, Field & Karpoff (2002) demonstrate that entrenchment provisions, specifically takeover provisions, are utilized by firms before going public to protect managers' benefits of control following an initial public offering (IPO). In the same vein, Forst, Seok Park, & Wier (2014) show that CEOs of companies with more entrenched governance receive higher total compensation post-

IPOs. Using an exogenous change in internal corporate governance, Chhaochharia & Grinstein (2009) show that firms with bad corporate governance, i.e., higher managerial entrenchment and worse board monitoring, witness a greater reduction in CEO compensation following the shock. Finally, to the extent that highly entrenched CEOs are (i) less likely to be penalized following bad financial performance and (ii) more likely to extract high compensation given their performance, we expect that over-entrenched managers will result in deteriorating shareholders' value.

In conclusion to this section, several dimensions of the agency problem exacerbate with firms' adoption of entrenching provisions. The practice of such provisions empowers management to impose their will on shareholders by limiting the latter's voting power and influence on firm decisions. Jensen & Murphy (2010) believe that no solution can truly eliminate the principal-agent problem; however, a good corporate governance structure plays a central role in mitigating the existing conflict of interest.

### **3. Data and Descriptive Statistics**

#### **3.1. Data and variable definition**

For all S&P 1500 companies between 2000 and 2016, we download accounting data from Compustat and stock return data from CRSP. We also download governance variables (including the E-index components) from Institutional Shareholder Services (ISS) and compensation data from Execucomp.

As mentioned earlier, we evaluate the effect of managerial entrenchment on the performance-turnover sensitivity as well as managerial compensation. Managerial entrenchment is captured using the E-index (Bebchuk et al., 2009), where each firm marks a score ranging from zero to six, based on the number of the E-index provisions that the company adopts in a given year.

We thus compute firm's excess managerial entrenchment by calculating the difference between its E-index and its industry mean in a given year.<sup>3</sup>

To examine the impact of excess managerial entrenchment on the manager's turnover-performance sensitivity, we identify turnover when the CEO in the following year is different from the current year's CEO. Firm performance is measured using buy-and-hold daily and monthly returns (*BH Return*). The buy-and-hold return is given by:

$$\text{BH Return}_{it} = \prod_{n=1}^N (1 + r_{in}) - 1 \quad (1)$$

Where N is the number of trading days or months for firm i in year t.

The managerial compensation comprises basic salary, incentive plan compensation, stock and option awards, and all other compensation. Thus, we examine the effect of excess entrenchment on total compensation, equity-based compensation, and cash compensation.

We include a set of control variables that explain managerial turnover and firm performance following prior papers (e.g. Adams & Ferreira, 2009). The inclusion of such variable is essential to control for potential confounding effects arising from omitting relevant variables that explain firm performance and, at the same time, are correlated with the E-index. Specifically, we control for firm size, financial leverage, liquidity, capital expenditure, and assets tangibility (Al-Shaer & Harakeh, 2020). Moreover, we include a set of variables that captures corporate governance, namely, percentage of independent directors, board size, and CEO gender, tenure, age, and duality (Dah and Fyre, 2017). All continuous control variables are winsorized at the 1% level and are used in accordance to the related literature (Coles, Daniel, & Naveen, 2014; Dah,

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<sup>3</sup> We use the mean instead of the median to maximize the number of observations since we restrict our sample to firm-years with non-zero excess entrenchment. Nevertheless, our results remain unchanged when using the median instead of the mean.

Frye, & Hurst, 2014; Linck, Netter, & Yang, 2009). Finally, we include industry and year dummy variables to account for unobserved characteristics related to industry and year attributes, where the industry dummy variables are based on the 48-industry definitions constructed by Fama & French (1997). All variables used in this paper are defined in Table 1.

[Insert Table 1 Here]

### **3.2. Descriptive statistics**

A summary statistic of the mean and the standard deviation of all the variables used throughout this research is presented in Table 2. Between 2000 and 2016, the mean value of the E-index is 3.387 with a standard deviation of 1.36, which suggests that the mean value of the E-index is significantly different from zero. In addition, the positive and negative excess E-index mean values are 0.843 and  $-0.840$ , respectively, which indicates that the distribution of the mean values are centered around zero. The table also shows that the average board size is 10 directors, of which 75% are independent directors. However, CEO duality shows that around 53% of the CEOs assume dual roles on the board. On average, CEOs seem to be well experienced with an average tenure of 10 years and an average age of 56 years. As far as financial variables are concerned, the mean value of leverage shows that an average U.S. firm has a debt-to-assets ratio of 1:4, spends 4% of its total assets on capital expenditure, and one-fourth of its assets are tangible.

[Insert Table 2 Here]

Finally, Table 3 reports the correlation matrix of the main independent variables used in this research. The reported correlation coefficients are in line with prior research (e.g., Dah & Frye, 2017) and assure that multi-collinearity is not a concern in the employed dataset.

[Insert Table 3 Here]

## **4. Results**

#### 4.1. Turnover-performance sensitivity

The turnover-performance sensitivity observes the sensitivity of CEO replacement to the performance of the firm. An extensive body of literature suggests that poor performance increases the likelihood of CEO turnover (Coughlan & Schmidt, 1985; Dah et al., 2014; Parrino, 1997; Warner, Watts, & Wruck, 1988; Weisbach, 1988). In this section, we examine the impact of excess managerial entrenchment on the sensitivity of CEO turnover to firm performance.

We conduct the following probit model to study the effect of excess entrenchment, both positive and negative, on the turnover-performance sensitivity:

$$\begin{aligned} \text{Turnover}_{it+1} (\text{Dummy}) = & \alpha_0 + \alpha_1 \text{Excess\_}E_{it} (\text{Dummy}) + \alpha_2 \text{Performance}_{it} \\ & + \alpha_3 \text{Excess\_}E_{it} (\text{Dummy}) \times \text{Performance}_{it} \\ & + \sum \alpha_j \text{Control\_Variables}_{it} + \varepsilon_{it} \end{aligned} \quad (2)$$

Where *Turnover (Dummy)* is an indicator variable that takes the value 1 if the CEO has changed since last year, *Excess\_E (Dummy)* is an indicator variable that takes the value 1 if excess entrenchment is positive and 0 if negative, and *Performance* is the industry-adjusted buy-and-hold return. The results are reported in Tables 4. Columns (1)-(4) use total CEO turnover (both voluntary and forced turnover) as the dependent variable; however, Columns (5)-(8) use forced CEO turnover explicitly. Columns (1) and (2) report regression results while using buy-and-hold daily returns as a measure of firm performance; however, Columns (3) and (4) use buy-and-hold monthly returns a measure of firm performance. The regression results reported in Columns (5)-(8) are analogous to those reported in Columns (1)-(4), but employ forced CEO turnover, instead of total CEO turnover, as the dependent variable in the probit regressions. Forced turnover is an indicator variable that takes the value of 1 if the CEO leaves office for reasons other than death or retiring when his/her age is above 60.

We start with total CEO turnover in Columns (1)-(4). The negative and significant coefficient on *BH Daily Return* (*BH Monthly Return*) in Columns (1) and (2) ((3) and (4)) indicates a negative association between firm performance and CEO turnover. In other words, a drop in firm performance increases the probability of CEO replacement. In Columns (2) and (4), an interaction variable between the excess E-index dummy and performance is added to the regressions. The coefficient estimate on the industry adjusted daily buy-and-hold return is still negative and significant in both columns. This suggests that, in the absence of excessive managerial entrenchment levels, CEO turnover is conversely associated with prior firm performance. Column (2) highlights a significantly positive interaction variable between excess entrenchment and performance. This implies a reduction in the likelihood of managerial dismissal following poor performance as positive excess managerial entrenchment levels rise. In Column (4), we employ monthly data instead of daily data to calculate the industry adjusted buy-and-hold return and find quite similar results to those presented in Column (2).

In Columns (5)-(8), we repeat the same analysis as in Columns (1)-(4) while employing forced CEO turnover, instead of total CEO turnover, as the dependent variable in the probit regressions. The negative and significant coefficient on *BH Daily Return* (*BH Monthly Return*) in Columns (5) and (6) ((7) and (8)) confirms the negative association between firm performance and forced CEO turnover as in total CEO turnover. More interestingly, Column (6) shows that the magnitude of the coefficient on the interaction variable  $Excess\_E_t (Dummy) \times BH\ Daily\ Return_t$  relative to that on *BH Daily Return* is higher compared to that in Column (2), which suggests a greater moderating effect for excess entrenchment on the performance-turnover sensitivity when the dependent variable indicates a case of a forced turnover. This observation also applies when comparing the coefficients reported in Column (8) to those in Column (4), i.e., when using *BH*

*Monthly Return* to measure firm performance. In sum, the results reported in Table 4 confirm that over-entrenching managers enable them to experience lower job security pressure as it is less probable that such managers are forced to leave office due to poor firm performance.

[Insert Table 4 Here]

## 4.2. CEO compensation

Prior literature highlights a direct association between CEO compensation and CEO power within firms. CEO authority and control may magnify their ability to extract higher pay levels. Core, Holthausen, & Larcker (1999) suggest that inflated CEO power may lead to a weak corporate governance structure and, thus, would increase managerial excess compensation and hamper firm value. Dah and Frye (2017) propose a negative effect of managerial excessive compensation on the soundness of the firm's governance structure. In this section, our paper examines the effect of excess CEO entrenchment on different components of managerial compensation. Accordingly, we run the following regression model:

$$\text{Log (CEO Compensation}_{t+1}) = \alpha_0 + \alpha_1 \text{Excess\_E}_{it} \text{ (Dummy)} + \sum \alpha_j \text{Control\_Variables}_{it} + \varepsilon_{it} \quad (3)$$

Where *CEO Compensation* is either equity, cash or total compensation. Table 5 Column (1) shows the effect of excess managerial entrenchment on future CEO total compensation. The results demonstrate that an increase in excess E-index is associated with an increase managerial total compensation. Similarly, Table 5 Columns (2) and (3) report the effect of excess E-index on CEO equity and cash compensation, respectively. Furthermore, in an untabulated analysis, we split the sample into over-entrenched and under-entrenched subsamples and find that the positive coefficient estimate on *Excess\_E (Dummy)* for the over-entrenched subsample is larger than that for the under-entrenched subsample. In other words, the direct effect of excessive managerial entrenchment on the components of CEO compensation is more pronounced when excess



entrenchment is above normal as opposed to below normal. Finally, from an economic perspective, the results suggest that over-entrenched CEOs are likely to receive 8% more total compensation than under-entrenched CEOs. This differential impact of excess entrenchment on CEO compensation is more pronounced for the equity component as over-entrenched CEOs are likely to receive 22% higher equity compensation than under-entrenched CEOs.

[Insert Table 5 Here]

### 4.3. Firm Performance

Bebchuk et al. (2009) imply that an increase in the E-index has a negative impact on the firm's performance. Dah (2016) demonstrates a converse association between managerial entrenchment and firm value during both recessionary and normal economic conditions. Accordingly, we now explore the effect of excess entrenchment on future firm performance. Consistent with our previous regression analysis, we use the year t+1 daily and monthly industry adjusted buy-and-hold returns to measure future firm performance. Thus, we utilize the below regression model:

$$Performance_{t+1} = \alpha_0 + \alpha_1 Excess\_E_{it} (Dummy) + \sum \alpha_j Control\_Variables_{it} + \varepsilon_{it} \quad (4)$$

Where all variables were either defined earlier or in Table 1. Table 6 Columns (1) and (2) indicate that excessive entrenchment is inversely correlated with firm performance for the over-entrenched group compared to the under-entrenched subsample. This finding is in line with the existing body of literature suggesting that firms with weak shareholder rights underperform relative to those with strong shareholder rights (Gompers et al., 2003; Bebchuk et al., 2009).

[Insert Table 6 Here]

To lend further support to our findings, we employ a different proxy for firm performance other than the buy-and-hold return. Following Harakeh (2020), we utilize the year t+1 Tobin's Q to capture firm value and use it as our dependent variable in Equation (4). Tobin's Q is calculated

following Chung & Pruitt (1994). Table 7 Column (1) reports regression results using the raw values of  $Q_{t+1}$  while Table 7 Column (2) uses industry adjusted values of  $Q_{t+1}$ . The results are aligned with our reported findings in Table 6 and suggest that, on average, an over-entrenched board of directors is likely to negatively affect firm value compared to an under-entrenched board of directors. In other words, inflating the entrenchment level among directors seems to be detrimental to shareholders' wealth.

[Insert Table 7 Here]

## 5. Conclusion

This paper analyzes the effect of different levels of excessive entrenchment on the firm's corporate governance and performance. In doing so, we examine the differential effect of positive and negative excessive managerial entrenchment on CEO turnover-performance sensitivity, CEO remuneration, and firm performance. The anti-takeover provisions presented in the E-index of Bebchuk et al. (2009) are used to measure managerial entrenchment, and thereby compute excess entrenchment by calculating the difference between managerial entrenchment index and its industry mean in a given year.

Our investigation reveals the presence of a differential impact for positive and negative managerial entrenchment on firm's corporate governance and performance. We first find that an increase in positive excess CEO entrenchment is inversely related to the turnover-performance sensitivity. That is, CEOs are less likely to be replaced because of poor performance when they are over-entrenched compared to when they are under-entrenched. Our analysis further suggests a differential impact for positive and negative excess entrenchment on CEO compensation by showing that over-entrenched managers receive significantly higher compensation than under-

entrenched managers. Finally, consistent with prior studies, our results indicate a negative association between managerial entrenchment and firm performance.

In conclusion, this paper suggests that entrenchment reduces the effectiveness of the board monitoring and deteriorates firm valuation in capital markets. CEOs gain more control as they get entrenched, and in turn, use this power to extract their own interest rather than the interest of shareholders. Nevertheless, cross-sectional heterogeneity resides in managerial entrenchment and future studies may need to take the differential impact of positive and negative excess entrenchment into account. This research implies that positive excess managerial entrenchment has a negative effect on shareholders' welfare as it diminishes the efficiency of the board's monitoring function and, subsequently, decreases firm value. We propose that policy makers should ensure a sound governance structure among firms by curbing CEOs from becoming overly entrenched, which serves shareholders' interests and protects their investments. This opens the door for future research to determine the optimal level of managerial entrenchment.

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## Tables

**Table 1: Variable Definitions**

Variable	Definition
<i>E-Index</i>	Entrenchment Index constructed following Bebchuk et al. (2009). It is composed of: golden parachutes, poison pills, staggered boards, supermajority requirements for charter amendments, supermajority requirements for merger amendments, and limits to shareholder bylaw amendments.
<i>Excess_E</i>	Excessive managerial entrenchment is calculated by taking the difference between the firm's E-index and its industry mean in a given year.
<i>Firm Size</i>	Natural logarithm of the firm's sales.
<i>Leverage</i>	Summation of the firm's debt in current liabilities and long-term debt, divided by total assets.
<i>Liquidity</i>	The difference between current assets and current liabilities, divided by total assets
<i>CAPEX</i>	Ratio of the firm's capital expenditure to total assets.
<i>PPE</i>	Ratio of the firm's property, plant, and equipment to total assets.
<i>%Independent</i>	Ratio of independent directors present on the board to the total number of directors.
<i>Board Size</i>	Total number of directors serving on the board.
<i>CEO Gender</i>	Dummy variable equal to 1 if the CEO is a male and 0 otherwise.
<i>CEO Tenure</i>	Number of service years for the CEO in office.
<i>CEO Age</i>	Age of the firm's CEO.
<i>Duality</i>	Dummy variable equal to 1 if the CEO is also the board's chair and 0 otherwise.
<i>Total Turnover</i>	Dummy variable equal to 1 if the firm's CEO is replaced in a given year.
<i>Forced Turnover</i>	Dummy variable equal to 1 if the CEO turnover is documented for reasons other than death or a CEO retiring when his/her age is above 60.
<i>CEO Total Compensation</i>	Natural logarithm of the total CEO compensation as reported by ExecuComp.
<i>CEO Cash Compensation</i>	Summation of CEO's salary and bonus.
<i>CEO Equity Compensation</i>	Difference between CEO total compensation and CEO cash compensation.
<i>BH Daily Return</i>	Industry adjusted daily buy-and-hold stock return is calculated by taking the difference between the firm's daily buy-and-hold stock return and its industry median.
<i>BH Monthly Return</i>	Industry adjusted monthly buy-and-hold stock return is calculated by taking the difference between the firm's monthly buy-and-hold stock return and its industry median.
<i>Q</i>	Tobin's Q is computed following Chung and Pruitt (1994).

**Table 2: Descriptive Statistics**

Variable	Number of Observations	Mean	Std. Dev.
<i>E-Index</i>	16569	3.387	1.360
<i>Positive Excess_E</i>	8013	0.843	0.614
<i>Negative Excess_E</i>	8043	-0.840	0.674
<i>Firm Size</i>	19924	7.581	1.643
<i>Leverage</i>	21553	0.233	0.206
<i>Liquidity</i>	15931	0.215	0.198
<i>CAPEX</i>	21231	0.041	0.046
<i>PPE</i>	20235	0.236	0.232
<i>%Independent</i>	15484	75.737	13.813
<i>Board Size</i>	15484	9.697	2.509
<i>CEO Gender</i>	21726	0.898	0.302
<i>CEO Tenure</i>	18368	9.968	8.037
<i>CEO Age</i>	19462	56.363	7.309
<i>Duality</i>	19907	0.533	0.499
<i>CEO Total Compensation</i>	19791	5944241	5959170
<i>CEO Equity Compensation</i>	19791	4713374	5364
<i>CEO Cash Compensation</i>	19907	1187674	1097

Notes: this table presents the mean and standard deviation of the variables used in all tests for the years 2000 to 2016 of the companies listed in the S&P 1500 index. All continuous variables are winsorized at the top and bottom percentile. All variables are defined in Table 1. \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.



**Table 3: Correlation matrix between main variables**

	E-Index	Firm Size	Leverage	Liquidity	CAPEX	PPE	%Independent	Board Size	CEO Gender	CEO Tenure	CEO Age	Duality
<i>E-Index</i>	1.000											
<i>Firm Size</i>	-0.086	1.000										
<i>Leverage</i>	0.038	0.228	1.000									
<i>Liquidity</i>	0.026	-0.403	-0.471	1.000								
<i>CAPEX</i>	-0.061	0.010	0.039	-0.254	1.000							
<i>PPE</i>	-0.043	0.114	0.253	-0.453	0.714	1.000						
<i>%Independent</i>	0.342	0.192	0.129	-0.125	-0.063	0.013	1.000					
<i>Board Size</i>	-0.005	0.546	0.221	-0.358	-0.008	0.129	0.127	1.000				
<i>CEO Gender</i>	-0.038	-0.068	0.003	0.034	0.050	0.030	-0.066	-0.069	1.000			
<i>CEO Tenure</i>	-0.128	-0.111	-0.089	0.128	0.005	-0.034	-0.200	-0.100	0.017	1.000		
<i>CEO Age</i>	0.003	0.049	0.029	-0.016	0.023	0.079	-0.043	0.046	0.011	0.392	1.000	
<i>Duality</i>	-0.063	0.136	0.006	-0.024	0.010	0.058	0.004	0.056	-0.014	0.205	0.178	1.000

Notes: this table reports the Pearson correlation matrix between the main variables used in the regression analysis. All continuous variables are wisorized at the top and bottom percentile. All variables are defined in Table 1.

**Table 4: The Effect of Excess Entrenchment on Turnover-Performance Sensitivity**

	<i>Total Turnover<sub>t+1</sub> (Dummy)</i>				<i>Forced Turnover<sub>t+1</sub> (Dummy)</i>			
	BH Daily Return		BH Monthly Return		BH Daily Return		BH Monthly Return	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Excess_E<sub>t</sub> (Dummy)</i>	-0.0066 (0.0049)	-0.0113** (0.0055)	-0.0066 (0.0049)	-0.0113** (0.0055)	-0.0053 (0.0037)	-0.0096** (0.0042)	-0.0053 (0.0037)	-0.0097** (0.0042)
<i>BH Daily Return<sub>t</sub></i>	-0.0410*** (0.0064)	-0.0573*** (0.0089)			-0.0272*** (0.0051)	-0.0422*** (0.0069)		
<i>Excess_E<sub>t</sub> (Dummy) × BH Daily Return<sub>t</sub></i>		0.0307*** (0.0114)				0.0282*** (0.0090)		
<i>BH Monthly Return<sub>t</sub></i>			-0.0415*** (0.0064)	-0.0577*** (0.0089)			-0.0274*** (0.0051)	-0.0424*** (0.0069)
<i>Excess_E<sub>t</sub> (Dummy) × BH Monthly Return<sub>t</sub></i>				0.0305*** (0.0113)				0.0278*** (0.0087)
<i>Firm Size<sub>t</sub></i>	0.0023 (0.0023)	0.0023 (0.0023)	0.0023 (0.0023)	0.0023 (0.0023)	-0.0012 (0.0018)	-0.0013 (0.0018)	-0.0012 (0.0018)	-0.0013 (0.0018)
<i>Leverage<sub>t</sub></i>	-0.0041 (0.0157)	-0.0042 (0.0157)	-0.0043 (0.0157)	-0.0044 (0.0157)	0.0064 (0.0129)	0.0063 (0.0129)	0.0063 (0.0129)	0.0062 (0.0129)
<i>Liquidity<sub>t</sub></i>	0.0021 (0.0183)	0.0023 (0.0183)	0.0023 (0.0183)	0.0025 (0.0183)	0.0090 (0.0145)	0.0092 (0.0145)	0.0090 (0.0145)	0.0092 (0.0145)
<i>CAPEX<sub>t</sub></i>	0.2590*** (0.0845)	0.2596*** (0.0845)	0.2589*** (0.0845)	0.2598*** (0.0845)	0.1849*** (0.0658)	0.1855*** (0.0658)	0.1851*** (0.0658)	0.1859*** (0.0658)
<i>PPE<sub>t</sub></i>	-0.0313 (0.0205)	-0.0314 (0.0205)	-0.0314 (0.0205)	-0.0316 (0.0205)	-0.0235 (0.0148)	-0.0236 (0.0148)	-0.0235 (0.0148)	-0.0237 (0.0148)
<i>%Independent<sub>t</sub></i>	0.0006*** (0.0002)	0.0006*** (0.0002)	0.0006*** (0.0002)	0.0006*** (0.0002)	0.0002 (0.0001)	0.0002 (0.0001)	0.0002 (0.0001)	0.0002 (0.0001)
<i>Board Size<sub>t</sub></i>	0.0032** (0.0014)	0.0032** (0.0014)	0.0032** (0.0014)	0.0032** (0.0014)	0.0017 (0.0012)	0.0018 (0.0012)	0.0018 (0.0012)	0.0018 (0.0012)

*Continued next page*

<i>CEO Gender<sub>t</sub></i>	0.0013 (0.0079)	0.0016 (0.0079)	0.0013 (0.0079)	0.0016 (0.0079)	-0.0035 (0.0061)	-0.0033 (0.0061)	-0.0036 (0.0061)	-0.0033 (0.0062)
<i>CEO Tenure<sub>t</sub></i>	-0.0029*** (0.0003)	-0.0029*** (0.0003)	-0.0029*** (0.0003)	-0.0029*** (0.0003)	-0.0012*** (0.0002)	-0.0012*** (0.0002)	-0.0012*** (0.0002)	-0.0012*** (0.0002)
<i>AGE</i>	0.0038*** (0.0003)	0.0038*** (0.0003)	0.0038*** (0.0003)	0.0038*** (0.0003)	-0.0011*** (0.0002)	-0.0011*** (0.0002)	-0.0011*** (0.0002)	-0.0011*** (0.0002)
<i>Duality<sub>t</sub></i>	-0.0217*** (0.0052)	-0.0217*** (0.0052)	-0.0217*** (0.0052)	-0.0217*** (0.0052)	-0.0141*** (0.0039)	-0.0140*** (0.0039)	-0.0141*** (0.0039)	-0.0140*** (0.0039)
<i>Intercept</i>	-0.2350*** (0.0419)	-0.2090*** (0.0427)	-0.2351*** (0.0419)	-0.2086*** (0.0427)	0.0515** (0.0227)	0.0704*** (0.0229)	0.0517** (0.0227)	0.0709*** (0.0229)
Industry Dummies	YES	YES	YES	YES	YES	YES	YES	YES
Year Dummies	YES	YES	YES	YES	YES	YES	YES	YES
Pseudo R <sup>2</sup>	0.0720	0.0727	0.0721	0.0728	0.0709	0.0713	0.0710	0.0714
N	11798	11798	11798	11798	11798	11798	11798	11798

Notes: This table reports results from probit regressions of CEO (total and forced) turnover in year t+1 on a dummy variable that captures the difference between positive and negative excess entrenchment in year t, buy-and-hold (monthly and daily) return in year t, and their interaction using the full sample. The t-statistics in parentheses are calculated based on White (1980) robust standard errors. All continuous variables are winsorized at the top and bottom percentile. All variables are defined in Table 1. \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

**Table 5: The Effect of Excess Entrenchment on CEO Compensation**

	<i>Log (CEO Total Compensation<sub>t+1</sub>)</i>	<i>Log (CEO Equity Compensation<sub>t+1</sub>)</i>	<i>Log (CEO Cash Compensation<sub>t+1</sub>)</i>
	(1)	(2)	(3)
<i>Excess_E<sub>t</sub> (Dummy)</i>	0.0801*** (0.0127)	0.2233*** (0.0271)	0.1156*** (0.0244)
<i>Firm Size<sub>t</sub></i>	0.3555*** (0.0076)	0.4259*** (0.0171)	0.0788*** (0.0191)
<i>Leverage<sub>t</sub></i>	0.1341*** (0.0453)	0.4095*** (0.0975)	0.0605 (0.0714)
<i>Liquidity<sub>t</sub></i>	-0.3068*** (0.0628)	-0.6773*** (0.1387)	-1.1318*** (0.1437)
<i>CAPEX<sub>t</sub></i>	0.5514** (0.2424)	0.2933 (0.5342)	-1.1250** (0.4382)
<i>PPE<sub>t</sub></i>	-0.5032*** (0.0566)	-0.5984*** (0.1183)	-0.3891*** (0.1079)
<i>%Independent<sub>t</sub></i>	0.0083*** (0.0006)	0.0194*** (0.0014)	0.0081*** (0.0013)
<i>Board Size<sub>t</sub></i>	0.0195*** (0.0037)	0.0386*** (0.0078)	0.0313*** (0.0071)
<i>CEO Gender<sub>t</sub></i>	0.0647*** (0.0204)	0.0543 (0.0403)	0.0969** (0.0430)
<i>CEO Tenure<sub>t</sub></i>	-0.0037*** (0.0011)	-0.0160*** (0.0025)	0.0008 (0.0027)
<i>CEO Age<sub>t</sub></i>	0.0012 (0.0011)	-0.0001 (0.0024)	0.0091*** (0.0028)
<i>Duality<sub>t</sub></i>	0.0230* (0.0139)	0.0146 (0.0298)	-0.0035 (0.0268)
<i>Intercept</i>	11.3615*** (0.1623)	2.0338*** (0.3019)	5.5405*** (0.2277)
Industry Dummies	YES	YES	YES
Year Dummies	YES	YES	YES
Adjusted R <sup>2</sup>	0.4731	0.3167	0.1012
N	11980	11980	11980

Notes: this table reports results from OLS regressions of the natural logarithm of CEO compensation for total, equity, and cash compensation in year t+1 on a dummy variable that captures the difference between positive and negative excess entrenchment in year t using the full sample. The t-statistics in parentheses are calculated based on White (1980) robust standard errors. All continuous variables are winsorized at the top and bottom percentile. All variables are defined in Table 1. \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

**Table 6: The Effect of Excess Entrenchment on Firm Performance using BH Returns**

	<i>BH Daily Return<sub>t+1</sub></i>	<i>BH Monthly Return<sub>t+1</sub></i>
	(1)	(2)
<i>Excess_E<sub>t</sub></i> (Dummy)	-0.0134** (0.0057)	-0.0138** (0.0058)
<i>Firm Size<sub>t</sub></i>	-0.0076*** (0.0029)	-0.0077*** (0.0029)
<i>Leverage<sub>t</sub></i>	0.0634*** (0.0239)	0.0637*** (0.0240)
<i>Liquidity<sub>t</sub></i>	-0.0197 (0.0248)	-0.0183 (0.0249)
<i>CAPEX<sub>t</sub></i>	-0.4470*** (0.1216)	-0.4532*** (0.1221)
<i>PPE<sub>t</sub></i>	0.0216 (0.0304)	0.0230 (0.0306)
<i>% Independent<sub>t</sub></i>	-0.0001 (0.0003)	-0.0002 (0.0003)
<i>Board Size<sub>t</sub></i>	-0.0013 (0.0017)	-0.0012 (0.0017)
<i>CEO Gender<sub>t</sub></i>	0.0013 (0.0097)	0.0001 (0.0097)
<i>CEO Tenure<sub>t</sub></i>	0.0007 (0.0005)	0.0007 (0.0005)
<i>CEO Age<sub>t</sub></i>	-0.0011** (0.0005)	-0.0011** (0.0005)
<i>Duality<sub>t</sub></i>	0.0068 (0.0066)	0.0070 (0.0066)
<i>Intercept</i>	0.2402*** (0.0611)	0.2394*** (0.0611)
Industry Dummies	YES	YES
Year Dummies	YES	YES
Adjusted R <sup>2</sup>	0.2415	0.2404
N	11787	11787

Notes: this table reports results from OLS regressions of buy-and-hold daily and monthly returns on a dummy variable that captures the difference between positive and negative excess entrenchment in year t using the full sample. The t-statistics in parentheses are calculated based on White (1980) robust standard errors. All continuous variables are winsorized at the top and bottom percentile. All variables are defined in Table 1. \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

**Table 7: The Effect of Excess Entrenchment on Firm Performance using Tobin's Q**

	$Q_{t+1}$	<i>Industry Adjusted</i> $Q_{t+1}$
	(1)	(2)
Excess_ $E_t$ (Dummy)	-0.1036*** (0.0190)	-0.1036*** (0.0190)
Firm Size $_t$	-0.0073 (0.0089)	-0.0073 (0.0089)
Leverage $_t$	-0.3260*** (0.1162)	-0.3260*** (0.1162)
Liquidity $_t$	0.4770*** (0.0987)	0.4770*** (0.0987)
CAPEX $_t$	5.6188*** (0.3359)	5.6188*** (0.3359)
PPE $_t$	-0.9948*** (0.0823)	-0.9948*** (0.0823)
% Independent $_t$	-0.0008 (0.0009)	-0.0008 (0.0009)
Board Size $_t$	-0.0195*** (0.0050)	-0.0195*** (0.0050)
CEO Gender $_t$	0.0784** (0.0316)	0.0784** (0.0316)
CEO Tenure $_t$	0.0086*** (0.0014)	0.0086*** (0.0014)
CEO Age $_t$	-0.0124*** (0.0016)	-0.0124*** (0.0016)
Duality $_t$	0.0915*** (0.0198)	0.0915*** (0.0198)
Intercept	2.3454*** (0.1498)	2.3454*** (0.1498)
Industry Dummies	YES	YES
Year Dummies	YES	YES
Adjusted R <sup>2</sup>		0.2355
N	12105	12105

Notes: this table reports results from OLS regressions of Tobin's Q on a dummy variable that captures the difference between positive and negative excess entrenchment in year t using the full sample. The t-statistics in parentheses are calculated based on White (1980) robust standard errors. All continuous variables are winsorized at the top and bottom percentile. All variables are defined in Table 1. \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.